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1 STATE OF NEW YORK
2 PUBLIC SERVICE COMMISSION

3 Case 06-T-0650 - Application of New York Regional
4 Interconnect Inc. For a Certificate of Environmental
5 Compatibility and Public Need Pursuant to Article VII
6 for a High Voltage Direct Current Electric Transmission
7 Line Running Between National Grid's Edic Substation in
8 the Town of Marcy, and Central Hudson Gas & Electric's
9 Rock Tavern Substation Located in the Town of New
10 Windsor

12 Evidentiary Hearing
13 3 Empire State Plaza
14 19th Floor
15 Albany, New York

16 March 25, 2009
17 9:15 a.m.

18 BEFORE: MICHELLE L. PHILLIPS,
19 Administrative Law Judge

20 JEFFREY STOCKHOLM,
21 Administrative Law Judge
22
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24

1 JUDGE PHILLIPS: Good morning. If we could
2 please come to order. We're going to go back on the
3 record. And I call case 06-T-0650, application of New
4 York Regional Interconnect, Incorporated, for a
5 certificate of environmental compatibility and public
6 need pursuant to Article VII for a high voltage direct
7 current electric transmission line running between
8 National Grid's Edic substation in the Town of Marcy and
9 Central Hudson Gas and Electric's Rock Tavern substation
10 located in the Town of New Windsor.

11 I'd like to take appearance of counsel, please.

12 MR. MCCARTHY: From Couch White, LLP, William
13 McCarthy, Leonard Singer, and Garrett Bissell on behalf
14 of New York Regional Interconnect.

15 MR. KLUCSIK: For Communities Against Regional
16 Interconnect, from the law firm of Gilberti, Stinziano,
17 Heintz & Smith, P.C., by Brenda Colella and John
18 Klucsik.

19 MR. BLOW: For the staff of the Department of
20 Public Service, Steven Blow, assistant counsel, and
21 Anthony Belsito, assistant counsel.

22 MR. MALONE: From the New York Power Authority,
23 Mark Malone and Sarah Barish-Straus.

24 MS. SMITH: For the New York State Department

1 of Agricultural and Markets, Diane Smith, associate
2 attorney.

3 MS. LEARY: For the New York Attorney General's
4 office, Maureen Leary.

5 MS. WILKINSON: For the New York State
6 Department of Environmental Conservation, Lisa
7 Wilkinson.

8 MS. HINTZ: For the New York State Department
9 of Transportation, Donna Hintz.

10 JUDGE PHILLIPS: I believe that's everyone.
11 Before we turn to the affidavits of the Towns
12 of Bethel and Highland and to Mr. Brower, do we have any
13 preliminary matters that we need to address?

14 MS. WILKINSON: Your Honor, just one.

15 JUDGE PHILLIPS: Yes.

16 MS. WILKINSON: DEC had inquired of not all the
17 other parties, but most of the other parties whether
18 there would be any objections to an additional two days
19 to submit testimony concerning the CARI Thruway
20 alternative, which was due, I think, Monday. And I did
21 not have a chance to poll everybody, but I did poll
22 Mr. Singer, Mr. Klucsik and Mr. Blow, none of whom had
23 any objections.

24 So if Ms. Leary doesn't have any objections, I

1 think in the order, it said if we wanted additional
2 time, that the request could be made to the ALJs.

3 JUDGE PHILLIPS: Okay. I'll take it under
4 advisement. I'd like to discuss it with Judge Stockholm
5 when he gets back, but --

6 MS. WILKINSON: Okay.

7 JUDGE PHILLIPS: And I saw -- I'm going to ask
8 Ag and Markets and DOT, it looked like you were shaking
9 your heads that you had no objection as well?

10 MS. SMITH: We do not have any objection.

11 JUDGE PHILLIPS: What about NYPA?

12 MR. MALONE: No, Your Honor, no objections.

13 JUDGE PHILLIPS: Great. Thank you.

14 MS. WILKINSON: Thank you.

15 JUDGE PHILLIPS: Are there any other
16 preliminary matters?

17 MR. BLOW: Your Honor.

18 JUDGE PHILLIPS: Yes.

19 MR. BLOW: I just wanted to inquire. I've
20 heard that NYRI does not have any questions for my
21 witness, Christopher Stolicky. And I know that I've
22 heard from Millennium that they don't have any questions
23 either. I wondered if any other party had questions for
24 Christopher Stolicky.

1 JUDGE PHILLIPS: When is he supposed to go on?

2 MR. BLOW: Well, he was supposed to go on on
3 the 31st, but then we were talking about he was
4 available also tomorrow.

5 JUDGE PHILLIPS: All right. I'll quickly ask.
6 You said NYRI already indicated they do not have cross.
7 And who else does not have --

8 MR. BLOW: And Millennium does not.

9 JUDGE PHILLIPS: Okay. What about CARI?

10 MR. KLUCSIK: No, Your Honor. We have none.

11 JUDGE PHILLIPS: NYPA?

12 MR. MALONE: No, Your Honor.

13 JUDGE PHILLIPS: Ag and Markets?

14 MS. SMITH: No, Your Honor.

15 JUDGE PHILLIPS: AG?

16 MS. LEARY: No, Your Honor.

17 JUDGE PHILLIPS: DEC?

18 MS. WILKINSON: No, Your Honor.

19 JUDGE PHILLIPS: DOT?

20 MS. HINTZ: No, Your Honor.

21 JUDGE PHILLIPS: Okay. Again, I'm going to
22 take that under advisement because I'm not sure if there
23 are other parties who are planning to be here on the day
24 that he was coming that maybe you haven't talked to. If

1 you could just confirm that for us and maybe report back
2 at lunch.

3 MR. BLOW: I can send out an e-mail.

4 JUDGE PHILLIPS: You don't have to report back
5 at lunch, I'm sorry, because it may not happen that
6 quickly. But the parties who are here, it seems like
7 you don't have a problem, but I just want to make sure
8 there weren't any parties who were planning to attend on
9 the day that he was scheduled for that
10 cross-examination. Are you able to tell me that today?

11 MR. BLOW: From our discussions on a conference
12 call, I believe the only ones that had indicated they
13 might have cross were -- the only party that indicated
14 they might have cross was NYRI.

15 JUDGE PHILLIPS: Okay. Why don't we do this:
16 On the day that he's supposed to attend, I guess you can
17 have his information, testimony and exhibits entered. I
18 don't know whether you were planning to do it by
19 affidavit --

20 MR. BLOW: Yes.

21 JUDGE PHILLIPS: -- so he doesn't have to show
22 up. You can do it that way.

23 MR. BLOW: Yes, because I believe he was in
24 Corning Gas negotiations this week, and I think he was

1 scheduled for a trip next week if he could make that,
2 so.

3 Thank you.

4 JUDGE PHILLIPS: Okay. Ms. Leary, I'm sorry, I
5 thought you had a comment as well, preliminary comment
6 or matter.

7 MS. LEARY: I just handed up a little bit
8 earlier, Your Honor, Dr. Schreiber's testimony and the
9 disk. I didn't know if I was too earlier, but I also
10 provided it to the court reporter in the interest of
11 saving time. So I just wanted to alert you to that
12 fact.

13 JUDGE PHILLIPS: Yes, we do have it, and I
14 appreciate it. I was holding off because I think what
15 we had discussed yesterday was we would sort of check
16 where we were around lunchtime with Panel D. And if it
17 looked like she could get in, I think you said 1:00 was
18 the time frame you were looking at, then we would
19 proceed that way. So I didn't want to mark it in case
20 it ended up that she was coming tomorrow instead of
21 today, but we do have -- we have one and the reporter
22 has one.

23 Are there any other preliminary matters?

24 Okay. I'm going to note for the record that we

1 have received an affidavit from both the Town of Bethel
2 and the Town of Highland. What we have done is put the
3 affidavit and testimony for the Town of Bethel together
4 and marked that for identification as Exhibit 198. We
5 have put the affidavit and testimony of the Town of
6 Highland together and marked them for identification as
7 Exhibit 199.

8 (Exhibits 198 and 199 marked for
9 identificaiton.)

10 JUDGE PHILLIPS: If there are no questions on
11 that approach, we are now ready to turn to, I believe,
12 Mr. Brower, who is the witness for Agricultural and
13 Markets; is that correct?

14 MS. SMITH: That's correct, Your Honor.

15 JUDGE PHILLIPS: Okay. Could you please go
16 through your witness' testimony and exhibits?

17 I'm sorry. Mr. Brower, could you please stand
18 and raise your right hand?

19 MATTHEW J. BROWER,
20 after first having been duly sworn, was examined and
21 testified as follows:

22 DIRECT EXAMINATION

23 BY MS. SMITH:

24 Q Good morning, Mr. Brower. Before you you have

1 a document entitled the "Direct Testimony of Matthew J.
2 Brower" consisting of nine pages. Did you prepare that
3 document?

4 A Yes, I did.

5 Q Do you have any changes, additions or deletions
6 to make to that document?

7 A No.

8 Q If I were to ask you the questions contained
9 therein, would your responses be the same?

10 A Yes.

11 Q Do you adopt this as your sworn testimony?

12 A Yes.

13 Q You also have another document before you
14 entitled the "Rebuttal Testimony of Matthew J. Brower"
15 consisting of six pages. Did you prepare that document?

16 A Yes.

17 Q Do you have any changes, additions or deletions
18 to that document?

19 A No.

20 Q If I were to ask you the questions contained
21 therein, would your responses be the same?

22 A Yes.

23 Q Do you adopt this as your sworn testimony?

24 A Yes.

1 Q There are three exhibits to your direct
2 testimony. The first is referenced as DAM-1 and it's a
3 paper by Wesley W. Gunkel. Have you reviewed this
4 paper?

5 A Yes.

6 Q Are you familiar with its contents and
7 conclusions?

8 A Yes.

9 Q Do you agree with the contents and conclusions
10 contained therein?

11 A Yes.

12 Q The next two exhibits are referenced as DAM-1
13 [sic] and DAM-3. Would you please describe those
14 exhibits?

15 A The first one you referenced would be DAM-2,
16 wouldn't it?

17 Q Yes.

18 A Okay. That's two photos that were taken along
19 NYRI proposed route. And the other, DAM-3, is two
20 photos that were taken along the Marcy South Alternate
21 route.

22 Q Okay. Were these exhibits prepared by you or
23 under your direction?

24 A Yes.

1 MS. SMITH: I would ask now that those exhibits
2 be marked for identification.

3 JUDGE PHILLIPS: The exhibits will be marked as
4 followed: DAM-1 is 200. DAM-2, 201. DAM-3 is 202.

5 (Exhibits 200 through 202 marked for
6 identification.)

7 MS. SMITH: And I ask that the direct
8 examination and cross testimony be copied into the
9 testimony as if given orally.

10 JUDGE PHILLIPS: Request granted.

11 (The following is the prefiled direct and
12 rebuttal testimony of Matthew J. Brower:)

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1 **NEW YORK REGIONAL INTERCONNECT, INC.**

2 **ELECTRIC TRANSMISSION FACILITIES**

3 **CASE 06-T-0650**

4 **Direct Testimony of Matthew J. Brower**

5
6 **Q.** Please state your name and business address.

7 **A.** My name is Matthew J. Brower. My business address is 10B Airline Drive,
8 Albany, New York 12235.

9 **Q.** By whom and in what capacity are you employed?

10 **A.** I am employed by the New York State Department of Agriculture and Markets as
11 an Agricultural Resource Specialist in the Division of Agricultural Protection and
12 Development Services. As an Agricultural Resource Specialist, I am responsible for
13 carrying out the policies and programs of the State Department of Agriculture and
14 Markets (Department) related to the protection of agricultural resources. My primary
15 responsibilities include the review, evaluation and necessary follow-up on proposed right
16 of way projects such as gas transmission lines, electric transmission lines and highway
17 reconstruction. When reviewing these projects, I focus on identifying possible impacts to
18 the agricultural resources and the farming operations in the vicinity. When a proposed
19 project appears to have negative impacts on agriculture, I advise the project sponsor
20 and/or approving agencies of the possible alternatives, construction techniques,
21 mitigation and restoration measures that would reduce such impacts.

1 Q. Please summarize your educational background.

2 A. I received an Associates Degree in Agronomy from SUNY Cobleskill
3 Agricultural and Technical College in 1982. I received a Bachelor of Technology Degree
4 in Plant Science from SUNY Cobleskill Agricultural and Technical College in 1989.

5 Q. Please summarize your professional experience.

6 A. I was employed by the St. Lawrence National Bank as a Farm Loan
7 Representative from 1983 until 1984. From 1984 to 1989, I served as District Technician
8 for the Montgomery County Soil and Water Conservation District and from 1989 to 1992
9 as District Manager. I have been employed by the Department of Agriculture and
10 Markets since January, 1992.

11 Q. Have you been involved in other Article VII electric transmission cases?

12 A. Yes. I have been involved in several other Article VII electric transmission cases
13 including the Central Hudson Gas and Electric Corporation reconstruction of the existing
14 P and MK transmission lines (91-E-0529), Niagara Mohawk Scriba-Clay 345kV line (92-
15 T-0114), Flat Rock Wind Power 230 kV line (03-T-0515), and the New York Electric
16 and Gas Corporation Ithaca Transmission Project (06-T-1298).

17 Q. Are you sponsoring any exhibits?

18 A. Yes, I am sponsoring 3 exhibits.

19 Q. What are the agricultural impacts associated with the construction of an above
20 ground electric transmission project?

21 A. The primary agricultural impact associated with the construction of electric
22 transmission lines is the placement of structures in agricultural fields. Other impacts of
23 concern include topsoil and subsoil mixing, soil compaction, and damage to livestock

1 fencing which can occur as a result of the need for temporary access across agricultural
2 fields during construction.

3 **Q.** How does the placement of structures impact the agricultural operation?

4 **A.** As dairy and cash crop farming operations become larger, the equipment used for
5 planting and harvesting has become larger. Often, this equipment can include two pieces
6 of harvesting or tillage equipment pulled by a tractor. As the size of the farming
7 equipment has increased over the years, the turning radius for the equipment has also
8 increased. The placement of structures in an agricultural field creates an obstacle for the
9 farmer to avoid during field operations. Avoidance of utility structures in agricultural
10 fields can result in a loss of productive acreage as well as a decrease in field operation
11 efficiency (exhibit __, DAM-1) with the larger planting and harvesting equipment
12 because of the increased turning radius required. Depending on the location, type and
13 number of structures, the acreage and efficiency loss can be significant.

14 **Q.** Explain how the location, type and number of structures can impact an
15 agricultural operation?

16 **A.** The least impact would occur with the placement of a monopole structure along
17 the field edge. Under these circumstances, the structure would take up the least area and
18 could be easily avoided with farm equipment. The placement of a monopole in the field
19 would have slightly more impact because it still would take up a relatively small area;
20 however, a farmer would have to negotiate farm equipment around the structure. The
21 placement of a lattice or H frame type structure on the edge of a field would take up more
22 area than a monopole, but would be easier to avoid than either structure placed in an
23 agricultural field. The placement of H frame or lattice structures in a field results in a

1 greater impact due to the space required and the lost efficiency navigating equipment
2 around the larger structure. The greatest impact occurs when H frame or lattice
3 structures are used when paralleling one or more existing electric transmission lines.
4 Since it is often difficult to place the new structures in alignment with the existing
5 structures, the construction of the new line results in numerous large structures staggered
6 across the field. This creates a series of obstacles that significantly decreases the tillable
7 acreage and the farming efficiency and could result in the land being taken out of
8 production.

9 **Q.** How does the mixing of topsoil and subsoil and soil compaction impact the farm
10 operation?

11 **A.** When the infertile subsoil material mixes with the fertile topsoil layer, crop
12 yields are reduced because of the decrease in available nutrients. The placement of
13 imported topsoil over the impacted area is the only way to restore crop productivity to
14 preconstruction levels. Soil compaction can decrease the infiltration and percolation of
15 water through the soil profile. During periods of seasonal wetness, such as spring and
16 fall, crop yields can be reduced because of saturation of the root zone. During dry times
17 of the growing season, crop growth can also be reduced because the plant roots are
18 unable to grow through the dense soil to access the soil moisture deeper in the soil
19 profile.

20 **Q.** Have you reviewed the New York Regional Interconnect (NYRI) proposed and
21 alternate routes, including the Marcy South Alternative?

1 A. Yes, I have reviewed the maps and ortho-photos that were submitted to the
2 Department as part of the application. I have also reviewed the routes in the field at
3 various road crossings.

4 Q. Do you have a preferred route?

5 A. The Department's preference would be a system alternative that did not require
6 the construction of a new electric transmission line. In the event that the Commission
7 was to issue a certificate to NYRI in this proceeding, the Department would prefer the
8 line follow the proposed route filed by NYRI.

9 Q. What are your concerns or comments relative to the proposed route filed by
10 NYRI?

11 A. The proposed route filed by NYRI with the Public Service Commission would
12 result in less agricultural impacts than the alternate routes filed by NYRI; however,
13 alternates A, MS-A, B, MS-B, C, G, I, K, MS-E, L, MS-F, M, N, O, A/O would be
14 acceptable to the Department in terms of agricultural impacts.

15 Q. Why would the location of the structures along the proposed route result in less
16 agricultural impacts?

17 A. Based on my field review and information submitted by NYRI, the proposed
18 route could potentially cross approximately 6.8 miles of agricultural land. According to
19 NYRI's application, approximately 75 miles or 40% of the proposed route would be
20 adjacent to existing railroads. Approximately half or 3.4 miles of the agricultural land
21 impacted by the proposed route would be adjacent to a railroad. The railroad already
22 creates a boundary for the agriculture fields and locating the electric transmission line
23 adjacent to a rail road would result in the structures being placed along the edge of the

1 field causing minimal impact to farming operations, as discussed in my previous answer
2 (exhibit __, DAM-2). Since NYRI has indicated in the application that they propose to
3 use monopoles adjacent to the railroad, the potential agricultural impacts would be
4 further reduced.

5 **Q.** Why would the proposed route result in less agricultural impacts during
6 construction?

7 **A.** As stated above, approximately half of the agricultural land crossed by the
8 proposed route would be adjacent to existing railroads. According to the information in
9 NYRI's application and their response to Department of Public Service Interrogatory
10 DPS-39, no new access is anticipated for this portion of the proposed construction. As a
11 result, the potential for subsoil mixing, soil compaction, and other agricultural impacts
12 would be minimized where the proposed route is parallel to a railroad. Other portions of
13 the proposed route would require new right of way, which would allow for careful
14 selection of center line location and structure placement to avoid or span agricultural
15 fields.

16 **Q.** How would the potential agricultural impacts associated with the above
17 mentioned NYRI alternate routes compare to the proposed route?

18 **A.** The alternate routes mentioned above would either be parallel to an existing
19 utility right of way or would involve new right of way. In some cases, the amount of
20 agricultural land along the alternate would be minimal. In other cases, careful design of
21 structure location during the Environmental Management and Construction Plan
22 (EM&CP) development could result in spanning of agricultural fields crossed by the

1 transmission line. Where the alternate involves new right of way, the centerline location
2 and structure locations could be carefully planned to minimize agricultural impacts.

3 **Q.** Which alternate routes submitted by NYRI would result in the greatest
4 agricultural impacts?

5 **A.** Alternates D, E, F, H, MS-C, MS-D, and MS-H would result in the greatest
6 agricultural impacts. In some cases, these alternates cross significantly more agricultural
7 land than the corresponding segment of the proposed route. Also, in some locations
8 alternates MS-C and MS-D are parallel to two or more existing electric transmission lines
9 (exhibit __, DAM-3). As a result, the placement of new structures in agricultural fields
10 in addition to the existing structures would result in a significant decrease in tillable
11 agricultural land and field operation efficiency as described above. Since all of these
12 alternates would require temporary access across agricultural land, the construction
13 impacts would be greater as well.

14 **Q.** Have you reviewed the Marcy South Buried Cable Alternative Route submitted
15 by CARI?

16 **A.** Yes. The Marcy South Buried Cable Alternative Route, submitted by CARI,
17 would have the greatest impact to agriculture because open trench excavation would be
18 required across agricultural fields. This would disturb more agricultural land during
19 construction as compared to an overhead transmission line. Trench excavation would
20 also increase the potential for topsoil and subsoil mixing and soil compaction. Also, the
21 above mentioned soil impacts would be a concern if future repairs were necessary.

22 **Q.** Have you reviewed the proposed deviations to the Marcy South Alternative that
23 were submitted by DPS staff?

1 A. Yes, I have reviewed these deviations and, while the Department does not support
2 the Marcy South Alternative, if this route were chosen, the deviations would not result in
3 any greater agricultural impacts from the corresponding portions of the Marcy South
4 Route submitted by NYRI. Deviations MS-H-8 and MS-H-9 would impact less
5 agricultural land than the MS-H routing proposed by NYRI.

6 Q. Do you have any additional comments?

7 A. No.

8 Q. Does this complete your testimony?

9 A. Yes.

BEFORE THE
STATE OF NEW YORK
PUBLIC SERVICE COMMISSION

In the Matter of
New York Regional Interconnect, Inc.
Case 06-T-0650
March 2009

Rebuttal Testimony of:

Matthew J. Brower
Agricultural Resource Specialist
Division of Agricultural Protection and
Development
New York State Department of Agriculture
and Markets
10B Airline Drive
Albany, New York 12235

1 **NEW YORK REGIONAL INTERCONNECT, INC.**

2 **ELECTRIC TRANSMISSION FACILITIES**

3 **CASE 06-T-0650**

4 **Rebuttal Testimony of Matthew J. Brower**

5

6 **Q.** Please state your name and business address.

7 **A.** My name is Matthew J. Brower. My business address is 10B Airline Drive,

8 Albany, New York 12235.

9 **Q.** By whom and in what capacity are you employed?

10 **A.** I am employed by the New York State Department of Agriculture and Markets as

11 an Agricultural Resource Specialist in the Division of Agricultural Protection and

12 Development Services.

13 **Q.** Are you the same Matthew J. Brower who previously testified in this case?

14 **A.** Yes.

15 **Q.** What is the purpose of your rebuttal testimony?

16 **A.** One purpose of this testimony is to respond to issues raised by Department of

17 Public Staff James J. de Waal Malefyt and Andrew C. Davis in their direct testimony.

18 The second purpose is to respond to issues raised in direct testimony submitted by CARI

19 witness Robert C. LaFleur.

20 **Q.** Which issues in Mr. de Waal Malefyt's testimony do you wish to respond to?

1 A. On page 36 of his direct testimony, Mr. de Waal Malefyt indicates that the Alt.
2 MS would result in less agricultural impacts because this route “crosses 48 miles of
3 agricultural district land compared to 70 miles on the Proposed Route.” While the
4 number of acres of land within an agricultural district may be greater along the Alt. MS,
5 this does not accurately reflect the potential impact to land used in agricultural
6 production. The inclusion of land in an agricultural district is based on whole tax parcels.
7 Since most tax parcels include both agricultural and nonagricultural land, agricultural
8 districts include not only land used in agricultural production but also abandoned
9 farmland, forestland and other land uses. In order to determine the agricultural impacts it
10 is necessary to compare the miles or acres of land used in agricultural production, as
11 opposed to land within an agricultural district, crossed by the various routes. As I stated
12 on page 6 of my direct testimony, I did such a comparison and came to the conclusion
13 that NYRI’s proposed route would potentially cross or be adjacent to approximately 6.8
14 acres of land used in agricultural production. 3.4 miles of this land is adjacent to the
15 railroad and would be along field edges. Alt. MS would potentially cross 5.9 miles of
16 land used in agricultural production and would cross the agricultural fields adjacent to
17 existing transmission lines creating multiple obstacles for the farm operator.

18 Q. Are there any other statements in Mr. de Waal Malefyt’s testimony that you wish
19 to respond to?

20 A. Yes, Mr. de Waal Malefyt states on page 53 of his direct testimony “DPS staff
21 would also recommend that Alternate D be selected instead of the Proposed Route in the
22 Nine Mile Swamp area, unless the facility can be placed underground through the swamp
23 within the railroad ROW along the Proposed Route.” Alternate D would impact

1 approximately 2 miles of land used in agricultural production while the proposed route
2 would impact 0.6 miles. The agricultural impact along this portion of the proposed route
3 would be minimal because the transmission line would be located along the edge of
4 fields. As a result, the Department recommends the placement of the facility
5 underground within the railroad ROW through the Nine Mile Swamp area, as opposed to
6 along Alternate D.

7 **Q.** What statement in the testimony prepared by Mr. Davis do you wish to respond
8 to?

9 **A.** In his testimony, Mr. Davis states “[a]long NYRI Alternate Route D, the 12.5
10 mile segment from the start of this segment east of NYS Route 12, to the south edge of
11 the Madison wind energy project, should be located underground to reduce impacts on
12 resources including NYS Rt. 20 Scenic Byway, historic resources, the ridge line above
13 Waterville and Sangerfield, and agricultural fields.” As discussed above, Alternate Route
14 D would impact more agricultural land than the NYRI proposed route. On page 8 of my
15 direct testimony, I explained that underground installation would disturb more
16 agricultural land during construction as compared to an overhead transmission line.
17 Since NYRI’s application and supplemental application provide insufficient information
18 on the construction and restoration methods that would be used for underground
19 installation, it is not possible to conclude that underground installation in agricultural
20 areas along NYRI Alternate Route D would reduce impacts to agriculture. Inadequate
21 construction and restoration measures increase the potential for long term impacts to soils
22 used for agriculture production due to alterations to drainage patterns, subsoil and topsoil
23 mixing and soil compaction. In fact, this could result in greater long term impacts than

1 overhead construction. Placement of the facility underground within the railroad ROW
2 through the Nine Mile Swamp area would impact less land used in agricultural
3 production. As a result, the Department recommends this alternative, as opposed to
4 underground or overhead construction along Alternate D.

5 **Q.** What statements in Mr. LaFleur's testimony do you wish to respond to?

6 **A.** On page 22 of his direct testimony, Mr LeFleur points out that NYRI's proposed
7 overhead routes "cross a significant distance of agricultural districts" and states that
8 CARI's Marcy South buried cable alternative route "may temporarily impact agricultural
9 lands during construction, but the cable will be buried deep enough to allow agricultural
10 operations to continue with minimal (if any) long term impacts." As I have stated
11 previously, the acres of agricultural district land crossed is not an accurate indication of
12 the agricultural impacts. Based on my detailed review of the routes, the NYRI proposed
13 route would have the least impact on land used in agricultural production. As I have also
14 stated previously, it is not possible to conclude that underground installation in
15 agricultural areas would have less long term impact than overhead because neither NYRI
16 nor CARI provide sufficient information on the underground construction and restoration
17 measures that would be used in agricultural areas. In fact, if the appropriate construction
18 and restoration measures are not followed, the long term impact to soil quality and crop
19 production could be significant. Also, no information is provided by NYRI or CARI
20 concerning the agricultural protection measures that would be used during future repairs
21 of the underground cable in land used in agricultural production. As a result, it is not
22 possible to conclude that the buried alternative would have "minimal" long term impact
23 to agricultural operations.

1 Q. Do you have any additional comments?

2 A. No.

3 Q. Does this complete your testimony?

4 A. Yes.

1 MS. SMITH: Mr. Brower is now available for
2 cross-examination.

3 JUDGE PHILLIPS: Who has cross-examination for
4 Mr. Brower? NYRI, did you have any?

5 MR. SINGER: No.

6 JUDGE PHILLIPS: CARI?

7 MS. COLELLA: We do.

8 JUDGE PHILLIPS: Staff?

9 MR. BLOW: No, Your Honor.

10 JUDGE PHILLIPS: AG?

11 MS. LEARY: No.

12 JUDGE PHILLIPS: DEC?

13 MS. WILKINSON: No.

14 JUDGE PHILLIPS: DOT?

15 MS. HINTZ: No.

16 JUDGE PHILLIPS: NYPA?

17 MR. MALONE: Just three questions, Your Honor.

18 JUDGE PHILLIPS: Okay. I don't know if you've
19 made any agreement as to -- they're pointing to you, so
20 I guess you can go first, Mr. Malone.

21 MR. MALONE: Short straw yesterday and today,
22 Your Honor.

23 CROSS-EXAMINATION

24 BY MR. MALONE:

1 Q Mr. Brower, are you aware of the agricultural
2 mitigation policies that were implemented as a part of
3 NYPA's Marcy South facility?

4 A I'm generally aware of it. I believe the
5 number of the provisions from that are part of or
6 contained within our current mitigation guidelines for
7 electric transmissions.

8 Q And do you know whether one of those policies
9 was the intent to confine construction activities in
10 agricultural areas to the access roads and the work
11 sites?

12 A I believe so, but I couldn't say for certain.

13 Q Do you know whether one of those policies was
14 to minimize the disruption of soil in the agricultural
15 areas?

16 A Yes.

17 MR. MALONE: I have nothing further. Thank
18 you, Your Honor.

19 JUDGE PHILLIPS: CARI.

20 MS. COLELLA: Thank you, Your Honor.

21 BY MS. COLELLA:

22 Q Mr. Brower, have you reviewed NYRI's
23 application materials in this proceeding?

24 A Yes.

1 Q Okay. And do you recall the discussion in the
2 application regarding the size of the foundations for
3 the transmission structures proposed by NYRI?

4 A Yes.

5 Q And we've had some discussion in this
6 proceeding that the area of the largest potential
7 foundation proposed by NYRI for its transmission
8 structures is 26-by-26 feet. Does that sound correct to
9 you?

10 A I don't believe based on the drawings that I've
11 seen that that is the largest size. My understanding
12 from a review of the drawings is that the largest size
13 could be 40-by-40.

14 Q Okay. Well, let's just assume 40-by-40. Let's
15 turn to page 4 of your direct testimony at lines 8
16 through 13.

17 You state that the placement of structures in
18 an agricultural field creates an obstacle for the farmer
19 to avoid during field operations, correct?

20 A Yes.

21 Q And that such avoidance of utility structures
22 in agricultural fields can result in a loss of
23 productive acreage as well as a decrease in field
24 operation efficiency with the larger planting and

1 harvesting equipment because of the increased turning
2 radius required, correct?

3 A Yes.

4 Q Okay. If the transmission -- if a transmission
5 structure proposed by NYRI were a lattice tower, and
6 we're assuming the foundation of that you said,
7 40-by-40, would the land underneath that tower be
8 considered -- and assuming it's placed in the farm
9 field, would the land underneath that tower be
10 considered productive acreage?

11 A No. You couldn't farm the land underneath the
12 lattice structure.

13 Q And assuming a 26-by-26 foundation, would the
14 land underneath that transmission structure be
15 considered productive acreage?

16 A No.

17 Q Okay. And due to the turning radius that you
18 mention in your testimony with respect to the large
19 planting and harvesting equipment, would there be an
20 area beyond the footprint of the transmission structure
21 itself that would be -- would become unproductive
22 acreage?

23 A Yes. Typically with -- particularly with
24 lattice type structures, as you approach them with farm

1 equipment, in order to swing out around them with the
2 equipment, you leave I guess what I would describe as a
3 V-shaped section on each side of the structure as you
4 swing out around and then come back in with the
5 equipment. So -- so there tends to be an area on both
6 sides of the structure going with the field operation
7 that can be essentially abandoned.

8 Q Okay. Assuming a 40-by-40 foot area footprint
9 of the transmission structure, would it be possible for
10 you to estimate what additional area beyond that, like
11 what the total area of unproductive acreage would be?

12 A Well, it depends on the size of the equipment,
13 but it could be 20 to 50 feet on either side in a --
14 and, again, a V-shape. It would start out at the point
15 and widen as you approach the structure.

16 JUDGE PHILLIPS: Can I just ask a
17 clarification?

18 When you said it would depend on the equipment,
19 do you mean the farm equipment when you say equipment?

20 MR. BROWER: Right.

21 JUDGE PHILLIPS: Okay. Thanks.

22 Q And assuming a 26-by-26-foot foundation or
23 footprint for the transmission structure, would that be
24 the same, or would it be bigger?

1 A I would say it's in the same range probably.

2 Q And can you tell me the average size of the
3 typical farm in New York State?

4 A Offhand I couldn't tell you what -- how many
5 acres.

6 Q Okay. Could you tell me like a range?

7 A Probably between a hundred and couple thousand
8 acres.

9 MS. COLELLA: That's all I have.

10 JUDGE PHILLIPS: Thank you.

11 Judge Stockholm?

12 JUDGE STOCKHOLM: Nobody else has questions?

13 JUDGE PHILLIPS: I don't think so.

14 JUDGE STOCKHOLM: I just had a question on the
15 photograph, or at least I assume it's a photograph, in
16 Exhibit 3, the one at the top that makes -- in your
17 Exhibit 3. I'm sorry. That would be 202 for
18 identification.

19 Do you know if all three of these structures
20 are Marcy South NYPA structures?

21 MR. BROWER: I don't know for certain whether
22 they're all part of the Marcy South or not.

23 JUDGE STOCKHOLM: Okay. You didn't do any --
24 this is an actual photo. It's not an illustration or --

1 MR. BROWER: No. This is an actual photo.

2 JUDGE STOCKHOLM: Mr. Malone, do you know what
3 that other right-of-way is there, or is that, in fact,
4 the NYPA right-of-way? I mean, all the NYPA
5 right-of-ways. I didn't think there were three -- I
6 didn't think it was three structures wide. That's why
7 I'm asking the question.

8 MR. MALONE: Your Honor, we don't really know
9 based on the picture exactly. Apparently there were
10 three lines -- at least three lines that converge at a
11 particular point.

12 JUDGE STOCKHOLM: Okay. But all three of these
13 would not be the Marcy South NYPA line?

14 MR. MALONE: No, Your Honor.

15 JUDGE STOCKHOLM: Thank you.

16 MS. SMITH: Your Honor, just a moment.

17 One is NYSEG and two are NYPA.

18 JUDGE STOCKHOLM: Thank you very much.

19 JUDGE PHILLIPS: I believe no one else had
20 cross-examination, so, Ag and Markets, do you have
21 redirect?

22 MS. SMITH: No, I don't, Your Honor. Thank
23 you.

24 JUDGE PHILLIPS: Okay. Thank you.

1 Mr. Brower, thank you for your time. You're
2 excused.

3 I believe the next panel is Panel D; is that
4 correct?

5 We're going to go back on the record just
6 briefly to deal with DEC's request from this morning. I
7 believe you had asked for two additional days for your
8 responsive testimony pursuant to the order on appeal
9 that was issued, I believe March 10th; is that correct?

10 MS. WILKINSON: Yes, Your Honor.

11 JUDGE PHILLIPS: And it was two days?

12 MS. WILKINSON: Yes.

13 JUDGE PHILLIPS: Okay. I've discussed it with
14 Judge Stockholm, and we've agreed to grant that request.

15 MS. WILKINSON: Thank you, Your Honor.

16 JUDGE PHILLIPS: We're back off the record.

17 (A brief recess was taken.)

18 JUDGE PHILLIPS: All right. I think we only
19 need to swear in Mr. Thompson, because I believe the
20 rest of you are under oath and continue to be under
21 oath.

22 So, Mr. Thompson, could you raise your right
23 hand?

24 CHRISTOPHER THOMPSON, RICHARD BUCCI, STEPHEN WOOD,

1 SAED MOUJTAHED, ABRAHAM PICHARDO,
2 after first having been duly sworn, were examined and
3 testified as follows:

4 JUDGE PHILLIPS: Thank you.

5 DIRECT EXAMINATION

6 BY MR. MCCARTHY:

7 Q Good morning, Panel D.

8 Panel D, do you have before you a document
9 entitled the "Prefiled Direct Testimony of Panel D"
10 consisting of the cover page and four pages of
11 testimony?

12 A (Panel) Yes.

13 Q Did you prepare this document?

14 A (Panel) Yes.

15 Q Do you also have before you an appendix to the
16 prefiled direct testimony of Panel D consisting of five
17 pages?

18 A (Bucci) Yes. The resumes.

19 (Moujtahed) Yes.

20 Q Do you have any changes that you would like to
21 make to these two documents?

22 A (Panel) No.

23 Q Panel D, if I were to ask you the questions
24 contained in the prefiled direct testimony of Panel D,

1 would you give the same answers contained therein?

2 A (Panel) Yes.

3 Q Do you adopt this as your sworn testimony?

4 A (Panel) Yes.

5 MR. McCARTHY: Your Honors, I ask that the
6 prefiled direct testimony of Panel D be copied into the
7 record as if given orally.

8 JUDGE STOCKHOLM: Granted. My only question is
9 on the appendices. When you supplied the direct
10 testimony of your witnesses on disk, Lord knows last
11 week sometime I think, did you include the appendices
12 with that testimony, or do we need to mark them for
13 identification?

14 MR. SINGER: We'll have to confirm that. We
15 believe that they were on that disk.

16 JUDGE STOCKHOLM: It was on that disk. Okay.
17 Please confirm that, otherwise we'll have to get the
18 evidence in as an exhibit. Otherwise, the motion is
19 granted.

20 (The following is the prefiled direct testimony
21 of Panel D:)

22

23

24

Before the
New York State Public Service Commission
New York Regional Interconnect, Inc.
Case No. 06-T-0650

NEW YORK REGIONAL INTERCONNECT INC.

Pre-filed Direct Testimony of Panel "D" Consisting of:

Christopher Thompson
Richard Bucci
Stephen Wood
Saed Moujtahed
Abraham Pichardo

On Behalf of New York Regional Interconnect Inc.

February, 2008

1 Q. PLEASE STATE YOUR NAMES AND RESPONSIBILITIES REGARDING THE
2 NEW YORK REGIONAL INTERCONNECT PROJECT.

3 A. Christopher Thompson, President, New York Regional Interconnect Inc.

4 A. Richard Bucci, Project Engineering Manager, WGI, Inc.

5 A. Stephen Wood, Project Environmental Consultant, ESS Group, Inc.

6 A. Saed Moujtahed, Project Engineering Consultant, WGI, Inc.

7 A. Abraham Pichardo, Project Engineering Consultant, WGI, Inc.

8

9 Q. DO YOUR RESUMES, ATTACHED HERETO AS APPENDIX A TO THIS
10 TESTIMONY, FAIRLY AND ACCURATELY REPRESENT YOUR EDUCATION
11 AND WORK EXPERIENCE?

12 A. Yes, our resumes are accurate.

13

14 Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY?

15 A. The purpose of our testimony is to support Exhibits 5, 9, E-1, E-2 and E-3, which: (1)
16 describe the transmission lines and cable that will be part of the New York Regional
17 Interconnection project ("Project"); (2) describe the northern and southern converter
18 stations and other facilities that will be part of the Project; (3) describe the underground
19 facilities and construction methods for such facilities; and (4) provide detailed estimates of
20 the capital costs of the proposed facilities covered by the Application and the basis for
21 such estimates.

22

THOMPSON/BUCCI/WOOD/MOUJTAHED/PICHARDO

1 Q. WERE YOU RESPONSIBLE FOR THE PREPARATION OF ANY SECTIONS
2 OF NYRI'S APPLICATION IN THIS PROCEEDING?

3 A. Yes, the following exhibits to NYRI's Article VII Application were prepared by us or
4 under our direction and supervision; Exhibits 5, 9, E-1, E-2 and E-3.

5

6 Q. DOES EXHIBIT E-1 OF THE APPLICATION ACCURATELY DESCRIBE THE
7 PROPOSED NYRI TRANSMISSION LINE?

8 A. Yes it does.

9

10 Q. PLEASE DESCRIBE THE INFORMATION PROVIDED IN EXHIBIT E-1 OF
11 THE APPLICATION.

12 A. Exhibit E-1 of the Application provides: (a) the design voltage and voltage of initial
13 operation of the Project; (b) the type, size, number and materials of conductors; (c) the
14 insulator design; (d) the length of the transmission line; (e) the construction materials of
15 the towers; and (f) the design standards for each type of tower and tower foundation.

16

17 Q. DOES EXHIBIT E-2 OF THE APPLICATION ACCURATELY DESCRIBE
18 THE OTHER FACILITIES ASSOCIATED WITH THE PROJECT?

19 A. Yes it does.

20

21

22

23

THOMPSON/BUCCI/WOOD/MOUJTAHED/PICHARDO

1 **Q. PLEASE DESCRIBE THE INFORMATION PROVIDED IN EXHIBIT E-2 OF**
2 **THE APPLICATION.**

3 A. Exhibit E-2 of the Application describes the Northern and Southern converter stations
4 associated with the Project and the AC interconnections at the Edic and Rock Tavern
5 substations. This Exhibit also describes the control and protection, cooling systems,
6 station service, fire protection and architectural treatment associated with these facilities.
7 In addition, a description of the overhead to underground transitions and the fiber optic
8 communication system is provided.

9

10 **Q. DOES EXHIBIT E-3 OF THE APPLICATION ACCURATELY DESCRIBE**
11 **THE UNDERGROUND CONSTRUCTION ASSOCIATED WITH THE**
12 **PROJECT?**

13 A. Yes it does.

14

15 **Q. PLEASE DESCRIBE THE INFORMATION PROVIDED IN EXHIBIT E-3 OF**
16 **THE APPLICATION.**

17 A. Exhibit E-3 of the Application describes the construction methods that will be used to
18 install cables underground for the underground sections of the Project. It includes a
19 description of the cables. Oil-pumping stations are not required and maintenance is not
20 anticipated once the cables are installed unless damage or failure occurs.

21

22

23

THOMPSON/BUCCI/WOOD/MOUJTAHED/PICHARDO

1 Q. DOES EXHIBIT 9 PROVIDE NYRI'S BEST ESTIMATE AT THIS TIME OF
2 THE ESTIMATED CAPITAL COSTS OF THE PROJECT?

3 A. Yes it does.

4

5 Q. DOES THIS CONCLUDE YOUR TESTIMONY?

6 A. Yes it does.

7

8 J:\DATA\Client4 11825-12199\12010\Art 7 Filed Binders\Testimony\NYRI Supplement Direct Panel D.doc

THOMPSON, Chris L., B.S.M.E, M.B.A., P. Eng. – Senior Vice President, Development, of American Consumer Industries Inc. (ACI); Senior Vice President of Colmac NYRI; Member, Board of Directors of ACI and Colmac NYRI. Over 30 years experience in engineering and management in the energy industry. Previously; President and CEO, CFO of Harris Group Inc. 1996-2003; Vice President of Industrial Development Resources 1995-1996; Senior Consultant, Operations Manager, Harris Group Inc. 1989-1995; RW Beck 1988-1989; Parsons Main 1986-1988; Stearns-Catalytic 1972-1986.

Bio of Rich Bucci

Richard M. Bucci is the Director of Electric Power Delivery Systems for Washington Group International, Inc., located in Princeton, New Jersey, where he is responsible for transmission, substations and distribution projects, covering consulting studies, engineering services and turnkey projects. He is the functional leader of Washington Group's efforts in the electric power delivery area. He has led major projects for domestic and international clients, including leading utilities and independent power developers. Recently Mr. Bucci led the Washington Group engineering team for Transmission and Substations rehabilitation and reconstruction in Northern Iraq.

Mr. Bucci is a registered professional engineer in NY and has been employed by Washington Group International and its legacy company Ebasco Services Incorporated for over 30 years, in the areas of system planning, engineering, design, procurement and construction of electric power systems. He earned an MSEE from Polytechnic University of NY and a BEE from Pratt Institute. He is a member of various industry societies and committees including the AEIC's Electric Power Apparatus Committee, and is a senior member of the IEEE Power Engineering Society. He has authored over fifteen published technical papers and articles, and is the chief editor of the McGraw-Hill/Electrical World Electric Distribution Systems Handbook.



Stephen B. Wood
Vice President and Senior Project Manager

EXPERIENCE

ESS Group, Inc. – January 2000 to Present
 Years of Prior Related Experience – 22

EDUCATION

JD, Southern New England School of Law
 MBA, Western New England College
 BA, Biology, North Adams State College

SUMMARY OF PROJECT EXPERIENCE

Mr. Wood is a Vice President and Senior Project Manager with more than 28 years of experience in environmental licensing and permitting of energy facilities and in project management. Prior to joining ESS, he was the Director of Environmental Affairs for Commonwealth Energy System, a major electric and gas utility company in Massachusetts. Mr. Wood was responsible for directing and managing all aspects of environmental policy and programs for electric and gas operations, including: generation, transmission, and distribution functions; environmental licensing and permitting for construction and operation of gas and electric facilities; consulting services to other energy related subsidiary companies; conducting environmental studies, impact assessments, and environmental impact reports; providing regulatory interpretation and guidance; developing and implementing compliance programs; and developing and recommending environmental policies for the organization.

Mr. Wood has been responsible for managing the environmental siting and permitting of a number of power generating facilities, both fossil fuel fired and renewable wind projects and high voltage transmission facilities. Representative projects include:

- Astoria Repowering Project 1,816 MW Gas-Fired, Combined Cycle Independent Power Plant, New York.
- 345 kV Transmission Line, Connecticut.
- Cape Wind Offshore Renewable Electric Generation and 115 kV Submarine Cable Project, Sound.
- Environmental Licensing and Permitting 345kV Substation, and 115kV Transmission Facilities in Massachusetts.
- Marble River Wind Energy Project, New York.

PROFESSIONAL CERTIFICATIONS

- Admitted to the Massachusetts Bar – June 1996.
- Admitted to the United State District Court for Massachusetts – January 1997

AFFILIATIONS AND MEMBERSHIPS

- Advisor – Electric Power Research Institute
- Air & Water Management Association
- American Bar Association, Section of Natural Resources, Energy and Environment Law
- Boston Bar Association, Environmental Section



SAED M. MOUJTAHED

Saed Moutjahed Over 20 years experience as a senior electric utilities design and planning engineer and project manager with Washington Group, Anaheim Public Utilities and Pasadena Water and Power. He is currently a project management consultant to Washington Division of URS Corporation.

MR. MOUJTAHED HAS EARNED A BSEE DEGREE FROM CALIFORNIA STATE UNIVERSITY, Long Beach, CA, majoring in power systems with a minor in control systems, electronics communication systems and networks. He has been responsible for a variety of electric power planning, design and construction projects, including:

- Participated in the design of overhead transmission lines from 400 kV through 12 kV and managed the construction activities including participation with all involved agencies and utilities.
- Project engineering management for the recent Iraq transmission, distribution and substations reconstruction project for the U.S. Government, as well as project cost control and estimating support.
- Managed Public Utility Demand-Side Management Programs, Capital Expansion Plans including a five-year underground transmission conversion program, Resource Adequacy Programs, Power Quality Programs, and Construction Projects.
- Represented Pasadena Water and Power on the Southern California Utility Power Pool (SCUPP) Resource Planning Committee and the Western System Coordination Council (WSCC)

Bio

Abraham Pichardo, P.E.

Abraham Pichardo is a Registered Professional Engineer in CT with over 25-years experience in engineering and design of high voltage AC and DC transmission and distribution systems in accordance with industry codes, company procedures and specifications. He is currently a senior consulting engineer with the Washington Division of URS Corporation.

Mr. Pichardo has extensive experience in electrical calculations and modeling tools such as short circuit analysis, protective device coordination, grounding analysis, bus calculations, load flow, reliability analysis, lightning protection, insulation coordination, etc. Through his many years of experience in the industry he has gained in-depth knowledge of electrical apparatus performance such as power transformers, circuit breakers, disconnect switches, cabling systems, grounding and ancillary subsystems. He has also been responsible for the development of numerous engineering designs, calculations, construction packages and specifications in compliance with applicable engineering, safety and environmental codes and standards such as NESC, NEC, IEEE, ANSI, EPA, OSHA, etc.

1 MR. McCARTHY: Your Honor, there is no rebuttal
2 testimony for Panel D.

3 JUDGE STOCKHOLM: Thank you.

4 MR. McCARTHY: Panel D is available for
5 cross-examination.

6 JUDGE STOCKHOLM: Thank you, Counselor.
7 Agriculture and Markets.

8 CROSS-EXAMINATION

9 BY MS. SMITH:

10 Q Mr. Bucci, hi. Can you get the Exhibit
11 E-1.1.1? And we're looking at page 11.

12 A (Bucci) Figure E-1.1.1-11?

13 Q Correct. Last week we asked you a series of
14 questions regarding foundations for lattice structures
15 and for steel monopoles. And when we discussed the
16 steel monopoles, you said that the foundation would be
17 approximately 17-by-17 feet. What I wanted to do is go
18 over the -- the drawings that are on this page so that
19 we can understand your testimony.

20 If you look at the drawing on the right hand,
21 bottom of the page, it's a typical pole case and
22 foundation. Can you go over the diameters of that, and
23 also explain how that structure -- the footprint of that
24 structure would look after it was installed?

1 A (Bucci) Okay. The lower right-hand side
2 depicts a typical pole caisson foundation. As you said,
3 it includes the angle type structure and a tangent
4 structure. Each one of those has a different diameter.
5 The angled structure diameter of the caisson is
6 approximately 8 feet, tangent structure is 7 feet in
7 diameter. What the -- the footprint of that is depicted
8 in the picture. That's what it would look like after
9 it's installed, circular footprint.

10 JUDGE STOCKHOLM: I apologize, counsel. Could
11 you give me the citation for that drawing again?

12 MS. SMITH: It's E-1.1.1-11.

13 JUDGE STOCKHOLM: Eleven. Thank you.

14 MS. SMITH: So it's page 11 of that exhibit.

15 Q Last week when you testified that the footprint
16 when constructed would be 17-by-17 on this structure,
17 what takes up the remaining 10 feet of the footprint
18 when -- once it's constructed in ag lands, or once it's
19 constructed on any type of land?

20 A (Bucci) Okay. Well, there's a series of
21 typical foundations that are provided in the
22 application, on this page, and also on page 10, or dash
23 10, and the foundations apply to different soil
24 conditions. And depending on the soil conditions, one

1 of these -- any loads on the towers, one of these
2 foundation types would be selected for any specific
3 location. The footprints -- the smallest one in the
4 figures I guess is this diameter of 7-foot for a tangent
5 structure, which is the lightest loaded structure in the
6 best soil conditions, and they range up to much larger.

7 The dimensions that I gave of 17 feet was
8 for -- actually, if you look at dash 10, it's
9 foundations in a rock anchor -- I'm sorry, foundations
10 with -- in rock, where the rock is close to the surface
11 of the soil. There's also another one for -- that
12 measures 36 feet wide by 12 inches rectangular shaped,
13 and that's all on page dash 11.

14 So when you said I said it was 17-by-17, I
15 believe the answer -- the question or the subject was --

16 Q The footprint?

17 A (Bucci) Yeah. It wasn't a specific one that
18 you had asked for.

19 Q Okay. So when we're looking at steel
20 monopoles, the best-case scenario is 7-foot by 7 --
21 7-foot diameter. It can go --

22 A (Bucci) Yes.

23 Q -- larger depending on shallow to bedrock
24 conditions?

1 A (Bucci) Yes.

2 Q When you're looking at the difference, what
3 takes up -- is it that the steel monopole is a larger
4 monopole, or is there concrete?

5 A (Bucci) Both. The steel monopole size varies
6 on the -- on the loads on the tower, that is the
7 conductors themselves, and the configuration of the line
8 and the -- the concrete, the foundation part, varies
9 depending on the soil conditions. They're two
10 independent, and they can -- but they each vary.

11 Q I believe another panel member wants --

12 A (Moujtahed) Just to add a note. Also depends,
13 as he mentioned, on the structure when you raise that
14 issue. And what it is, it's between tangent structure,
15 which require less support, in other words lighter, and
16 then you go to an angle, which is slightly more, and
17 then a dead end, which is much more. However, the
18 majority, most of the poles are tangent, which require
19 the light one.

20 Q Okay. Thank you very much for the
21 clarification.

22 MS. SMITH: And that is all that Ag and Markets
23 has, Your Honor.

24 JUDGE STOCKHOLM: Thank you. Is -- is there

1 any other cross-examination that we can go forward with
2 at this point? I know DEC wants to reserve and CARI
3 wants to reserve. Does Staff have anything of this
4 panel?

5 MR. BLOW: No, Your Honor.

6 JUDGE STOCKHOLM: Okay. Well, I'm sorry, but
7 we'll have to go off the record until the final panelist
8 arrives.

9 (A brief recess was taken.)

10 DIRECT EXAMINATION

11 (Continued)

12 BY MR. McCARTHY:

13 Q Good morning, Mr. Pichardo.

14 A (Pichardo) Good morning.

15 JUDGE STOCKHOLM: Mr. Pichardo, I believe
16 you're under oath.

17 MR. PICHARDO: Yes, sir.

18 JUDGE STOCKHOLM: And you remain so.

19 MR. PICHARDO: Yes, Your Honor.

20 BY MR. McCARTHY:

21 Q Mr. Pichardo, do you have before you a document
22 entitled the "Prefiled Direct Testimony of Panel D"
23 consisting of a cover page and four pages of testimony?

24 A (Pichardo) Yes, I do.

1 Q Did you prepare that document?

2 A (Pichardo) Yes, I do.

3 Q Do you have any changes that you would like to
4 make to that document?

5 A (Pichardo) No.

6 Q Do you also have before you an appendix to the
7 prefiled direct testimony of Panel D consisting of five
8 pages?

9 A (Pichardo) Yes, I do.

10 Q Do you have any changes that you would like to
11 make to that document?

12 A (Pichardo) Yes, just one minor typo. The
13 professional engineering license is not in New Jersey.
14 It's in Connecticut.

15 Q Okay. Thanks.

16 JUDGE STOCKHOLM: And I was advised off the
17 record that counsel would be preparing a disk that has
18 this appendix on it for the purpose of copying it into
19 the record.

20 MR. McCARTHY: Yes. That's correct.

21 JUDGE STOCKHOLM: And would you make certain
22 that that change is made on that disk?

23 MR. McCARTHY: Yes, Your Honor.

24 JUDGE STOCKHOLM: Thank you.

1 BY MR. McCARTHY:

2 Q Mr. Pichardo, if I were to ask you the
3 questions contained in the prefiled direct testimony of
4 Panel D, would you give the same answers contained
5 therein?

6 A (Pichardo) Yes.

7 Q Do you adopt this as your sworn testimony?

8 A (Pichardo) Yes.

9 MR. McCARTHY: Mr. Pichardo is available for
10 cross.

11 JUDGE STOCKHOLM: Okay. We have the full panel
12 now.

13 Okay. Let me see. The back row was
14 complaining about being picked on yesterday, so I'll
15 pick on the front row today.

16 MR. KLUCSIK: Notwithstanding your gracious
17 attention, Your Honor, I believe Ms. Wilkinson expressed
18 some interest in voir dire of the panel.

19 JUDGE STOCKHOLM: Oh, I apologize. That's
20 right, she did. So it's not my fault that I'm picking
21 on the back row first then. I just want to note that
22 for the record.

23 MS. WILKINSON: Your Honor, I'd like an exhibit
24 to be marked.

1 JUDGE STOCKHOLM: Okay. Off the record.

2 (Discussion off the record. Thereafter,
3 Exhibit 203 was marked for identification.)

4 VOIR DIRE EXAMINATION

5 BY MS. WILKINSON:

6 Q Mr. Thompson, I'll start with you.

7 JUDGE STOCKHOLM: Would you identify this
8 exhibit, counselor?

9 MS. WILKINSON: Yes. This exhibit is DEC-31.
10 It was an interrogatory request for Panel D.

11 JUDGE STOCKHOLM: That request, then, a number
12 of pages of attached minutes to the interrogatory itself
13 have been marked for identification as Exhibit 203.

14 BY MS. WILKINSON:

15 Q Mr. Thompson, do you recognize this
16 interrogatory?

17 A (Thompson) Yes.

18 Q And as to your information, did you prepare
19 this or direct the preparation of this?

20 A (Thompson) Correct.

21 Q And since the pages aren't numbered, we'll just
22 go with the second page, which is a table indicating the
23 dates of any records -- any site visits along the
24 proposed route.

1 Mr. Thompson, does this table indicate your
2 records of site visits to the proposed route; is that
3 correct?

4 A (Thompson) To the best of my recollection, yes.

5 Q So you visited the Edic and Rock Tavern
6 substations on numerous occasions?

7 A (Thompson) Correct.

8 Q And that's the extent of your site visits on
9 the proposed route?

10 A (Thompson) Per se. I went to all of the public
11 hearings and whatnot. And while we were in the car, we
12 crossed various points that team members would point out
13 to me on occasion where the -- the line was going, but I
14 have not physically been down the routes beyond this,
15 correct.

16 Q Okay. Mr. Bucci, does this exhibit accurately
17 state your site visits of the proposed route?

18 A (Bucci) These are my personal visits. It
19 doesn't include the visits of staff that are not on the
20 witness panel here. There were other visits by them.

21 Q Okay. Mr. Pichardo, is the information correct
22 as to you?

23 A (Pichardo) The date on the site visit was --
24 I'm sorry. The date on the site visit may not be

1 correct. I've been in the area for other reasons, on
2 substations I've been visiting for other project that
3 would be necessary in the past, but there need to be
4 some correction there.

5 Q Okay. Can you tell us exactly how you would
6 correct this response?

7 A (Pichardo) Actually, I would say this day with
8 the second part that I visited the whole route -- not
9 visited. I saw the route via video. I did visit part
10 of the route on other business matter for other project
11 associated with my previous involvement in other
12 project.

13 Q Okay. But that's not part of this project,
14 correct?

15 A (Pichardo) For reason of the visit, not, but
16 the video was part of this project.

17 Q Okay.

18 JUDGE STOCKHOLM: Just so the record is clear,
19 there appears to be two sentences in the box next to
20 your name. I think your testimony is that the second
21 sentence is correct and should remain; is that true?

22 MR. PICHARDO: Yes, sir. Yes, Your Honor.

23 JUDGE STOCKHOLM: Should the first sentence be
24 eliminated?

1 MR. PICHARDO: (Pichardo) Yes, to eliminate it.

2 JUDGE STOCKHOLM: To be accurate. Okay.

3 MS. WILKINSON: Your Honor, so I'm clear, the
4 only sentence that remains in this box, then, would be
5 the second sentence?

6 JUDGE STOCKHOLM: I believe that's correct.

7 BY MS. WILKINSON:

8 Q Which is the substations in the proposed route
9 were reviewed via video; that's correct?

10 A (Pichardo) Yes, ma'am.

11 Q And I'm going to apologize ahead of time for
12 not pronouncing Mr. -- is it Moujtahed?

13 A (Moujtahed) Moujtahed.

14 Q Moujtahed. I'm sorry. I apologize.

15 A (Moujtahed) No problem.

16 Q Is this information correct as to you, your
17 site visits?

18 A (Moujtahed) Regarding the visitation?

19 Q Correct, in the box here.

20 A (Moujtahed) Yes, it is correct.

21 Q Thank you.

22 Mr. Thompson, if you could turn to your resume,
23 which is also included in this response.

24 A (Thompson) Okay.

1 Q And it indicates that you have 30 years
2 experience in engineering and management in the energy
3 industry. If you can walk through that experience so we
4 can better understand what it is, starting with your
5 experience at Stearns Catalytic from 1972 to '86.

6 A (Thompson) Sure. Would you like the
7 five-minute version, the five-hour version or the
8 five-day version?

9 Q We'll start with five minutes.

10 A (Thompson) Okay. Fair enough.

11 Stearns Catalytic is an engineering design
12 company. That was my first job out of college. I began
13 there as a mechanical engineer. Probably for my first
14 10 years, I worked in various assignments, primarily in
15 large coal-fired utility power plant design and startup.
16 I spent actually over a year out in the field doing
17 startup of a couple of big units.

18 Then the next couple of years the market
19 changed, and we began doing more cogeneration type
20 projects, gas turbine type projects. Then I moved on.

21 I worked as a project manager for Parsons Main
22 out in southern California doing combine-cycle gas
23 turbine projects. Then I went to work for R.W. Beck and
24 began doing what was called independent engineering

1 due-diligence reviews primarily for financial
2 institutions on project finance type projects. Then I
3 moved on to Harris Group, continued doing independent
4 engineering due-diligence work, and also began taking on
5 some more management administrative roles. Did that
6 through the mid '90s.

7 As Harris Group formed a sister company to do
8 development, I actually was assigned to that Industrial
9 Development Resources. They actually took an equity
10 role in development projects was the anticipation there.
11 That didn't work out well. There was too many conflicts
12 of interest and whatnot. So we decided to back out of
13 that.

14 And so I continued back with Harris Group. I
15 became their CFO, was involved with financing a couple
16 of projects over in Russia through the XM Bank for our
17 company. We actually opened an office over there. I
18 continued doing independent engineering due-diligence
19 reviews during that period, as well as working with
20 developers is what they called their owners engineer in
21 the early stages of project development, primarily power
22 generation projects. Ultimately, I became the president
23 and CEO of Harris Group.

24 And then in 2000, I think it was '4, I left

1 Harris Group and joined American Consumer Industries,
2 which is an independent power developer here in the U.S.
3 And that's when they were just getting into a project
4 called the New York Regional Interconnect. And so I was
5 assigned as their investor representative to oversee
6 their interests in that project. That involvement
7 continued, and I ultimately became assigned full-time to
8 the NYRI project and became the president of New York
9 Regional Interconnect.

10 I'd be happy to give you more definition if
11 you'd like.

12 Q Well, let me ask a few questions.

13 A (Thompson) Sure.

14 Q During the course of your experience, other
15 than -- excluding experience with NYRI, had you, prior
16 to this, had any experience with transmission line
17 projects?

18 A (Thompson) Yes. As I told several people, all
19 of my transmission experience always involved a
20 generator at one end, though. Some of those lines were
21 fairly short, some of them were fairly extensive, but
22 they were always associated with a generation project.

23 Q What was the longest line?

24 A (Thompson) About 200 kilometers.

1 Q Which equates to how many miles?

2 A (Thompson) Maybe the engineers can help me with
3 that one.

4 JUDGE STOCKHOLM: Round numbers, it's 120
5 miles.

6 A (Bucci) 120 miles.

7 (Thompson) Plus or minus in there someplace.

8 Q So that -- so that 120-mile line associated
9 with the generation project, that was a line that your
10 company directed the development of?

11 A (Thompson) No. Actually, that's one that I was
12 the -- did the independent engineering due-diligence
13 review of. So I reviewed the original designs and
14 permits, and then monitored it through construction for
15 the banks.

16 JUDGE STOCKHOLM: Was the due-diligence work
17 that you were doing financial or construction?

18 MR. THOMPSON: It was construction I would call
19 it, but it was --my customer was the financial
20 institutions. In other words --

21 JUDGE STOCKHOLM: Let me -- let me --

22 MR. THOMPSON: Okay.

23 JUDGE STOCKHOLM: -- more accurately state the
24 question. Were you involved in looking for your client

1 at whether or not, for example, the project was running
2 over budget, under budget, or were you --

3 MR. THOMPSON: Correct.

4 JUDGE STOCKHOLM: That was part of what you
5 were doing?

6 MR. THOMPSON: That was very much so. Yes.

7 JUDGE STOCKHOLM: Okay. Thank you.

8 BY MS. WILKINSON:

9 Q So, Mr. Thompson, along those lines, you were
10 reviewing the project pursuant to criteria that the
11 financial institutions gave you?

12 A (Thompson) I was reviewing the project and
13 checking it against all of the contracts that had been
14 put in place relative to loan documents and covenants
15 that had been put in place by the financial
16 institutions, as well as monitoring the environmental
17 permits and whatnot to make sure that we believed they
18 were continuing to maintain those.

19 Q Can you identify that project that you spoke
20 about that was approximately 120 miles long?

21 A (Thompson) Sure. It actually was in Peru.

22 JUDGE STOCKHOLM: On-site visit.

23 A (Thompson) The transmission line portion of the
24 project actually went up and over the Andes Mountains

1 and terminated into Lima. The project was a gas field
2 development on the east side of the mountains, and they
3 transported the gas as far west as they could to the
4 foot of the mountains, built a power generation
5 facility, converted the gas into power, and then were
6 able to transport it by a transmission line over the
7 mountains.

8 Q So it's fair to say that the environmental
9 compliance was related to the environmental laws of
10 Peru?

11 A (Thompson) That, and some of the world
12 export/import bank requirements as well.

13 Q And is there an easy way to summarize what
14 those requirements are?

15 A (Thompson) No. And I probably couldn't
16 recollect. That was 10 or 12 years ago, actually 14 or
17 15 now.

18 Q Well, do you have a general idea of the area --
19 of the substantive area of the requirements?

20 A (Thompson) I think they were fairly consistent
21 with the types of things we would see now that -- there
22 were restrictions to protect erosion and environmental
23 damage. There were restrictions on -- or some
24 guidelines on how to go about clearing the right-of-way

1 for the transmission line, those types of things.

2 Most of the environmental guidelines that were
3 really addressed laid -- or were more specific to the
4 gas field development, the gas pipeline to the power
5 plant, the environmental restrictions on the power plant
6 itself, but there were some obviously associated with
7 the transmission line.

8 JUDGE STOCKHOLM: Did the construction of that
9 transmission line encounter environmental violations of
10 any of the permits, to your knowledge?

11 MR. THOMPSON: I know on twice they had severe
12 rain storms that washed out their provisions, and so
13 they were required to go back and do some remediation as
14 well as rebuilding their -- their protective systems.

15 JUDGE STOCKHOLM: Were any fines levied, to
16 your knowledge?

17 MR. THOMPSON: I do not believe so.

18 JUDGE STOCKHOLM: Thank you.

19 BY MS. WILKINSON:

20 Q Were you involved yourself in those remedial
21 activities?

22 A (Thompson) I did visit the site and did review
23 what they were doing just to report back to the banks
24 that, in fact, they had, in fact, done that.

1 Q And do you have any idea of the relative cost
2 of the repairs that they had to do and the length of
3 time it took to do them?

4 A (Thompson) I'm guessing -- I guess I should say
5 no, I don't. It was not a project charge. It was a
6 contractor charge, so.

7 Q So the contractor would have been responsible
8 for paying for the remediation?

9 A (Thompson) That's correct.

10 Q Do you have any idea how long it took to
11 accomplish it?

12 A (Thompson) I'm guessing, a couple of weeks.

13 JUDGE STOCKHOLM: From the perspective of the
14 record, guesses usually are probably not --

15 A (Thompson) I don't know then.

16 JUDGE STOCKHOLM: Yes, that's a better answer.
17 Otherwise, you're guessing. Thank you.

18 Q In your experience -- and we'll go down the
19 line here because this is a new panel. In your
20 experience, have you ever seen a transmission project
21 such as NYRI proposed, or constructed using a railroad
22 right-of-way to transport equipment to and from?

23 A (Thompson) I've not seen a transmission line
24 project utilizing that. I have seen generation projects

1 obviously transporting material to a site.

2 Q Via railcar?

3 A (Thompson) Via railcar.

4 Q But a transmission line project with the
5 various pole structures that are represented in this
6 application?

7 A (Thompson) I have not seen that, no.

8 Q Not in the United States or ever?

9 A (Thompson) Correct.

10 Q Maybe go down the panel. Mr. Bucci?

11 A (Bucci) Yes.

12 Q You have seen railcar --

13 A (Bucci) I have seen railcar construction,
14 railcar transportation for transmission line projects.

15 Q And where is that?

16 A (Bucci) There have been several that have
17 involved that. In fact, many of the transmission
18 projects that are -- at the time Mr. Thompson mentioned
19 that were associated with the generation project,
20 there's usually rail service at the origin point of the
21 transmission line. And so that would be -- those are
22 examples. And those are -- there are many of those
23 during my career that I've worked on.

24 We -- we've done several transmission lines.

1 We've done -- we've done -- okay. A recent example,
2 we've done work with Metro North along their rail line.
3 And that was not constructed, but it was -- the plan was
4 to put a transmission line alongside the Metro North
5 line and transport the materials there via railcar as
6 much as possible, similar to this project.

7 Q Mr. Bucci, just so I understand, the projects
8 you've seen with railcars being used to facilitate the
9 construction of transmission lines, those were
10 associated with lines associated with generation,
11 electric generation?

12 A (Bucci) No. Both types, with generation and
13 without.

14 Q And what's the longest distance that you
15 observed a railcar being used?

16 A (Bucci) I don't -- I don't recall the distance.

17 Q Well, the NYRI project is 190 miles. Would it
18 be more than a hundred miles?

19 A (Bucci) The NYRI project is not using railroad
20 construction for 190 miles.

21 Q Okay. I understand that. Collective --

22 A (Bucci) I would say, you know, it is -- the
23 project that I've seen, the distances are representative
24 of the distances that we would be looking at with NYRI.

1 You know, considering the segment lengths and distances
2 between rail access, you know, access to rail yards,
3 that's representative.

4 Q And what's the name of that project?

5 A (Bucci) Well, the Metro North project was just
6 called -- I think it was -- well, it was in the New
7 Rochelle area, Metro North project, substation project.

8 Q But that project wasn't built, correct?

9 A (Bucci) It has not been constructed.

10 Q The Metro North project was not constructed?

11 A (Bucci) That's correct.

12 Q So of the projects --

13 A (Bucci) Not yet been constructed. Has not yet
14 been constructed.

15 Q Of the projects that have been constructed, can
16 you give me the name or names of the projects?

17 A (Bucci) I can't recall specific names of
18 projects, no.

19 Q Do you know where they're located?

20 A (Bucci) One of the projects is in the
21 Philadelphia area.

22 Q And -- go ahead.

23 A (Bucci) There have been projects in -- there
24 was a project in Nevada. There's been several projects

1 overseas. That's about as specific as I can get, you
2 know, without names of all these projects in front of
3 me.

4 Q Okay. Do you know the approximate time frame
5 of the Philadelphia project?

6 A (Bucci) Yeah. That was -- that was within the
7 last 10 years or so. It was maybe 10 years ago.

8 Q Do you know who authorized it for the -- was it
9 the Pennsylvania Public Service Commission?

10 A (Bucci) It would have been -- oh, the
11 Commission? Well, it was in Pennsylvania.

12 Q Okay. The equivalent of the Public Service
13 Commission there would have authorized it?

14 A (Bucci) I wasn't involved in the licensing
15 portions of it.

16 Q Okay. So you -- what portions of it you were
17 involved with?

18 A (Bucci) The engineering construction portion.

19 Q Okay. So you don't recall who the application
20 was submitted to, what entity in Pennsylvania?

21 A (Bucci) No.

22 Q And was this at a time when you worked for
23 Washington Group?

24 A (Bucci) Yes.

1 Q Okay. So maybe the other panel members might
2 be able to address that question.

3 A (Bucci) Probably not, just because --

4 Q Maybe we can have them address it. Thank you.

5 A (Moujtahed) I wasn't there maybe at the time
6 when that project was underway.

7 (Pichardo) I was not involved with this
8 particular project you mentioned.

9 Q Okay.

10 JUDGE STOCKHOLM: Mr. Bucci, can you tell me
11 who the client of Washington Group was, who built this
12 line?

13 MR. BUCCI: The client was a developer, and I
14 can't recall who it was, Your Honor.

15 JUDGE STOCKHOLM: Was it a utility?

16 MR. BUCCI: No.

17 JUDGE STOCKHOLM: How long was this line?

18 MR. BUCCI: It wasn't very long. It was
19 approximately I would say 5 to 10 miles.

20 JUDGE STOCKHOLM: And along what --

21 MR. BUCCI: Along the -- along the Amtrak rail
22 line coming out of Philadelphia.

23 JUDGE STOCKHOLM: Thank you.

24 BY MS. WILKINSON:

1 Q And was this line associated with the
2 generation project?

3 A (Bucci) Yes.

4 Q Do you know the name of the generation project?

5 A (Bucci) I don't recall the name of the -- of
6 the generation project.

7 Q Do any other panel members have experience with
8 building transmission lines utilizing railcars for the
9 construction?

10 A (Moujtahed) I was involved in preconstructing
11 transmission line along the railroad when I have to
12 interface with the railroad company to facilitate the
13 construction time frame and anything associated with.

14 Q And can you give me the name of that project?

15 A (Moujtahed) When I go to a job interview, they
16 ask me sometimes what's your most weaknesses. And my
17 response is remembering names. However, on this
18 project, I believe it is the Englishtown/Monroe in New
19 Jersey. And there are -- there are other projects in
20 the northern part of New Jersey, but I don't recall the
21 names.

22 (Bucci) I just remembered the Philadelphia
23 project. Fairless Hills Industrial Project.

24 Q Can you spell that?

1 A (Bucci) F-A-I-R-L-E-S-S.

2 Q Any of the other panel members?

3 A (Pichardo) Can you repeat your question again,
4 please?

5 Q Sure. Do you have experience utilizing
6 railcars to facilitate the construction of a
7 transmission line?

8 A (Pichardo) Up to certain stand with certain
9 limitations. I've been doing the studies of several
10 transmission line over the railroad track, particularly
11 industrial and all the effect creating other facilities
12 along the transmission line.

13 Also, we have a substation for Delmarva Power,
14 I think today -- the name they change, it's Connectiv,
15 that we develop a slightly different way. This far, we
16 build the transmission tower off the line and carry over
17 under the line in the railroad track that we built. It
18 was the opposite way. I have seen transmission line
19 with monopoles similar to the NYRI project on this kind
20 of a scale built along the transmission line down the
21 railroad corridor. There are a few samples in New
22 Jersey built by Public Service Electrical and Gas
23 Corporation. And I see some other number of project
24 that I was not directly involved, but has been done in

1 the past.

2 We -- normally in the transmission system, we
3 include the transmission line substation and other
4 facility. We include the railroad car to transport
5 heavy equipment, particular transformer. It's not
6 unusual to bring extremely large power transformer in
7 the railroad track in a special car built for these
8 particular purposes. Many of them we cannot be able to
9 transport in a regular road for weight and limitation of
10 height as usually used on the railroad system to bring
11 that to the site.

12 So I just want to point it out, perhaps we're
13 concentrating too much on the transmission system, but
14 one of the issue is transmission line is like
15 construction if you compare with power plant and other
16 type of similar transmission project that we do in our
17 company. I don't see a major undertaking project other
18 than used to work in the railroad track. I mean, it's
19 completely doable in my opinion on this subject.

20 (Bucci) Mr. Pichardo brings up a point -- a
21 good point that I'd like to add to. He noted that
22 he's -- there's been many transmission lines built along
23 railroad right-of-way. And we've seen -- and he's seen
24 some of those. And I would like to just say that I have

1 also. And back in my home town of central New Jersey,
2 we have a 230 kV pole line along the -- recently built.
3 It's recent construction. Recent meaning within the
4 last I would say 20 years. Monopole construction along
5 the line. And this is in a fairly residential area with
6 a freight -- it's a freight line of the -- I believe
7 it's the Norfolk and Southern railway.

8 Q Mr. Bucci, just to clarify, is your experience
9 confined to design?

10 A (Bucci) No.

11 Q Okay.

12 MS. WILKINSON: Your Honor, that concludes my
13 preliminary questions.

14 JUDGE STOCKHOLM: Okay. Do you have questions
15 not in the nature of voir dire?

16 MS. WILKINSON: I do.

17 JUDGE STOCKHOLM: You may proceed.

18 CROSS-EXAMINATION

19 (Continued)

20 BY MS. WILKINSON:

21 Q Mr. Thompson, and I do not mean to
22 mischaracterize previous testimony, but last week when
23 you were -- when Panel E and G testified, and I don't
24 believe you were on those panels, certain

1 representations were made concerning estimates of the
2 project, and one of which was the method of construction
3 in the Rio -- under the Rio Reservoir.

4 Are you familiar with what I'm speaking about?

5 A (Thompson) I was present for most of that
6 testimony, yes.

7 Q Okay. If -- if we were to look at the NYRI
8 application, can you tell me where in the application we
9 could find your plans for using HDD to underground in
10 the Rio? I know Exhibit E-3 talks about the open-trench
11 construction, and there's been movement away from that.
12 So where would we look to find how you're going to
13 utilize HDD to underground in the Rio?

14 A (Thompson) I'm not familiar with where that's
15 addressed. It's my understanding that the testimony
16 here becomes part of the record in the fact that it was,
17 I guess, committed to by the panels that HDD would be
18 suitable for underneath there. Does that not constitute
19 part of the record?

20 JUDGE STOCKHOLM: Yes, it does.

21 Q Okay. I understand that. This is a
22 construction panel, so that's why I wanted to ask this
23 question of this panel. So maybe, Mr. Bucci, I can go
24 down the line here, and direct me to where in the

1 application we could see a discussion of the HDD
2 technique as it might be applied in the Rio.

3 A (Bucci) In Exhibit E-3, Section E-3.4.5.

4 Q Okay. You're going to have to give us a minute
5 here.

6 MR. KLUCSIK: Mr. Bucci, if I may, could you
7 give us that citation slowly one more time?

8 MR. BUCCI: Exhibit E-3.4.5. Paragraph is
9 entitled "Rio Reservoir Alternative Installation."

10 Q Okay. And this is the extent of the
11 information on the HDD technique that would be utilized
12 to underground in the NYRI?

13 A (Bucci) No. This is what's presented in
14 this -- just this one part of the application. It's not
15 the extent of the technique.

16 Q Okay. But it's the extent of what is in the
17 application; is that correct?

18 A (Bucci) No, it's not even --

19 Q Okay. That's what I'm asking. I just want --

20 A (Bucci) Well, there's -- there's a discussion
21 of HDD in Exhibit 4, construction methods. If you need
22 a specific -- it's a -- it's another -- I believe that
23 the one in Section 4 is more general in terms of
24 performing HDD, wherever we need to perform -- you know,

1 use HDD, not specific for the Rio Reservoir, but the
2 techniques are similar.

3 Q Sitting here today, have you -- you -- have you
4 made a determination whether HDD will be feasible at the
5 location of the Rio River crossing?

6 A (Bucci) Yes. Based on the work we've done to
7 date, and based on the experience of myself and our
8 company and this panel in doing HDD work.

9 Q So you think it will be feasible?

10 A (Bucci) Yes, I do.

11 Q Have you undertaken any preliminary studies or
12 observations at the Rio Reservoir where the crossing
13 would occur?

14 A (Bucci) Preliminary observations, yes.

15 Q And what are those observations that would lead
16 you to conclude it would be feasible?

17 A (Bucci) We visited the site. We looked at the
18 terrain. Using experience, judged, you know, if there
19 would be -- well, first of all, the length of the
20 crossing, staying within the range that you could do
21 with HDD, and the -- we had to look for places to set up
22 the drilling equipment. And we found some candidate
23 locations for that. So it didn't seem -- there's -- you
24 know, what we saw on that basis, didn't see any

1 obstacles that would prevent HDD from being used.

2 Q And do you know how much -- about how much land
3 clearing would be required?

4 A (Bucci) We do mention that in the reference
5 that I gave previously for the application E-3.4.5. In
6 general, the footprint is less than 4,000 square feet.

7 Q So would you need to set up some kind of
8 construction site alongside where you were going to do
9 the HDD?

10 A (Bucci) You need to -- I'm trying -- I wouldn't
11 use the word -- I don't know if the word
12 "construction" -- construction site is anywhere you do
13 construction, I guess, no matter how big or how small or
14 how -- yes, there certainly would be an area where you
15 would -- where you would place the drilling equipment in
16 order to make the drill. And that area -- you'd need an
17 area of about 4,000 square feet or less, as we state.

18 Q And the area that you need to place your
19 equipment, would that area have to be cleared if it were
20 not already cleared area?

21 A (Bucci) It would -- it would have to be clear
22 enough to get the drilling rigs set up. So, for
23 example, if it was an open field, it would be fine. If
24 there were -- if it was a forest, it would have to be

1 cleared. But we look for locations where there was open
2 field, and we did find those locations.

3 Q Do you know about where you would begin and end
4 across the Rio?

5 A (Bucci) Well, as we state in the application,
6 you'd need about a 400 -- you'd need about a 400-foot
7 setback from the actual water crossing to obtain the
8 proper angle for drilling down.

9 Q And do you know whether this area that you
10 would need, is it -- is it on the Boy Scout reservation
11 in Forestburgh? Do you know whether it would encroach
12 on that?

13 A (Bucci) I don't recall where the Boy Scout
14 reservation boundaries were.

15 Q And then do you -- what space do you need on
16 the opposite end of the crossing, where the drill's
17 coming out or where the line is coming back out?

18 A (Bucci) About the same.

19 Q 4,000 square feet?

20 A (Bucci) Or less.

21 JUDGE PHILLIPS: I just had a quick question.
22 On your last question, Ms. Wilkinson, were you asking
23 how much area they needed to come out on the other side
24 or how much area they needed to work on the other side?

1 MS. WILKINSON: A work area. I was asking
2 about the work area on the other side.

3 JUDGE PHILLIPS: Okay. Great. Thank you.

4 Q Did you understand that to be my question,
5 Mr. Bucci?

6 A (Bucci) Yes.

7 Q Okay. Mr. Bucci, if undergrounding were used
8 in the Nine Mile Swamp, would the techniques be the same
9 techniques that the application describes for the, I
10 guess I call it northern portions of the line, or would
11 there be different techniques?

12 A (Bucci) We haven't studied the Nine Mile Swamp
13 for underground construction. I don't believe we did
14 that. Underground construction can vary with the --
15 certainly with the soil conditions that are available to
16 you.

17 Q Okay. I want to turn to, I think it's an
18 Exhibit E-1.1.4. I'll say it again. E-1.1.4.

19 A (Bucci) Okay.

20 Q And this discusses the transition structures
21 that are going to be required between overhead
22 conductors and underground cables?

23 A (Bucci) Yes.

24 Q And you give two figures in Exhibit E-3. And I

1 guess what I want to ask you is, what determines which
2 design would be selected at a particular location?

3 A (Bucci) I believe the two figures consist of a
4 lattice-type transmission and a pole-type transmission.
5 I'm just checking here. Yes. The two figures are --
6 one figure is for a steel pole transition station, the
7 other is for a steel lattice tower transition station.
8 And the choice would be with the -- if the transmission
9 line was steel pole at that point, you would use the
10 pole transmission. If the transmission line was
11 lattice-type structure at that point, then you would use
12 the lattice-type structure transition.

13 Q Okay. So where the -- where the line is on the
14 railroad, I think there was a transition station
15 somewhere around Clayville, Figure 24 of Appendix B,
16 which is Exhibit 37. At that location, we'd be looking
17 at the pole, the transition station for monopoles,
18 correct?

19 A (Bucci) Yes. I believe that -- that section is
20 pole construction, and we would be looking at the
21 pole-type transition station.

22 Q And what would be the area of the transition
23 station at that location?

24 A (Bucci) We give the typical figure for that in

1 the figure that you just reference, E-3.7-1?

2 Q Yes.

3 A (Bucci) And that indicates approximately
4 94-by-96 feet, roughly. And that's a fenced-in area.
5 That's not the actual footprint of the -- the equipment
6 itself at that --

7 Q And what would that be?

8 A (Bucci) The equipment itself? It's
9 approximately from this figure -- we're looking at -- it
10 looks like 30 -- rough -- approximately 30-foot square,
11 30-by-30.

12 Q Is --

13 A (Bucci) Yeah, about that.

14 Q So the 94-times-96 foot area with the fenced-in
15 area, is that the extent of the clearing that you'll
16 need for this transition station?

17 A (Bucci) I don't recall if any specific
18 dimensions were given somewhere else in the application
19 about clearing for the transmission stations, but yes,
20 that approximately would be the same -- that area would
21 be sufficient, approximately.

22 JUDGE STOCKHOLM: The area outside the
23 footprint of the structures, will that be grass? Will
24 plants be allowed to grow there? Will it be mowed?

1 Will it be crushed rock? What's your intention in that
2 area?

3 MR. BUCCI: The area within the fence would be
4 as typical for a substation ground, which is basically
5 crushed stone, rock to provide good grounding. Whether
6 or not you could plant -- I can't say you cannot have
7 plants growing there, but it wouldn't be -- it wouldn't
8 be convenient. It wouldn't be natural.

9 JUDGE STOCKHOLM: Okay. I just wanted to
10 understand how that was going to be dealt with. Thank
11 you.

12 BY MS. WILKINSON:

13 Q And would it be necessary to have some kind of
14 access road to get to the transition station?

15 A (Bucci) Well, it's on -- it's on the
16 right-of-way. The right -- so the same access would --
17 would -- we're envisioning would be no additional access
18 because of the transition station since it's already on
19 the right-of-way.

20 Q So you'd be using the railcar, then, to access
21 it?

22 A (Bucci) I believe on the railroad, that's --
23 the rail -- there are other -- you can also have access
24 along the -- the railroad, not necessarily on the

1 railroad. The railcar limitations was on a specific
2 area where there was wetlands that couldn't be
3 disturbed, but other than that, it would be normal
4 access. And we're not -- the transition stations were
5 not in that location with the rail-only access
6 limitation.

7 Q Okay. As I look at Figure 24, it appears that
8 you've designated or shown an access road from Oneida
9 Street to the transition station.

10 JUDGE PHILLIPS: What figure are you looking
11 at?

12 MS. WILKINSON: Figure 24 of Exhibit 37.

13 A (Bucci) It shows an access road to the
14 right-of-way, not only to the transmission -- to the
15 transition station.

16 Q I see that. At that location, is it expected
17 the access road will be -- will generally fit the
18 descriptions that you've provided in the application for
19 dimensions?

20 A (Bucci) Yes. The application -- the
21 descriptions we provided were general for access roads,
22 including all of them, in general.

23 Q And would there be a need during construction
24 to have a larger road than you'll have permanently?

1 A (Bucci) You're asking if there would ever be a
2 larger access road?

3 Q I'm wondering during construction, would you
4 need to have a road that's larger than you would have
5 after it's constructed and you're in the maintenance
6 mode?

7 A (Bucci) You might, yes. We gave the dimensions
8 of the access roads for use during construction.

9 Q Okay. And those --

10 A (Bucci) The approximate dimensions.

11 Q And those would apply to this --

12 A (Bucci) Yes.

13 Q -- access road? During construction, it might
14 be larger than what you would have after you're done?

15 A (Bucci) Yeah, the -- it wasn't a -- yes.

16 Q Okay. Thank you.

17 JUDGE STOCKHOLM: Looking -- excuse me.

18 Looking at the conversion station in pink on this
19 figure, Figure 24, my question is, is that square to
20 scale?

21 I mean, I thought we just looked at figures
22 that indicated that they would be roughly a hundred foot
23 square fenced-in area. It strikes me that the pink
24 representation here may not be to scale. Maybe the

1 Staff ruler would help.

2 MR. BELSITO: You want plastic or metal?

3 MR. BUCCI: Do you have wood?

4 MR. BELSITO: We might have laminate.

5 MR. BUCCI: It should be to scale, Your Honor.

6 I didn't prepare these drawings.

7 JUDGE STOCKHOLM: Does it appear to be to scale
8 to you?

9 MR. BUCCI: Yeah, it does. One inch is equal
10 to 400 feet, right? So --

11 JUDGE STOCKHOLM: According to the other
12 exhibit, there should be a hundred foot on a side round
13 number.

14 MR. BUCCI: Which would be a quarter of an
15 inch, approximately.

16 JUDGE STOCKHOLM: So you think it is, more or
17 less.

18 MR. BUCCI: More or less.

19 JUDGE STOCKHOLM: Okay. Thank you.

20 BY MS. WILKINSON:

21 Q Mr. Bucci, can you turn to page 10 of Exhibit
22 E-3 in the application?

23 A (Bucci) Okay.

24 Q And I'm looking at number 5 where you speak

1 about reestablishing protective vegetative cover within
2 one full growing season. Did you see that?

3 A (Bucci) Yes.

4 Q Okay. Does your success in doing that depend
5 on how long it actually takes the vegetation to grow
6 back, doesn't it?

7 A (Bucci) It says one full growing season.

8 Q Right, to reestablish protective vegetative
9 cover, but is it possible that some vegetation will take
10 longer than a year to actually grow back?

11 A (Bucci) It doesn't -- well, I should say that
12 I'm not an expert in the vegetation planting. I'm not
13 an environmental expert, but it says one full growing
14 season. It doesn't say a year. But I'm not -- like I
15 say, I couldn't really expand on that myself.

16 Q Okay. So one full growing season, you're not
17 sure what that means, is that what you're saying?

18 A (Bucci) That's correct. I'm not.

19 Q Okay. And number 7, which talks about
20 vegetation clearing that was unattended, it says,
21 "sediment control measures would be installed and
22 monitored until the vegetation is reestablished."

23 And I -- go ahead.

24 A (Bucci) I'm sorry. I said I'm not sure what

1 that means going back to the previous -- I'm not sure
2 the length of the growing season of all vegetation that
3 could be used.

4 Q Okay. That goes back to 5?

5 A (Bucci) Yes.

6 Q Okay. Going to 7.

7 A (Bucci) Okay.

8 Q Where it talks about you would monitor
9 vegetation until it's reestablished, you would --
10 actually would install sediment control measures and
11 monitor until vegetation is reestablished.

12 If it happens that the vegetation, you know, is
13 a very old, tall tree that would take years to regrow,
14 are you going to be monitoring that tree for 20, 30
15 years until it grows back to its height?

16 A (Bucci) Steve's younger than me, so he can --

17 Q So we've got to get your ages. Who's going to
18 be around in 40 years?

19 A (Wood) I'll try to help. Obviously if it's a
20 tall tree, it's not going to go grow back that quickly.
21 I think the intention here is that if there is some
22 clearing that occurs in areas where it really shouldn't,
23 then there would be some, you know, immediate
24 vegetation -- you know, it's planted grass seed and

1 other fast-growing vegetation to stabilize the area.
2 And that would be monitored in the silt fence and so
3 forth talked about here would be installed for that --
4 for that period.

5 Q Okay. Until -- so "until the vegetation is
6 reestablished" doesn't necessarily refer to the
7 vegetation that has been inadvertently, you know,
8 damaged or removed. It refers to just making the area
9 stable?

10 A (Wood) Yeah. Right. To stabilize the area,
11 and then, you know, the other vegetation would obviously
12 grow in over a much longer period of time once the area
13 was stabilized.

14 MS. WILKINSON: Your Honor, I think I'm done.

15 JUDGE PHILLIPS: Thank you. Who's next?

16 JUDGE STOCKHOLM: I think CARI.

17 JUDGE PHILLIPS: Okay. Looks like CARI.

18 MR. KLUCSIK: Thank you, Your Honor.

19 BY MR. KLUCSIK:

20 Q Mr. Bucci, hello again.

21 A (Bucci) Hello.

22 Q In connection with the use of horizontal direct
23 drilling near water resources, a 400-foot setback from
24 that water resource would be required; is that correct?

1 A (Bucci) That's what we -- that's an approximate
2 number that we have stated in the application.

3 Q . So it would be some distance, approximating --

4 A (Bucci) Yes.

5 Q -- 400 feet?

6 In order to accomplish horizontal direct
7 drilling near such a water resource, would it be
8 necessary to clear the area within that 400-foot
9 setback?

10 A (Bucci) No. You're -- let me rephrase my
11 answer. I understand that the question means would you
12 have to clear it from the waterway to the point back
13 400 feet. No. You could -- you could have the -- the
14 area can be left alone. You just need an area to put
15 the drilling equipment. Once you drill into the ground,
16 you don't have to clear the -- the rest of the area.

17 MR. KLUCSIK: Thank you.

18 JUDGE STOCKHOLM: So for the pushing of the
19 line that is actually installed this way, there will be
20 no cleared right-of-way?

21 MR. BUCCI: That's correct, Your Honor. The
22 drilling would be underneath the waterway so that there
23 would be -- not necessary to disturb anything on the
24 surface.

1 JUDGE STOCKHOLM: It would also be underneath
2 the surface of the ground?

3 MR. BUCCI: Yes.

4 JUDGE STOCKHOLM: Yes. Okay.

5 MR. BUCCI: Yes. Yes.

6 MR. BLOW: Your Honor.

7 JUDGE STOCKHOLM: And the other question I had
8 is the discussion that you just had, or the answers you
9 just gave concerning the HDD under the reservoir, or
10 all -- for example, I think that NYRI said that for
11 underground portions where there were, I think, trout is
12 sea grade or better trout streams, that you were going
13 to use HDD. And my question is, do you have to be
14 400 feet away from those streams?

15 MR. BUCCI: No, Your Honor. That's restricted
16 to -- that discussion is restricted to the reservoir
17 itself.

18 JUDGE STOCKHOLM: Okay. And just how far away
19 from those streams would you -- as a general
20 construction matter?

21 MR. BUCCI: Not very far at all. And the
22 reason I say that is, the distance depends on the -- how
23 deep you need to go. So the shallower stream, you can
24 get much closer.

1 JUDGE STOCKHOLM: Thank you.

2 MR. BLOW: Your Honor, I don't like to
3 interrupt, but we're on this topic. And the question
4 that was raised by you and Mr. Klucsik brought a
5 question to mind, if I might.

6 If there's no cleared right-of-way, when you
7 do -- when you have HDD, how do you deal with a fault in
8 the -- if you have a cable fault and you've installed by
9 HDD?

10 MR. BUCCI: The simple answer is you have to
11 pull the cable out.

12 MR. BLOW: So you -- so you get pulling
13 equipment and you install it at the place where you had
14 cleared to -- the exit and entry point for the HDD,
15 right, and then you'd pull it to one of those cleared
16 areas; is that what you're saying?

17 MR. BUCCI: Yes, that's basically what we're
18 saying.

19 MR. BLOW: And you don't -- you wouldn't need
20 to maintain any cleared right-of-way for -- for crossing
21 streams by HDD?

22 MR. BUCCI: I didn't -- I didn't say that, or
23 at least -- no, I didn't say that. What I -- what I was
24 referring to about no cleared right-of-way was that the

1 land directly over the drilled portion does not have to
2 be cleared, but certainly, you know, as you're -- the
3 trench -- where the trench ends or where the overhead
4 portion ends, or -- that portion, you know, where you
5 actually start to drill, that area would be cleared as
6 part of the right-of-way.

7 MR. BLOW: Obviously. Thanks.

8 MR. KLUCSIK: If I may resume, Your Honor.

9 JUDGE STOCKHOLM: You certainly may. Thank
10 you.

11 BY MR. KLUCSIK:

12 Q I want to -- just before we leave Mr. Blow's
13 question, I want to make sure I understand your answers.

14 Is it your testimony, then, that in order to
15 repair a fault which occurs in underground cable
16 installed by means of horizontal direct drilling, the
17 procedure would be to establish a site at some setback
18 distance from the water resource or other sensitive
19 resource and pull the cable out from under that resource
20 in order to repair the fault?

21 A (Bucci) You would pull the cable out. You
22 wouldn't -- you wouldn't have to establish a site. It
23 would be where the -- where the pipe or conduit ends.
24 In other words, the underground -- the drilled portion

1 of the cable will be in a conduit. Where that conduit
2 ends is where you would have to pull.

3 Q Thank you, Mr. Bucci. I'd also like to go back
4 to some questions Judge Stockholm asked you with respect
5 to horizontal direct drilling and water resources other
6 than the Rio River.

7 With respect to water resources other than the
8 Rio Reservoir, is it your testimony that horizontal
9 direct drilling would involve placement of the drilling
10 machine at some distance removed from the edge of the
11 water resource, that would be setback?

12 A (Bucci) Well, there's always -- there always
13 has to be a setback of some sort, yes.

14 Q And that setback would vary depending on the
15 depth and length of the drilled portion?

16 A (Bucci) Those are two -- those are two of the
17 factors. There are other factors that would vary also.
18 The drilling equipment for smaller drills is much
19 smaller than the -- so there's not much room required.

20 Q And with respect to those circumstances where
21 you would be dealing with other water resources, would
22 you need to clear the distance between the edge of the
23 water resource and the drill site?

24 A (Bucci) No. The drill site is the only -- the

1 only part that needs clearing. Drill -- where the
2 drill -- where the conduit will enter the ground or the
3 drill will enter the ground and will exit on the other
4 side.

5 Q Mr. Bucci, my questions up until now have
6 related to the use of horizontal direct drilling in
7 proximity to water resources.

8 Would the setbacks and the clearing
9 requirements that you've just described with respect to
10 horizontal direct drilling approximate to water
11 resources also apply with respect to the use of
12 horizontal direct drilling near other sensitive
13 resources?

14 Let me rephrase the question.

15 If you were using horizontal direct drilling to
16 avoid a sensitive archaeological site, would the
17 drilling machine be set back from the anticipated border
18 of that archaeological site?

19 A (Bucci) It would always have to be set back
20 from the -- from the object that you are -- that you had
21 to drill underneath. In order to get that low into the
22 ground, however low that may be, you need a certain
23 angle to enter the ground. And depending on that depth
24 and that angle, that's what would determine the -- the

1 . distance back from the -- from the object that you would
2 have to be.

3 Q So there would be some setback from the
4 location of the obstacle you were seeking to avoid?

5 A (Bucci) There would have to be in order to get
6 the proper angle for the drilling machine, drilling
7 machine limitations with regard to angle.

8 Q And in that circumstance, would it be necessary
9 to clear the land between the drill site and the
10 location of that resource?

11 A (Bucci) Not -- not for the purposes of
12 drilling. The drill -- once the drill goes in the
13 ground, unless -- I mean, you know, under -- of course,
14 there can always be an unforeseen problem where, you
15 know, I might want to do something else, but normally,
16 that's not the procedure. For example, a drill that I
17 bring up from time to time we're quite proud of is we
18 drilled under the New Jersey Turnpike. Now, you know,
19 you can't come up in the middle of the New Jersey
20 Turnpike. So, you know, these are typically the way
21 it's done. Once you're underneath, you don't disturb
22 what's on the surface.

23 Q Thank you, Mr. Bucci. I have a couple
24 questions with respect to other types of construction.

1 Is it correct that the normal or typical or
2 most frequently encountered construction process
3 anticipated for construction of the NYRI line would not
4 be rail-mounted construction?

5 A (Bucci) Could you repeat that one more time?

6 Q Most of the line would not be constructed from
7 a railcar; is that correct?

8 A (Bucci) That's correct.

9 Q Would it be constructed using rubber-tired
10 vehicles?

11 A (Bucci) That's one of the methods. Another one
12 is track vehicles.

13 Q So a Caterpillar type track vehicle --

14 A (Bucci) Yes.

15 Q -- would be another type of equipment that
16 would be used in non-rail-mounted construction?

17 A (Bucci) Could be, yes.

18 Q And those rubber-tired or tracked vehicles
19 would make their way to the marshaling yard or laydown
20 area on an access road; is that correct?

21 A (Bucci) Yes.

22 Q And would they make their way from the
23 marshaling yard or laydown area to the construction site
24 via an access road?

1 A (Bucci) It could go along the right-of-way if
2 there's room.

3 Q So your answer is that the access road could be
4 within the right-of-way?

5 A (Bucci) The access to a specific tower
6 location, yes, from the -- could be, sure.

7 Q And in some places along the proposed route,
8 there are existing access roads; is that correct?

9 A (Bucci) Yes.

10 Q And in some places, there are no access roads
11 currently existing; is that correct?

12 A (Bucci) Well --

13 Q You would have to create --

14 A (Bucci) Or limited such that we would have to
15 create an access road.

16 Q Could you give me a description of the existing
17 access roads? Is there a typical access road in terms
18 of the nature of its construction? What's it made of?

19 A (Bucci) Well, if you're talking about access
20 road that's built specifically for the purposes of
21 accessing the transmission right-of-way, we --

22 Q This question asks -- this question asks if you
23 can describe a typical existing access road in terms of
24 the materials of its construction?

1 A (Bucci) Right. Well, keep in mind that we were
2 going to use existing roads wherever possible, not
3 necessarily built specifically for access to
4 transmission, but the -- the road that we provided in
5 our application description is fairly typical for an
6 access road.

7 JUDGE STOCKHOLM: Where is that in the
8 application?

9 MR. BUCCI: Access roads are in Exhibit 4. And
10 we gave a 16-and-a-half-foot width, road width.

11 Q I'll accept that. My question, though, is, is
12 the typical existing access road concrete?

13 JUDGE STOCKHOLM: Counsel, you're referring to
14 existing access roads on the Marcy South facility?

15 MR. KLUCSIK: Existing access roads wherever
16 they would be used on the proposed route.

17 A (Bucci) My answer is that the access road
18 description that we gave that we'd build for a new
19 access road, I mean, it's basically a typical access
20 road, so -- but I have no specific knowledge of the
21 existing access roads, what they look like or the
22 materials. So that's as close as I can get you.

23 Q Okay. So your testimony is you don't know what
24 the existing access roads are built of, are made of?

1 A (Bucci) I would expect that they're similar to
2 what we would propose.

3 Q Which would be what?

4 A (Bucci) Either gravel or concrete depending on
5 the weight requirements.

6 Q So it's your testimony that where you need a
7 new access road, you're going to build it of concrete or
8 gravel; is that correct?

9 A (Bucci) No. We can also use native soil
10 without gravel for temporary access roads.

11 Q So it might be concrete?

12 A (Bucci) We believe that a gravel base would be
13 sufficient for the weights anticipated.

14 Q So it would not be concrete?

15 A (Bucci) Correct.

16 Q And it most likely would be gravel?

17 A (Bucci) Or native soil.

18 Q So it might be dirt?

19 A (Bucci) Yes.

20 Q Would the description you just gave of the
21 access road you might build apply to temporary access
22 roads?

23 A (Bucci) They would likely be native soil.

24 Q Can you tell me what specifications you would

1 use for the construction of such access roads?

2 A (Bucci) The access roads would be designed for
3 the vehicles that we will be using, weight and width.
4 We give -- the dimension that we give that's expected is
5 16-and-a-half-feet wide.

6 Q Have you established the specification for
7 load-bearing strength of the roads?

8 A (Bucci) No. That would be established based on
9 the detail design, you know, and construction. Vehicle
10 sizes and weight's determined later.

11 Q Does your application indicate the size of the
12 structural components necessary to build a lattice
13 tower?

14 A (Bucci) Well, for all the components that we --
15 yes, it gives sizes for the components. And for all the
16 sizes that we give in the application, which are
17 representative, the -- the access road that we describe
18 in here are -- would be sufficient for those.

19 Q So from the sizes, you're capable of discerning
20 the weight of the structures or the components?

21 A (Bucci) From the sizes and materials --

22 Q From the sizes of the materials, you can
23 derive -- you can derive the weight that would have to
24 be carried over the roads?

1 A (Bucci) From the size of the material and the
2 type of material together.

3 Q So is -- since you know the approximate sizes
4 and can calculate the approximate weights, is there any
5 reason that you can't set a specification for the access
6 roads today?

7 A (Bucci) Yeah. We don't know the -- the exact
8 range of sizes that would be used in any given location.
9 And that doesn't include only the materials, but it
10 includes the construction equipment itself.

11 Q I'd like to move now to application, Exhibit 4.
12 I believe the relevant section is going to be 4.6.6.2.
13 My questions relate to caisson foundation construction.
14 And you may be able to answer my questions without
15 reference, but I think that's the relevant text in the
16 application if I'm not mistaken, 4.6.6.2.

17 Are you with me?

18 A (Bucci) I have it. Yes.

19 Q I'd like you to help me understand caisson
20 foundation construction, if you will.

21 Starting point, I assume, is the excavation of
22 a hole for the caisson; is that correct? Would that be
23 the first step in the construction of a foundation that
24 makes use of caissons?

1 A (Bucci) Yes. The reason for my hesitation is
2 excavation -- I wouldn't -- the augers would dig
3 straight down.

4 Q To create a whole for the caisson?

5 A (Bucci) That's excavation, but creating a hole
6 using augers, digging straight down, yes.

7 Q And once the whole was prepared, does the
8 construction of the caisson itself involving pouring
9 concrete into the hole?

10 A (Bucci) Generally, yes.

11 Q And once --

12 A (Bucci) Excuse me. There's more to it than
13 that, but that would be one of the things you'd have to
14 do.

15 Q In a simplified world.

16 A (Bucci) Yeah.

17 Q And once the caisson pour was completed, would
18 there be a concrete foundation cap placed or constructed
19 on top of the caisson?

20 A (Bucci) Depends on the foundation type. If you
21 refer to the figures in E dash -- figures in E-1, for
22 example, one type without the concrete cap would be in
23 the -- for a typical pole caisson foundation in -- well,
24 we don't say the type of soil, but it's generally going

1 to be a good -- good supportive soil. That would just
2 be the cylindrical caisson itself.

3 Q So in that circumstance, the diameter of the
4 caisson would represent the entire diameter of the
5 foundation?

6 A (Bucci) That would be -- that's correct.

7 Q Can you give me a sense of -- with respect to
8 lattice tower construction, for example, how many
9 caisson -- how many caissons per structure you would
10 anticipate, assuming -- assuming we were in soil that
11 required the use of caissons?

12 A (Bucci) We generally -- they're generally
13 referred to as piles because -- for -- for lattice type,
14 the reason being, with the lattice type, you use --
15 you'd use a concrete cap to get a square surface area
16 for the -- for the lattice leg. You're not dealing with
17 a cylindrical pole. So there would be a concrete
18 rectangular cap, if needed, piles or caissons, but
19 they're -- they're called piles because their -- their
20 diameter is much smaller.

21 Q In that circumstance, would the pile be driven
22 or poured?

23 A (Bucci) Could be either one. Generally driven,
24 but could be --

1 Q And how about for a monopole, how many caissons
2 would you anticipate for a monopole construction,
3 assuming for the purposes of the question that use of a
4 caisson was appropriate for a monopole construction?

5 A (Bucci) Well, normally when we say caisson for
6 a monopole, we mean the one caisson that the pole would
7 actually bolt onto the top. It would be just one
8 caisson. However, there are -- in poor soil conditions,
9 we indicate some pole foundations that do have a
10 concrete cap, rectangular cap. And under that cap,
11 there would be multiple piles or caissons of smaller
12 diameter.

13 Q So could you give me a range of -- of likely
14 caisson number per foundation? I assume the beginning
15 point is one. What's the -- what's the upper number
16 that you might anticipate?

17 A (Bucci) Yeah. They're in the -- they're in the
18 figures. I guess each of the figures where we show
19 piles does give a number, a range. So it would be
20 whatever is in the figures. Various numbers depending
21 on the foundation type.

22 Q Can you give me a sense of what you anticipate
23 as the maximum caisson depth?

24 A (Bucci) I can give you an estimated length.

1 Q Let's start with an estimated length. I assume
2 that would mean an average or typical? No?

3 A (Bucci) That would mean --

4 (Moujtahed) Those are really -- you can't have
5 a specific answer when you say range, because we're
6 talking about what? We're talking about what kind of
7 soil? Is it -- is it monopole? I mean, it goes all
8 over the map.

9 Q I appreciate that. Let me rephrase the
10 question then.

11 In a circumstance where you have a really big,
12 really heavy monopole, and you have really lousy
13 load-bearing soil, how deep would the caisson be?

14 A (Bucci) That's the case when you use piles,
15 multiple piles rather.

16 Q Then let me try --

17 A (Bucci) We do give a number in the application
18 of -- I'm sorry. The depth.

19 Q The depth, yes. What would be the deepest
20 caisson you would use?

21 A (Bucci) I can't tell you the deepest, but in
22 poor soil, you use a caisson -- or you use a pile -- I'm
23 distinguishing piles from caissons. Multiple piles of
24 smaller diameter, 40 feet.

1 Q Thank you.

2 A (Bucci) Typical.

3 Q Thank you. That's very helpful. Let's try
4 another dimension.

5 What do you expect would be the maximum
6 diameter for such a caisson?

7 A (Bucci) Is that the third dimension, because --
8 I can't give any more. Yes. It's 12 inches.

9 Q Twelve inches?

10 A (Bucci) Typical. For the pile driven under
11 the -- that would go -- to support the concrete cap.
12 The other --

13 Q What would the maximum dimension -- the maximum
14 diameter be for a poured caisson?

15 A (Bucci) Well, the caisson in Figure E-1.1.1-11,
16 which is a typical pole caisson, is a diameter of
17 approximately 7 feet for tangent and 8 feet for angle
18 structure.

19 Q Am I correct that the application states that
20 the caisson hole would be created by a large-diameter
21 auger? Or let me just -- without reference to the
22 application, would the caisson hole be created by a
23 large-diameter auger?

24 A (Bucci) By an auger, the diameter of the hole.

1 Q Which could be up to 7 or 8 feet?

2 A (Bucci) Correct.

3 Q And is it correct that that -- the use of such
4 an auger could create up to 90 cubic yards of soil
5 removed from the hole?

6 A (Bucci) As a matter of fact, that's a quote
7 from the application, yes.

8 Q Funny how that works out.

9 A (Bucci) It's great.

10 Q And the process that we've just described in
11 terms of auguring a hole for the caisson and pouring
12 concrete to create it, would that be the same process
13 for construction of poles along the railroad within the
14 railroad right-of-way? Would that be the -- would the
15 description you've given us in the last couple minutes
16 apply to construction of caisson foundation poles in the
17 railroad right-of-way?

18 A (Bucci) Yes. Let me just check the figure for
19 the -- yeah. Naturally, it depends on -- naturally,
20 yes.

21 (Moujtahed) It all depending where you are
22 digging the hole. Is it raw? Is it water base?

23 (Bucci) Which is what we were describing. I
24 would say we were talking in general about the size of

1 piles that could be expected for the various
2 foundations. And yes, it would apply.

3 Q And would the techniques that we've just talked
4 about also apply in the New York City Watershed,
5 assuming you were dealing with soils that commended the
6 use of caissons?

7 A (Bucci) Well, one that we haven't talked about
8 is the wood pole, which requires no foundation. You
9 insert the pole into the ground.

10 Q I appreciate that.

11 A (Bucci) And that would be good soil conditions,
12 you know, sturdy soil conditions. You could use that.

13 Q That's useful information, but it's not an
14 answer to my question.

15 My question was, would the process that we've
16 just described for caisson construction apply in the New
17 York City watershed assuming that load-bearing strength
18 commended the use of caisson construction rather than
19 some different foundation technique?

20 A (Bucci) Yes, it would apply with the
21 possibility, of course, of additional restrictions or
22 requirements on the process. But yes, process would
23 apply.

24 Q I want to turn now to some additional questions

1 with respect to foundations and their construction.
2 We've just talked about the use of concrete in the
3 creation of caissons and foundation caps. Are there
4 other uses of concrete associated with either monopole
5 or lattice tower construction?

6 A (Bucci) I'm sorry. I have to ask you to repeat
7 the question because I was looking at some figures.

8 Q Are you going to use concrete to do anything
9 other than build caissons or foundation caps at the
10 structures?

11 A (Bucci) In maybe small amounts for special
12 unique things that come up; for example, at the
13 transition stations, there would be some additional
14 foundations for potheads. There may be -- yes, there
15 would be -- there could be concrete used for splicing
16 what we call along the underground cable, a splice box
17 or splice manhole.

18 Q Splice box foundation?

19 A (Bucci) No. The manhole itself --

20 Q The manhole?

21 A (Bucci) -- could be -- could be poured
22 concrete.

23 Q And I assume there would be poured concrete
24 used in the construction of the converter stations?

1 A (Bucci) Oh, yes. Right. And when we get to
2 the converter stations, there would also be poured
3 concrete foundations.

4 (Pichardo) It should be noted that the
5 underground portion is not encased in concrete. I would
6 say the amount of concrete would be limited because the
7 underground portion of the cable, or the amount of
8 concrete is limited in a certain way because the cable
9 is designed to be direct buried underground.

10 (Bucci) Yes. Where underground cable crosses a
11 roadway to provide protection for the trench, there
12 would be a slab of concrete used.

13 Q Can you give me an idea of what you'd expect in
14 terms of required concrete volume for a series of poles
15 that involve poured caissons and concrete foundation
16 caps, or per pole? Let's do it per pole.

17 How much concrete would be required for --
18 assume -- for the purposes of my question, please assume
19 the maximum depth of the caisson and the maximum
20 foundation cap area. My question is, taking those
21 assumptions, what do you anticipate as the volume of
22 concrete required for that installation?

23 A (Bucci) Well, your question is not really a
24 valid -- let me clarify. The volume of concrete -- the

1 maximum concrete pile also depends on the -- the pole
2 size that needs to be supported. And the maximum is
3 rarely used. It's only used for terminal towers or
4 large angle towers. So we have a straight run, which is
5 most of the route. You don't use the maximum.

6 Q But we don't know where the maximum towers are
7 going to be, do we?

8 A (Bucci) We have only an idea from the -- from
9 the design that we have now, which wherever there's a
10 change in direction of the center line of the route. So
11 I could give it to you for one -- a tower. I mean, it's
12 on the -- it's on the figures. You just need to pick a
13 figure, but I could give that to you.

14 JUDGE STOCKHOLM: Could you -- could you give
15 us a volume each for tangent, angle and dead end?

16 MR. BUCCI: It would also -- tangent, angle and
17 dead end do not have a set foundation. It also depends
18 on the soil type. Both -- both things come into play.
19 So it's difficult to give a total cubic yards, you know,
20 for the whole project.

21 Q Let me try to make it easy for you.

22 A (Bucci) I broke it down by how many towers we
23 have of each type and --

24 Q Let me try to make it easier for you then.

1 Let's take two circumstances. First is your typical
2 tangent tower.

3 A (Bucci) Okay. I can give you that.

4 Assuming that typical -- the typical tangent
5 tower is in decent soil conditions, which I'm expecting
6 it to be.

7 Q Let's assume for purposes of concrete-use that
8 we have a typical tangent tower in a circumstance that
9 requires a poured caisson and a foundation cap. Is that
10 a -- is that a reasonable scenario, that there might be
11 such tangent towers?

12 A (Bucci) Well, only dead-end structures.
13 Tangent towers would be, as we say in the application,
14 typical -- they wouldn't have the cap.

15 Q So it would just be the caisson? I'll take
16 that number if that's typical.

17 A (Bucci) Sure. Cubic yards of concrete for one.
18 And arguably the worst case would be -- in the typical
19 figures, the worst case is the angle structure, which
20 is -- did I say I was going to give you tangent? I'm
21 sorry.

22 Q I thought so.

23 A (Bucci) Okay. Tangent is 60 cubic yards. And
24 they're both on the figures. Angle is 75 cubic yards.

1 Q And that would be the biggest?

2 A (Bucci) No. One typical --

3 Q Now that we've established the typical tangent
4 cubic yard requirement for concrete, what's the worst
5 case?

6 A (Bucci) I can't give you a worst case. We
7 haven't done a design to that specific -- specificity at
8 this point.

9 JUDGE STOCKHOLM: What is the -- we've got --
10 you gave us numbers for tangent and angle that are
11 typical. Do you have a number that is typical for
12 dead-end structure?

13 MR. BUCCI: Yes. Let's see. That one is for
14 rock anchor, and this is for --

15 MR. MOUJTAHED: I'm sorry. What type of
16 structure so we can provide you the right --

17 MR. KLUCSIK: I think the judge asked about a
18 dead-end structure.

19 JUDGE STOCKHOLM: Dead-end or terminal
20 structure.

21 MR. MOUJTAHED: Right, but we're talking about
22 pole or we're talking about rock soil? I mean, rock --
23 the type of --

24 JUDGE STOCKHOLM: Typical soil. Whatever you

1 think is typical.

2 MR. BUCCI: All right. For the same soil that
3 I just gave the other example, which is typical soil,
4 decent soil, for the dead-end structure, it would be a
5 rectangular concrete pad, 12 inches by 36 inches.
6 And -- oh, in terms of total volume?

7 MR. KLUCSIK: Concrete volume.

8 MR. BUCCI: Okay. We give it. The cap would
9 be -- the cap itself is 195 cubic yards for this
10 dead-end structure. Caissons, 85 cubic yards.

11 MS. LEARY: Excuse me.

12 MR. BUCCI: That's for two.

13 MS. LEARY: For the record, may we hear the
14 figure number again?

15 MR. BUCCI: Yes. Figure E-1.1.1-11.

16 The figures are good.

17 BY MR. KLUCSIK:

18 Q And, Mr. Bucci, can you tell me at this point
19 how many of those typical tangent structures would be
20 installed per mile of overhead line?

21 JUDGE STOCKHOLM: Do you have the actual number
22 of towers based on the current design for the whole
23 thing? We can do the math, do the division.

24 MR. BUCCI: It's approximately seven structures

1 per mile taken the full length of the line into account,
2 you know, of course, minus the underground portions.

3 JUDGE STOCKHOLM: And total number of
4 structures per mile again on average?

5 MR. BUCCI: Seven structures per mile on
6 average.

7 JUDGE STOCKHOLM: Okay. The question,
8 however --

9 MR. BUCCI: Total.

10 JUDGE STOCKHOLM: -- was how many tangent
11 structures per mile on average. I believe, counselor --

12 MR. KLUCSIK: That was the question, Your
13 Honor.

14 BY MR. KLUCSIK:

15 Q Mr. Bucci, if I it helps you, I'm trying to
16 figure out what the concrete needs are per mile.

17 A (Bucci) I would go with the seven per mile, you
18 know, without doing a detailed estimate.

19 Q I'll accept that. Do you have a sense of how
20 much concrete would be needed --

21 A (Bucci) Well, we have done estimates to arrive
22 at the costs, and we provided those in response to one
23 of the interrogatories.

24 JUDGE STOCKHOLM: You've prepared a number so

1 that you can tell me how many yards of concrete are
2 going to be needed for this project?

3 MR. BUCCI: The quantity that we've used for
4 cost-estimating purposes is available, yes, Your Honor.
5 It's in one of the exhibits that we've provided in
6 response to interrogatories.

7 JUDGE STOCKHOLM: You don't recall that,
8 Mr. Klucsik? I don't recall seeing it either, although
9 I don't see most of the answers, I just see the
10 questions.

11 MR. BLOW: Your Honor, I believe it's Exhibit
12 180. Mr. De Waal Malefyt included it as Exhibit --

13 JUDGE STOCKHOLM: To his testimony?

14 MR. BLOW: Yes. It was prepared by NYRI, but I
15 thought it was Panel A, though. So I don't know whether
16 it's this panel or Panel A that should be discussing it,
17 but in any case, we were going to ask Panel A to
18 describe the exhibit since the exhibit was prepared by
19 Panel A.

20 JUDGE STOCKHOLM: Well, if we have an exhibit
21 in the record, it may facilitate questions that are
22 being asked at the moment.

23 MR. BLOW: There may be other discovery
24 responses, but the -- the exhibit regarding the cost

1 estimation for the deviations that DPS staff had talked
2 about on the Marcy South Alternative is Exhibit 180, and
3 that was a cost estimation exhibit in part, at least.

4 JUDGE STOCKHOLM: Well, maybe this is not going
5 to be that simple. I just looked -- we are just looking
6 at Exhibit 180. And it's not immediately obvious to us
7 that numbers are provided that would answer the question
8 of the number of yards of concrete.

9 MR. KLUCSIK: If Mr. Bucci would offer an
10 estimate, I would probably accept it.

11 JUDGE STOCKHOLM: That's fine. Do you have
12 those numbers somewhere that you know of, Mr. Bucci? I
13 mean, rather than getting an estimate on the record,
14 have you actually done this calculation?

15 MR. BUCCI: Yes.

16 JUDGE STOCKHOLM: It sounds to me like a
17 calculation has been done.

18 MR. BUCCI: Yes, Your Honor. And it is in an
19 exhibit that we provided, the cost estimates.

20 JUDGE STOCKHOLM: All right. Let me show you
21 Exhibit 180, and perhaps you can answer the question.

22 Okay. It apparently is not in Exhibit 180.

23 MR. SINGER: I think it's in the discovery
24 response.

1 MR. BUCCI: I can do an estimate right now,
2 Your Honor. It's just that I -- you know, it could be
3 slightly different than the estimated number that we've
4 spent, you know, time on.

5 JUDGE STOCKHOLM: If it's available, I'd just
6 as soon get the correct number in the record.

7 MR. KLUCSIK: I think I've got a shortcut if
8 you'll indulge me.

9 JUDGE STOCKHOLM: I think we're almost there.
10 Counsel wants to show the witness an response to an
11 interrogatory. I'm going to allow him to do that.

12 MR. KLUCSIK: I'm suspect we are approaching
13 the same --

14 MR. BISSELL: 246.

15 MR. KLUCSIK: Go ahead.

16 MR. BISSELL: I was just going to say, I think
17 what Mr. Bucci is referring to is the response to CARI
18 246, provided the work papers for the cost estimate.
19 And I was just going to ask Your Honor if I can show him
20 this response so he can see the answers in those work
21 papers?

22 JUDGE STOCKHOLM: Yes, sir.

23 BY MR. KLUCSIK:

24 Q Mr. Bucci?

1 A (Bucci) Yes.

2 Q Rather than have you labor through the fine
3 print of your cost estimates, I'll ask you whether you
4 participated in preparing the response to CARI
5 Interrogatory 406 -- I'm sorry, 407?

6 MR. SINGER: I think you'd have to show that to
7 them. I don't think he's memorized which of the
8 hundreds of responses that he's participated in.

9 MR. KLUCSIK: I'd be delighted to do so.

10 MR. BUCCI: Most of them.

11 JUDGE STOCKHOLM: Is the number that you're
12 looking to establish on the record in that document,
13 counsel?

14 MR. KLUCSIK: It is, Your Honor.

15 JUDGE STOCKHOLM: Thank you.

16 BY MR. KLUCSIK:

17 Q If you would -- if you would focus your
18 attention on the last paragraph, I believe the answer to
19 my question may be found therein.

20 Let me ask a fresh question and see if you can
21 answer it with that paper in hand.

22 A (Bucci) Okay.

23 Q Can you give me an estimate of the concrete
24 requirement in cubic yards for the typical monopole

1 structure?

2 A (Bucci) Be on the order of 55 cubic yards of
3 concrete.

4 Q Thank you, Mr. Bucci.

5 Let me try to press my luck one step further
6 and ask you whether you have an estimate for the
7 concrete requirement to build a converter station? That
8 will not be found in the answer to Interrogatory 407.

9 Can you give me an order of magnitude estimate?
10 I'm not looking for an exact number.

11 A (Pichardo) What about a thousand cubic yard?

12 (Bucci) We haven't done that. You know,
13 there's a number of different components within the
14 converter yard that we would have to add up and think
15 about.

16 Q A range?

17 A (Bucci) Based on -- well, I will say it will be
18 based on the footprint that's provided in the
19 application.

20 Q But that doesn't -- that doesn't really give us
21 the capability of calculating the volume of concrete
22 because I don't know the depth of the required
23 foundations over that footprint.

24 A (Bucci) And neither would we, because we

1 haven't done a detailed soil analysis.

2 Q So your answer is you don't know at this point;
3 is that right?

4 A (Bucci) Yes.

5 Q Thank you. Would you agree that it's a big
6 number?

7 JUDGE STOCKHOLM: Compared to what, counselor?

8 A (Bucci) Yeah, exactly.

9 Q Would it be in the range of a -- would a
10 thousand cubic yards be a wildly unrealistic number?

11 A (Bucci) No.

12 Q Thank you.

13 A (Bucci) It wouldn't be wild.

14 Q With respect to transmission line, would you
15 expect the concrete needs for construction of poles or
16 towers to be satisfied from the same point of origin?
17 Let me rephrase the question.

18 How many miles of line would you expect to
19 service from a single point of origin for the concrete?

20 A (Bucci) I can more accurately answer your first
21 question because it's a more general question. We
22 haven't done the exact, you know, dimensions on this.
23 But no, it would be from various points along the -- the
24 line. It could be from -- you know, we would have to do

1 the detailed investigation of the quarries in the area,
2 so forth, together with the selected contractor
3 knowledge.

4 Q Would you anticipate the location of a concrete
5 manufacturing plant at any of your laydown areas?

6 A (Bucci) I wouldn't rule that out necessarily.
7 We don't know at this point.

8 JUDGE STOCKHOLM: Is -- is that a typical
9 technique that you use in transmission line
10 construction?

11 MR. BUCCI: It has been used. It can be used.
12 If it will -- if the -- if the many different
13 conditions, including distance to the nearest local
14 facility -- well, just that, you know, knowing New York
15 State, there's quite -- there's quite a bit available --
16 it would be less likely, I think, in this area to have
17 to build our own concrete batch plant.

18 JUDGE STOCKHOLM: If in the final design you
19 were going to do that, would there be other
20 environmental protections or other requirements at that
21 kind of a laydown site if you were creating your
22 concrete there?

23 MR. BUCCI: I don't believe so, Your Honor.
24 We're not going to be quarrying. We're going to just be

1 mixing. So it would be similar to the operation in
2 taking the concrete from the truck, you know, down the
3 chutes to the -- to the location.

4 JUDGE STOCKHOLM: Okay.

5 MS. WILKINSON: Your Honor, may I ask a
6 follow-up based on that question?

7 JUDGE STOCKHOLM: You may.

8 MS. WILKINSON: Mr. Bucci, would there be any
9 air-pollution-emitting equipment associated with that
10 concrete production?

11 MR. BUCCI: I'm giving my -- my opinion based
12 on experience. You know, that -- like I said, basically
13 the same kinds of equipment and materials are involved
14 in either operation.

15 MS. WILKINSON: I'm not sure I understand.

16 MR. BUCCI: I don't really see a significant --
17 any difference between the operation of bringing the
18 concrete to the site in a ready-mix truck and pouring it
19 versus bringing the materials and mixing it on the -- on
20 the site itself.

21 MS. WILKINSON: What I'm asking, though, is
22 would you have a source of air pollution at that site
23 where you're making the concrete?

24 MR. BUCCI: Well, my only answer I can give you

1 is that, with any expert opinion, is that I don't see a
2 difference in any of the operation -- you know, a major
3 difference in the operation or the equipment involved,
4 whether it was mixed at the site or whether it was
5 poured and used at the site. I mean, there's trucks,
6 there's crushed rock, there's concrete. I don't --
7 cement. Excuse me. Cement. There's vehicles.

8 Do you mean like exhaust fumes from vehicles?

9 MS. WILKINSON: Well, I'm wondering -- the
10 truck is going to be -- the truck would be stationary at
11 that site for some time, right, if it's making the
12 concrete?

13 MR. BUCCI: Or if it's mixing -- or if it's
14 delivering the concrete, it would be there.

15 MS. WILKINSON: Is the truck going to be on and
16 operating while that occurs?

17 MR. KLUCSIK: Your Honor, I'd like to reclaim
18 my cross-examination, if I may.

19 MS. WILKINSON: I'm sorry. I apologize. But
20 it was based on the judge's question.

21 JUDGE STOCKHOLM: You may. I don't think I
22 quite got to the depth that we were going at this point.
23 It is your cross-examination. You may proceed,
24 counselor.

1 MR. KLUCSIK: Thank you, sir.

2 BY MR. KLUCSIK:

3 Q Mr. Bucci, if a concrete batch plant were
4 located at one of the laydown areas, would it be
5 required to bring in by truck the Portland cement used
6 in the manufacture of the concrete?

7 A (Bucci) Yes, you would bring in --

8 Q And would it be necessary to bring in by truck
9 the crushed stone that would be necessary for the
10 manufacture of that concrete?

11 A (Bucci) Yes.

12 Q Would it be necessary to bring in the water
13 that is -- by truck which is -- would be necessary for
14 the manufacture of that concrete?

15 A (Bucci) Or you would need water, not
16 necessarily have to bring it in by truck.

17 Q Assuming it was not present naturally at the
18 laydown area, would you need to bring it in by truck?

19 A (Bucci) If it was -- if there wasn't water
20 available at the site, yes, water source, yeah. Yes.

21 Q So in that respect, the location of a concrete
22 batch plant at a laydown area would have significantly
23 different characteristics than the simple movement of a
24 ready-mix truck to that site; is that correct?

1 A (Bucci) Well, what I'm saying is that all the
2 ingredients are there, the water, the aggregate, the
3 concrete. It's mixing in -- the ingredients are there.
4 So I'm not sure that I -- you know, how -- what you mean
5 by different -- everything is different. So, to me,
6 it's -- it's a similar process.

7 Q In the case of --

8 A (Bucci) It's not going to be a huge batch plant
9 either, obviously, because of the limitations at the
10 site, so. And that's one of the reasons why it's
11 generally, you know, avoided if there's local, you know,
12 batch plants available.

13 Q In the circumstance where we had a batch plant,
14 you would need at least three trucks to bring in the
15 requisite materials to the site, to the batch plant; is
16 that correct?

17 A (Bucci) I don't know.

18 Q Well, we just went through the ingredients,
19 which are cement, stone and water.

20 A (Bucci) Three separate ingredients. Okay.

21 Q Would you --

22 A (Bucci) If you want to use that basis to
23 estimate the number of trucks, I couldn't say.

24 Q Those ingredients --

1 A (Bucci) Obviously there's different trucks for
2 different materials, correct.

3 Q And in the case of delivery to the laydown area
4 by ready-mix truck, all those ingredients would be
5 contained in a single truck, wouldn't they?

6 JUDGE STOCKHOLM: Would you be able to put a
7 truckful of water, a truckful of cement and a truckful
8 of gravel into a single cement truck driving to the site
9 to deliver cement?

10 MR. BUCCI: No, Your Honor.

11 JUDGE STOCKHOLM: Thank you.

12 Q In the absence of a concrete batch plant
13 located at a laydown area, would the concrete be
14 delivered to the laydown area by a ready-mix truck?

15 A (Bucci) Yes, most likely. Yes. Could be
16 railcar.

17 Q In the circumstance where we were not talking
18 about rail-mounted construction?

19 A (Bucci) Yes. Truck, ready-mix truck.

20 Q And would the requisite concrete be delivered
21 to the construction site, the pole site, by ready-mix
22 truck?

23 A (Bucci) Yes.

24 Q Can you tell me what the weight of a fully

1 loaded ready-mix truck is?

2 A (Bucci) Is that not an interrogatory that we're
3 currently responding to?

4 Q You owe me none.

5 A (Bucci) Okay.

6 MR. MALONE: Your Honor, just for
7 clarification, I think they owe me one, and that was
8 the -- how much thermal backfill on the 7.7-mile
9 underground and how many cement trucks, because he
10 testified that the thermal backfill is similar to or has
11 characteristics of cement and would be brought in by
12 cement trucks, how many cement trucks it would take to
13 bring those in.

14 MR. SINGER: I just want to point out that when
15 people say we owe them one, I don't think that means
16 that the responses are overdue.

17 JUDGE PHILLIPS: No. As I recall, that was
18 actually a question that was raised during one of the
19 first days of cross-examination. And I don't think
20 we've been going 10 days yet. So we did not take it
21 that way. Thank you for the clarification.

22 MR. KLUCSIK: I did not mean to imply that
23 Mr. Singer or any other party was late.

24 A (Bucci) I don't know. We normally estimate

1 concrete in cubic yards. So I don't know that answer,
2 weight.

3 Q Would you agree that the weight of concrete is
4 at least one ton per cubic yard?

5 A (Bucci) Offhand, I can't tell you the -- the
6 weight.

7 Q Mr. Bucci, based on your experience in
8 construction, when concrete is delivered to a job site,
9 is it always entirely consumed at the job site? Let me
10 rephrase.

11 In the circumstance where concrete is delivered
12 to a job site by ready-mix truck, is the concrete
13 delivered -- brought to the site by that truck always
14 consumed at the delivery point?

15 A (Bucci) If he's an efficient contractor, it
16 would be. The attempt is to use as much of it, yes,
17 without wasting. So if it's an efficient contractor,
18 yes, it would be used at the site.

19 Q Would you agree with me that it's not uncommon
20 for there to be leftover concrete in the ready-mix
21 truck?

22 MR. SINGER: Can we define what we mean by "not
23 uncommon"?

24 Q Let me attempt to rephrase.

1 Is it your experience that in the delivery of
2 concrete to a construction site, there is unused
3 concrete which remains in the truck?

4 A (Bucci) Yes.

5 Q Is there any reason for you to believe that in
6 the course of construction of the NYRI line, that would
7 not occasionally happen?

8 A (Bucci) Occasionally I would expect it might,
9 sure. Yes.

10 Q Do you know what will happen with those
11 concrete returns? Are you familiar with the term
12 "concrete returns"?

13 A (Bucci) Well, I'm familiar with the term, but
14 I'm not familiar with the entire process, you know, what
15 you do with the return. Normally you return it to an
16 offsite location.

17 Q That's my next question. Do you know what will
18 happen with the unused concrete that is brought to the
19 site by the ready-mix truck?

20 A (Bucci) When it returns to the offsite
21 location?

22 Q What will happen to the unused material?

23 A (Bucci) Most likely it will be brought to --

24 (Pichardo) If the NYRI project go through, it

1 will be location where it will be disposed of
2 appropriately in accordance with the law and the
3 regulation.

4 Q Do you have any sense of where that might be?

5 A (Pichardo) At this moment, no, but part of the
6 plan, construction plan, it will be seen after all the
7 construction that -- at least our organization will be
8 involved as part of the construction plan program how we
9 dispose material of this nature, not only concrete, but
10 all the material.

11 (Bucci) I mean, again, the simple answer -- the
12 simplistic answer, you know, at this point, applicable
13 is it will go back to the originating plant, and they
14 would take it back.

15 Q Would you agree with me that, historically,
16 concrete returns are dumped at the construction site?

17 A (Bucci) No.

18 Q Do you know what the pH of concrete returns is?

19 A (Bucci) No, I don't.

20 Q Would you argue with me if I told you that the
21 pH of wet concrete was alkaline in nature?

22 MR. SINGER: Your Honor, I object. He just
23 said he didn't know.

24 JUDGE STOCKHOLM: Sustained.

1 JUDGE PHILLIPS: May I just ask before you go
2 on, could you give me an estimate, just only because
3 we're getting close to what is usually our lunch break,
4 about how much cross do you have left?

5 MR. KLUCSIK: I would hope to be completed
6 within a half hour, Your Honor.

7 JUDGE PHILLIPS: Okay. We'll keep going until
8 1:00. And if you're not done, I'd ask you to indicate
9 an appropriate stopping point close to that time.

10 I'm sorry. Who was that?

11 MR. MOUJTAHED: Your Honor, I'm sorry, would it
12 be at all possible if we can break now rather than wait
13 half an hour?

14 JUDGE PHILLIPS: Okay. That's -- yes.

15 MR. MOUJTAHED: If possible. We appreciate it.

16 JUDGE STOCKHOLM: We'll take 10 minutes. And
17 we'll push through the end of this panel -- the end of
18 your cross, I should say.

19 MR. KLUCSIK: Thank you, Your Honor. I will
20 try to be brief.

21 JUDGE PHILLIPS: We're off the record for ten
22 minutes then.

23 (A brief recess was taken.)

24 JUDGE STOCKHOLM: Mr. Klucsik.

1 MR. KLUCSIK: Thank you, Your Honor.

2 BY MR. KLUCSIK:

3 Q Mr. Thompson, I suspect this question is best
4 posed to you. Does NYRI have any land rights with
5 respect to the site for the northern converter station?

6 A (Thompson) Yes. We have an option agreement to
7 purchase a site at the -- adjacent to the substation
8 there for the location.

9 Q And do you have any land rights with respect to
10 the southern converter station location?

11 A (Thompson) We have not procured any rights for
12 the southern station as of this date.

13 Q In the application, Exhibit 2, location of
14 facilities at page 2, there is text that reads --

15 JUDGE STOCKHOLM: Hang on just one second,
16 counsel. Let them get to the page.

17 A (Thompson) Page 2.

18 Q Section 2.3.

19 A (Thompson) Okay. Title.

20 Q Title "Orthophotography (Aerial Maps)." Are we
21 together?

22 A (Thompson) Yup.

23 Q Would one of you please read the second last
24 sentence in that section beginning with "Final design"?

1 MR. SINGER: Your Honor, this panel is not the
2 panel that sponsors this exhibit. It's Panel A.

3 MR. KLUCSIK: I'll ask my question without
4 reference to the exhibit, Your Honor.

5 JUDGE STOCKHOLM: Go ahead.

6 Q Mr. Bucci, is it correct that the converter
7 stations have not been subject to a final design
8 exercise?

9 A (Bucci) They have not been subject to final
10 design.

11 Q Will the placement of the converter stations
12 change -- let me rephrase.

13 Could the location of the converter stations
14 change as a result of that final design? Let me
15 rephrase.

16 Could the placement of the converter station
17 upon the land that Mr. Thompson referenced change as a
18 result of final design?

19 A (Thompson) The location within the parcel is
20 what you're saying?

21 Q Yes.

22 A (Bucci) Well, I mean, it's -- I suppose. I
23 mean --

24 (Thompson) We believe -- I was going to say, I

1 think our preliminary design based on a preliminary
2 design is identified what we think is most logical
3 location for -- on the site, but certainly it's subject
4 to change, I guess.

5 Q Let me refer you to Exhibit E-1 in the
6 application. This is the description of proposed
7 transmission lines -- I'm sorry, E-2, other facilities.
8 Specifically --

9 A (Bucci) Okay.

10 Q Getting close, Mr. Bucci?

11 A (Bucci) I'm there. Right past 2.

12 Q Please consult Figure E-2.2.1-2.

13 A (Bucci) Okay.

14 Q There are three drawings on the page; would you
15 agree?

16 A (Bucci) Yes.

17 Q Would you please take a look at the one that is
18 lowest on the page?

19 A (Bucci) Okay.

20 Q Closest to the bottom of the page.

21 A (Bucci) Yes.

22 Q Does that figure describe a valve hall for the
23 converter station?

24 A (Bucci) Yes.

1 Q Is the valve hall --

2 A (Bucci) Well, it's -- put it a better way. The
3 valve hall is one of the items shown on it.

4 Q And is the valve hall shown at the center of
5 that figure?

6 A (Bucci) Yes.

7 Q And is the valve hall a building?

8 A (Bucci) Yes.

9 Q Could you tell me the dimensions of that
10 building?

11 A (Bucci) Well, this figure gives dimensions. I
12 can't tell by the printed copy. They're too small to
13 see.

14 Q Neither can I. That's why I asked you.

15 A (Bucci) Okay. I think we probably describe it
16 in the text. I think we could -- on the electronic copy
17 it would be visible.

18 MR. SINGER: Mr. Klucsik, did you ask for the
19 dimensions of the valve hall?

20 MR. KLUCSIK: That's correct.

21 MR. SINGER: Can I tell the witness where it's
22 stated in the text?

23 MR. KLUCSIK: I would be appreciative of that.

24 MR. SINGER: It's in E-2.2.1, paragraph in the

1 middle of the page. It starts "The footprint of each
2 valve hall..."

3 A (Bucci) Approximately 160 feet by 85 feet.

4 Q Thank you. Is that dimension likely to change
5 as a result of final design?

6 A (Bucci) Likely to change? It's not a final
7 dimension.

8 Q Let me ask the question another way. Would the
9 kind of changes that you might expect in the final
10 design phase hold potential for requiring a change in
11 building dimension?

12 A (Bucci) Well, I mean, no. But understand that
13 all these dimensions are done on the basis of the design
14 at this point. So an inch or two or -- I mean, I don't
15 know -- I can't really, you know, give you a complete
16 answer. You're talking about feet, yards, the next
17 town -- you know, it's basically the design is -- is
18 good for -- for the sizing based on the size converter
19 station, but it's never done until the final design.
20 Could get smaller, too.

21 Q Would it -- would it be accurate to say that
22 the size of the building enclosure as it exists today is
23 predicated on certain assumptions about what the
24 building will contain?

1 A (Bucci) Yes.

2 Q And are those assumptions of what the building
3 will contain subject to change based on final design?

4 A (Bucci) This answer applies to all the
5 dimensions in this book. They're all -- it's not a
6 final design. Dimensions are subject to change, sizes
7 of equipment. You know, this is the best representation
8 we have based on the extensive design work we've done to
9 date. And it will be refined in the -- refined in the
10 final design. Refinement does not mean redone or
11 changed in significant ways that we would expect.

12 (Pichardo) We have to take in account that the
13 design of the converter station particularly is highly
14 sensitive depending on the manufacturer selected to do
15 this project.

16 JUDGE STOCKHOLM: I'm sorry. I didn't
17 understand that. Would you stay that again, sir?

18 A (Pichardo) Well, the dimension of the
19 equipment, when we're talking about power at a -- which
20 is in the line of the converter station, is a
21 proprietary technology for each of the manufacturers.
22 It's not like we have a commodity on the AC system that
23 you buy a break in the model, then they have plus or
24 minus the set dimension.

1 Within a reasonable range, every company, they
2 have a different component and different arrangement
3 that may affect the overall dimension as far as wide and
4 high. Some of them smaller, some of them a little bit
5 wider, but will not be double at this moment. So the
6 expectation that we know will be the number of
7 transformer that will be there roughly will be the same
8 amount. Technology between Our Stone, one of the
9 manufacture, ABB, Seaman's, or any -- Mitsubishi, or any
10 other manufacturer, they have their own proprietary
11 technology. So it's very hard to say set dimension at
12 this moment, if you don't go on that paper.

13 What we believe at this moment is based on the
14 knowledge that we have. We have an envelope that
15 roughly provides you sufficient information at this
16 moment to determine roughly the size of expecting
17 converter station.

18 JUDGE STOCKHOLM: How -- how rough is roughly?

19 MR. BUCCI: I'll take a crack at that.

20 Your Honor, representative in a conservative
21 sense. So that's the steps we've taken when we've --
22 we've done this design, to be representative and
23 conservative.

24 In the specific case that Mr. Pichardo gave as

1 an example, different manufacturers, we looked at the
2 various manufacturers and tried to do an envelope, you
3 know, that we allow for use of either.

4 JUDGE STOCKHOLM: Go ahead, Mr. Klucsik.

5 BY MR. KLUCSIK:

6 Q Let me ask you to make reference to Figure
7 E-2.2.1-3.

8 A (Bucci) Okay.

9 Q And see the figure on the lower portion of the
10 page, which is described as the static var compensator
11 area?

12 A (Bucci) Yes.

13 Q Does the large rectangle represent a building?

14 A (Bucci) Yes.

15 Q And its height is shown as approximately
16 45 feet, 48 feet, perhaps?

17 A (Bucci) It's shown as 40 feet with -- there is
18 a portion in the middle that's 8 feet above that, yes.

19 Q Would the static var compensator area be
20 subject to the same potential change based on final
21 design that you've described for the valve hall?

22 A (Bucci) Yes.

23 Q Are there any other buildings associated with
24 the converter station other than the valve hall and the

1 static var compensator?

2 A (Bucci) Again, depending on final design, I
3 wouldn't rule out placement of some of the other
4 equipment inside enclosures as well.

5 Q So there could be additional building area that
6 are -- that is not shown on your diagrams, on your
7 drawings?

8 A (Bucci) There could be.

9 Q Do you have any sense of how large those
10 structures might be if they were needed?

11 A (Bucci) They would not be -- the valve hall
12 would be the largest in terms of height. The other
13 buildings, I -- it would depend. I wouldn't -- I
14 wouldn't -- wouldn't be able to say, no.

15 Q In addition to the buildings we've just
16 discussed, there will be located at the -- at the
17 converter stations electrical equipment that is not
18 enclosed in a building, correct?

19 A (Bucci) Correct.

20 Q And the dimensions of the areas which contain
21 those outside electrical components are provided in the
22 application, correct, on a number of figures?

23 A (Bucci) Yes.

24 Q Would you expect the final design phase holds

1 the potential for a change in the overall area or
2 dimensions of the electrical equipment located outside
3 the buildings at the converter stations?

4 A (Bucci) Inasmuch as I just explained in terms
5 of all dimensions being subject to final, you know,
6 design change, yes.

7 Q Do the northern and southern converter stations
8 have the same design in terms of number -- in terms of
9 number of buildings?

10 A (Bucci) Well, the southern converter station,
11 there's a static var compensator that's in addition to
12 what's in the north.

13 Q So there's a second static var compensator at
14 the southern --

15 A (Bucci) There's only -- there's one at the
16 southern. There is none in the northern station.

17 Q Thank you.

18 JUDGE STOCKHOLM: Just out of curiosity, if you
19 need one at the south end, why don't you need one at the
20 north end?

21 MR. BUCCI: The southern end of the
22 transmission system is in need of more -- it's in
23 need -- it's a weaker system in the south than it is on
24 the north. So to accept the power, the static var

1 compensator helps the southern system.

2 JUDGE STOCKHOLM: And if the current's running
3 in the opposite direction, you're taking southern power
4 and moving it north towards Canada, for example, you
5 don't need that at the northern end?

6 MR. BUCCI: I guess I would have to defer to
7 the folks who did the SRIS specifically, but --

8 JUDGE STOCKHOLM: As far as you know.

9 MR. BUCCI: As far as I know, no. It would be
10 good.

11 JUDGE STOCKHOLM: Thank you.

12 BY MR. KLUCSIK:

13 Q Do you know what color the converter station
14 buildings will be?

15 A (Bucci) No.

16 Q Other members of the panel, does anybody know
17 what color they will be?

18 A (Pichardo) We could select a technological
19 color if you like.

20 (Moujtahed) We can do it by lottery.

21 JUDGE STOCKHOLM: Is that a -- is that a detail
22 that will be included in the EM&CP, to your knowledge?

23 MR. BUCCI: Yes. Sure. Yes, sir.

24 Q Do any of the panel members know what standard

1 will be used to select that color?

2 A (Bucci) Well, in my engineering experience,
3 there's no color selection standard for those type of
4 buildings. It's normally sort of a subjective
5 architectural attribute.

6 (Pichardo) We have the Neptune project is an
7 HVDC project. It's a prefab building. It is a light
8 color. It's not really specific. Most of the
9 electrical equipment is a light-weight color for
10 technical reasons, but the building itself will not have
11 any particular requirement unless I guess need to be
12 blended with the environment to no appear. Basically,
13 that was my preference call, I would say, from
14 electrical point of view.

15 MR. KLUCSIK: No further questions, Your Honor.

16 MR. BLOW: Your Honor.

17 JUDGE STOCKHOLM: Yes.

18 MR. BLOW: If I might just ask one question I
19 neglected to ask when Your Honor indulged me to --
20 regarding clearance requirements, because I'm not sure I
21 understand.

22 BY MR. BLOW:

23 Q If you are constructing by HDD, you said you
24 didn't have to clear the right-of-way over the -- in the

1 buffer area or if there's any other area over the object
2 that you're trying to avoid by HDD. What about
3 long-term right-of-way vegetation maintenance, are you
4 saying that you -- that this area of the right-of-way
5 would not be cleared at all?

6 A (Bucci) Yes, that's correct.

7 Q Is there anything about the cable itself that
8 provides the reason why you don't clear in this area as
9 opposed to, let's say, when you do open-trenching for
10 undergrounding?

11 A (Bucci) No. The cable is the same, will be the
12 same type of cable. It will be in conduit during -- for
13 the portion that's in the drilled area, whereas it could
14 be direct buried in other locations.

15 Q So it's just a resource protection measure that
16 you don't clear the right-of-way?

17 A (Bucci) Yes. It's not necessary to clear the
18 right-of-way. So it does -- it is resource protection.

19 Q Why would it then be necessary to keep the
20 right-of-way cleared if you have an open-trench
21 situation?

22 A (Bucci) Well, because the only way to get the
23 cable -- to get the cable in the case of a failure of
24 the cable would be to dig up the cable, whereas in the

1 HDD situation, you would actually pull the cable back to
2 the point where the conduit enters the ground. You
3 don't have a means of pulling the cable if you don't
4 have a conduit underground.

5 Q I see. Oh, so it has to do with the fact that
6 it's direct buried in the open-trench situation?

7 A (Bucci) Yes.

8 MR. BLOW: Thank you, Your Honor.

9 JUDGE STOCKHOLM: That was more than one, Mr.
10 Blow.

11 MR. BLOW: I know, but they followed on the
12 other -- one followed from the other very -- so easily
13 and quickly that --

14 JUDGE STOCKHOLM: Yes, I've noticed that
15 before.

16 Mr. Glasser, would you put in your appearance
17 for the record, sir?

18 MR. GLASSER: Yes. Good afternoon, Your
19 Honors. Robert J. Glasser of Thompson Hine representing
20 Central Hudson Gas and Electric Corporation. Good
21 afternoon.

22 JUDGE STOCKHOLM: Good afternoon, and welcome
23 to our proceeding.

24 MR. GLASSER: Well, I must say I have been

1 looking forward to getting tickets to the show having
2 watched it over the internet for the last few days.

3 JUDGE STOCKHOLM: Excellent. You now have a
4 ticket. Indeed, you now have the floor. You have
5 cross-examination for this panel, sir?

6 MR. GLASSER: I do. Very brief.

7 JUDGE STOCKHOLM: Please proceed.

8 BY MR. GLASSER:

9 Q Mr. Thompson, gentlemen, good afternoon. My
10 name is Bob Glasser. I represented Central Hudson Gas
11 and Electric. I met Mr. Thompson previously, but not
12 the others. I just wanted to follow-up on the converter
13 stations.

14 When -- when the filing in May of 2006 was
15 made, it showed the two converter stations as being
16 1,010 feet by 870 feet in outside dimension. And that's
17 in the originally filed Exhibit E-2. Is -- and that
18 produces a 20-acre size. Is that still the current
19 proposal, 20 acres for each of the stations?

20 MR. SINGER: Gentlemen, there's a acreage size
21 set forth in Exhibit E-2.2.1 for each of the converter
22 station sites.

23 MR. THOMPSON: Thank you.

24 A (Bucci) So we can give the size -- the acreage

1 size currently. Would that answer your question?

2 Q That was the question.

3 A (Bucci) Well, the -- the acreage of the site is
4 29. If you look at the -- the figure, the footprint of
5 the actual converter station, it does not take up the
6 entire site. I'm sorry. I gave you the northern end.
7 Right. No. Southern end. So 29 acres is for the
8 southern site.

9 JUDGE STOCKHOLM: For the entire site?

10 MR. BUCCI: For the entire site.

11 JUDGE STOCKHOLM: Thank you.

12 Q And the -- is it still the current design for
13 the converter station itself to be 20 acres within that
14 29-acre site?

15 A (Bucci) We don't have a drawing that shows all
16 the dimension -- you know, the shape of the converter
17 station is a very odd shape. If you can look at Figure
18 E-2.2.2-1, that shows the proposed southern converter
19 station. And we do show that the acreage property line
20 boundary, which it gives you an indication of the
21 29-acre. And you can see that the -- the converter
22 station equipment itself takes up certainly the major
23 portion of that. It's a little bit less. But to
24 give -- you know, it's such an odd shape that we don't

1 have the complete dimensions, you know, the fence line,
2 so to speak. The fence line would be within that area.

3 Q Okay. Well, I'd like to then go back to
4 follow-up on some of the questioning that just took
5 place.

6 If I understood it correctly, the panel was
7 stating that you designed the -- the current design
8 reflects a use of land within the southern converter
9 station that you do not expect you will exceed. You
10 may -- you may end up with a final design that takes up
11 less land, but your expectation is you will not exceed
12 what you're showing currently?

13 A (Bucci) No. I have similar expectation for
14 exceeding or not exceeding. These are representative in
15 a conservative manner.

16 Q Well, normally to an engineer, when you say
17 "conservative," you mean a value that you're not going
18 to exceed, do you not, sir?

19 A (Bucci) No, I don't -- I mean, that it's --
20 it's likely not to exceed it because we were
21 conservative in applying the -- in the portion that we
22 applied to size it, but it's not -- it doesn't mean it
23 will not.

24 JUDGE STOCKHOLM: Does it mean that the

1 probability of it being larger is less than the
2 probability of it being smaller? Is that what you mean
3 by conservative?

4 MR. BUCCI: Yes, Your Honor.

5 JUDGE STOCKHOLM: Thank you.

6 Q In fact, if I heard the -- Mr. Pichardo, do I
7 have your name correctly, sir? If I heard his statement
8 correctly, he seemed to be saying that the -- because of
9 the variations in specific technology by the various
10 vendors, when you did these designs, you tended to
11 select the larger pieces of equipment so that you would
12 be sure that your preliminary design was an adequate
13 one. Is that a fair way to describe it, Mr. Pichardo?

14 A (Pichardo) I say yes, but I need to qualify a
15 few items there.

16 When you're dealing with the overall entire
17 design, there is other component that have to be
18 considered, for instance, noise. The boundary of the
19 property line have to be sufficient far distance from
20 the location of the converter station and all the other
21 equipment to make sure we comply with the requirement
22 standard of the particular town and location will be
23 done.

24 Many factor of this nature, we -- the best of

1 our knowledge, we feel pretty confident in determining
2 the probability that we could do the work in that way,
3 but unless we have a final design and all the parameter,
4 including manufacturers, equipment size, requirement for
5 each individual facilities, and approval process, it is
6 very hard to say from this desk that we're going to be
7 constrained on this kind of -- we will, as an engineer,
8 we will like it to be smaller, to save the money to the
9 project and save the money to the community, and have
10 the minimal impact that we would like to do.

11 Q Now, in terms of noise, is it correct that
12 noise attenuation is reduced as a function of distance?

13 A (Pichardo) Yes.

14 (Bucci) And other -- yes, that's one factor --
15 that's one thing that reduces noise. There are other.

16 Q So would that tend to be a factor to -- would
17 noise tend to be a factor that would tend to induce you
18 as engineers in doing the final design to compress the
19 size of the station as much as technically feasible?

20 A (Bucci) I'm not sure I understand your
21 question. Are you saying --

22 Q You want to get the noise-producing equipment
23 as far away from the boundary lines as possible, which
24 means towards the center, which means compressing the

1 size of the station. Is that a fair -- is that a factor
2 you would take into consideration?

3 A (Bucci) We do take noise into consideration
4 when we do the design. I wouldn't approach it in the
5 way that you described. The primary distance issues
6 is -- are clearance, electrical clearance requirements,
7 which, you know -- I believe we've compressed it about
8 all we can compress it considering the electrical
9 clearance requirements. Those are usually overriding.

10 Q Well, but what you just said, sir, is subject
11 to all of the qualification as to the fact that the
12 manufacturer had not been designated for any of the
13 equipment items yet; is that -- is that fair?

14 A (Bucci) No. That more or less -- that applies
15 mainly to the valve hall, because the other equipment
16 is -- is a very standard equipment and that we're very
17 familiar with. So I wouldn't expect the outdoor
18 equipment sizes to change that much -- or to change.
19 But overall, when you look, you know, at the converter
20 stations, it's a complex facility that has many
21 different types of equipment combined. And until you do
22 the final design, you can't be sure of all the
23 dimensions.

24 Q Okay. Thank you.

1 MR. GLASSER: Your Honor, I have a question
2 that I think may be appropriate to direct to counsel as
3 opposed to the panel. And the question is whether NYRI
4 will accept a certificate condition that would require
5 NYRI to use best efforts to minimize the size of the
6 southern converter station subject to legitimate
7 technical and cost considerations.

8 JUDGE STOCKHOLM: Well, it seems to me that
9 Mr. Thompson could commit to that.

10 MR. GLASSER: I'm just not sure what your
11 practice is, Your Honor.

12 JUDGE STOCKHOLM: Is that an acceptable
13 condition to you, Mr. Thompson?

14 MR. THOMPSON: You know, with the caveats that
15 you put on that, certainly that would have been our
16 normal design practice anyway with the price of land and
17 everything, so.

18 JUDGE STOCKHOLM: Let me just indicate,
19 Mr. Glasser, in the event that you weren't listening
20 closely from a remote location yesterday, but we talked
21 about putting in the appendix to all of the parties'
22 briefs any recommendations with regard to ordering
23 clauses that you might have.

24 MR. GLASSER: Thank you, Your Honor. I was

1 listening closely at that point as well as every other
2 point that the web would allow me to listen closely at.

3 JUDGE STOCKHOLM: And it's a good thing you're
4 not under oath.

5 MR. GLASSER: My nose is still the same length.

6 JUDGE STOCKHOLM: I can't tell from this
7 distance.

8 MR. GLASSER: One other area is -- which I
9 think I'd like to address to Mr. Thompson given our last
10 discussion.

11 BY MR. GLASSER:

12 Q Mr. Thompson, is it acceptable to NYRI now
13 concerning the SL line to agree to a certificate
14 condition that, in substance, would have NYRI pay for
15 the reconstruction of the approximately 2 miles or so of
16 SL right-of-way that's owned by Central Hudson that
17 would include, at least notionally, one DC circuit
18 underground, one DC circuit on the tower, and a second
19 Central Hudson circuit on the tower, and for Central
20 Hudson -- that is the right-of-way that's owned by
21 Central Hudson? Is it acceptable to NYRI to pay for
22 that reconstruction on that segment?

23 JUDGE STOCKHOLM: Wow. Is there anything we
24 have in the record that talks about this, Mr. Glasser?

1 MR. GLASSER: I guess I have to say, despite
2 the close attention I was paying, Your Honor, I don't
3 believe I could answer that question.

4 JUDGE STOCKHOLM: I have no objection -- I'm
5 not trying to say that I object in any way to your
6 question, but there's a whole bunch of things in those
7 questions and stuff that, you know, I think it has to be
8 tied to something a little bit closer.

9 MR. GLASSER: Okay. I had hoped that I could
10 do it in summary fashion.

11 JUDGE STOCKHOLM: Let me suggest this. Do you
12 have any other questions?

13 MR. GLASSER: I don't have any other questions.
14 I do have some documents I would like to offer as an
15 exhibit, to identify and offer as an exhibit.

16 JUDGE STOCKHOLM: All right. Well, it's almost
17 1:30, so I want to take a break for lunch. And we will
18 return to you after lunch. In the meantime, perhaps you
19 could talk to counsel for the company or, perhaps,
20 Mr. Thompson to better identify the answer to that
21 question. I'm not ruling your question out of order. I
22 just don't know how it's going to tie into the record.

23 MR. GLASSER: I've already done what Your Honor
24 has suggested and spoken to counsel for NYRI.

1 JUDGE STOCKHOLM: And the result of that was
2 your question?

3 MR. GLASSER: Yes, sir.

4 JUDGE STOCKHOLM: All right. Well, at some
5 point, in brief or otherwise, I need this tied up
6 together, but if -- if Mr. Thompson understands the
7 question and can answer it, I have no objection to him
8 going forward.

9 MR. THOMPSON: I have to say, I'm not exactly
10 familiar with the details. I know we've had some
11 discussions with Central Hudson about how to best
12 reconfigure this and address the issues. And we have
13 agreed to do that. My only reservation is I don't know
14 the detail about one circuit underground, one
15 aboveground, and where yours -- how that fits together.

16 If that's what our technical people have agreed
17 with your technical people, then that's the -- the
18 agreement, then yes. As far as the commitment, yes,
19 we've agreed that we would pay for that, that cost.

20 MR. GLASSER: Thank you, Mr. Thompson. And to
21 your point about the technical details needing
22 clarification, I totally accept that and agree with
23 that.

24 Should I address the exhibit at this time, Your

1 Honor, or do you want to do that after lunch?

2 JUDGE STOCKHOLM: Let's do that after lunch.
3 We've gotten quite late.

4 JUDGE PHILLIPS: I did want to check,
5 Ms. Leary, very quickly, have you decided whether you
6 want to call Ms. Schreiber today or tomorrow?

7 MS. LEARY: I think --

8 JUDGE PHILLIPS: Tomorrow?

9 MS. LEARY: Well, I thought -- I thought that
10 she was going between "D" and "A".

11 JUDGE PHILLIPS: That's what I'm asking, but I
12 thought you also said 1:00. So do you --

13 MS. LEARY: No. Any time after 1:00 is fine.
14 And I'm just e-mailing her. I --

15 JUDGE PHILLIPS: We can deal with it after
16 lunch. I just didn't want you to think I've forgotten
17 about you.

18 MS. LEARY: Okay.

19 JUDGE PHILLIPS: If we can come back at 2:30,
20 please. We're off the record.

21 (A lunch recess was taken. Thereafter, Exhibit
22 204 was marked for identification.)

23 JUDGE STOCKHOLM: When we left, Mr. Glasser
24 noted a document that he wanted to have marked for

1 identification. And he is in the process at the moment
2 of circulating that document among the parties. The
3 reporter has a copy, and the document has been marked
4 for identification as Exhibit 204.

5 And, Mr. Glasser, when you get finished, just a
6 brief foundation.

7 MR. GLASSER: Yes, Your Honor.

8 JUDGE STOCKHOLM: And description. I'm afraid
9 you have to use the microphone. I apologize.

10 MR. GLASSER: Thank you, Your Honor.

11 This is a set of responses by New York Regional
12 Interconnect to Central Hudson, Interrogatories 1
13 through 10, 12 through -- excuse me, 1 through 9 and 11
14 through 20. And I've given a copy to Mr. Singer and
15 understand he has no objection to their receipt.

16 JUDGE STOCKHOLM: Mr. Singer, let me just ask
17 you, are these the answers prepared by NYRI in response
18 to these interrogatories?

19 MR. SINGER: Yes, they are. And Mr. Glasser is
20 correct, we have no objection to this -- these being
21 entered into the record.

22 JUDGE STOCKHOLM: Thank you. Thank you,
23 Mr. Glasser. Does that -- does that conclude your
24 cross?

1 MR. GLASSER: It does indeed. Thank you.

2 JUDGE STOCKHOLM: Thank you. Before we -- is
3 there any other cross-examination?

4 I apologize. I forgot about the rest of the
5 back row. Ms. Leary, please proceed.

6 MS. LEARY: Thank you, Your Honor.

7 BY MS. LEARY:

8 Q Mr. Thompson, I wanted to ask you the big
9 question in my mind. And just to make clear for the
10 record, New York Regional Interconnect, Incorporated,
11 has not constructed a transmission line anywhere in New
12 York?

13 A (Thompson) That's correct.

14 Q And I will refer to that corporation by the
15 term NYRI, N-Y-R-I, the acronym.

16 Are you aware of whether they have ever
17 constructed a transmission line anywhere in the United
18 States?

19 A (Thompson) NYRI was formed as a special-purpose
20 company to build the NYRI project. So no.

21 Q And I assume the answer given -- I assume your
22 answer also responds to my next question, which is
23 anywhere else in the world?

24 A (Thompson) Correct.

1 Q Okay. I wanted to ask you very specific
2 information about the Peruvian line in which you were
3 involved. Can you tell me the name of the developer of
4 that line?

5 A (Thompson) I can't recollect off the top of my
6 head. I'm sorry.

7 Q Can you tell me the year in which it was
8 constructed?

9 A (Thompson) It was probably in the mid '90s,
10 like '94, '95, '96 I believe were the years I was going
11 down there.

12 Q It's my understanding you were with the Harris
13 Group at that time?

14 A (Thompson) Correct.

15 Q As opposed to the Industrial Development
16 Resources --

17 A (Thompson) Correct.

18 Q -- sister corporation?

19 A (Thompson) Correct.

20 Q So you do not remember the developer of the
21 Peruvian line? Do you remember anything about it,
22 start, finish?

23 A (Thompson) It was -- oh, as far as what?

24 Q I'm sorry. Do you remember anything about it

1 other than what you've testified this morning?

2 A (Thompson) I remember it was originally a Shell
3 Oil gas line that was found in Peru, I believe it was in
4 the early '80s, that sat dormant until this company --
5 and they were headquartered out of Texas.

6 Q The company that developed it?

7 A (Thompson) That developed it, correct. And
8 their name, I just -- I'm sorry. I'm drawing a blank on
9 their name.

10 Q That's okay. Happens all the time to me.

11 JUDGE STOCKHOLM: Mr. Thompson, do you have
12 that information someplace that you might supply it in a
13 few days or so?

14 MR. THOMPSON: I could. I'm sure I have
15 something --

16 JUDGE STOCKHOLM: If you want it, you can ask
17 for it in that fashion if you like.

18 MS. LEARY: Thank you.

19 Q Mr. Thompson, and the rest of the panel, the
20 inquiry that I'm making is much like, you know, pardon
21 the analogy, looking on Angie's List or asking a
22 neighbor for a recommendation. You come into New York
23 to do something. We need to know who have you done that
24 for before and who are they? So I'm going to ask the

1 panel if you can sort of respond to my next question
2 with that in mind.

3 So, you know, you're very clear on what the
4 NYRI project entails. What projects have any of you
5 participated in in a construction role - and I think
6 this might exclude you, Mr. Thompson, to some degree -
7 in a construction role that would be similar to what is
8 proposed here?

9 And I'm not suggesting exactly the same, but
10 I'm asking you for the record to identify those clients,
11 those companies, those transmission lines that would
12 give the record the sense of the experience that you
13 have for this line.

14 So let's start with Mr. Bucci. I know you had
15 some trouble this morning remembering the client from
16 Metro North. I think you then said the Philadelphia
17 project was Fairless Hills. There was a Nevada project,
18 one overseas. Can you, to the best of your
19 recollection, provide reference projects, if you will,
20 for the record?

21 A (Bucci) For the record, the Metro North client
22 was Metro North.

23 Q I thought that might be the case, but it wasn't
24 clear from the record. So thank you.

1 A (Bucci) Yeah. Sure.

2 In New York, some example projects would be the
3 Independence project, associated transmission line for
4 that -- I'm giving you both -- well -- and that was -- I
5 guess the client was Sithe Energies who was the
6 developer.

7 Q Would you spell that for the record?

8 A (Bucci) S-I-T-H-E Energies. We worked with
9 NYPA on the Long Island Sound crossing project, included
10 underground portions and underwater portions.

11 Q Would that also include overhead portions?

12 A (Bucci) No, it didn't. Except for the
13 substations, which were aboveground, some of them. We
14 constructed the Linden Cable project, 345 kV project
15 which included horizontal directional drilling. We did
16 that construction work. We were responsible for the
17 construction of the project.

18 Q That's --

19 A (Bucci) Is that enough?

20 Q That's plenty. Thank you. I don't need a
21 laundry list. I just need your best.

22 And Mr. Moujtahed?

23 A (Moujtahed) Moujtahed.

24 Q Moujtahed.

1 A (Moujtahed) You got it.

2 I mentioned earlier that I've done construction
3 for a company First Energy under the Washington Group
4 umbrella, that was the Englishtown/Monroe. Windsor,
5 Wyckoff, and several others just I can't remember the
6 name, but if you like, I can supply that to you later
7 on.

8 Q Thank you. And, Mr. Pichardo, can you give us
9 just one or two, if you would?

10 A (Pichardo) One that I remember also closest in
11 the State of New York was the High Phase Order project.
12 It's a NYSEG project that was converted from
13 three-phase. Demonstration project also sponsored by
14 the Department of Energy. They converted from
15 three-phase to six-phase.

16 I also worked most recently in one in Arizona
17 for the Springerville substation 345 kV from Tucson
18 Electrical and Gas Corporation. It's comprised of a
19 substation 345 kV on a associated transmission line.

20 We most recently -- this still is not under
21 construction, but we're involved most recently in the
22 same and is starting the construction phase for the
23 NYSEG Ithaca project.

24 Q Okay. And would you tell me, of the projects

1 that you gentlemen have just named, whether any of those
2 went through sensitive ecological areas such as wetlands
3 or watersheds or streams?

4 A (Moujtahed) I have done a project that was
5 reconductoring, meaning they have existing line.
6 However, part of the project has relocation of certain
7 poles, meaning you have to construct new poles in a
8 wetland area. That was -- I can't remember the name,
9 but this was in New Jersey on the shore, most of the
10 shore in New Jersey, again, for First Energy.

11 Q Thank you. Mr. Bucci, any of your projects
12 traverse sensitive ecological areas?

13 A (Bucci) I'm not sure, you know, exactly how you
14 define "sensitive ecological". We did cross bodies of
15 water, large and small. And some of the projects that I
16 didn't mention specifically I know were traversed
17 wetlands and -- yes.

18 Q Mr. Pichardo, any other projects in which
19 you've been involved traverse sensitive ecological
20 areas? And the examples of that I gave were wetlands or
21 protected streams or water bodies, watershed areas,
22 anything like that.

23 A (Pichardo) Yes. I've been working some of
24 them. However, I still have to mention that we -- as a

1 sort of a mini project, the ecological stay or
2 requirement is not defined by the construction of
3 electrical engineer. There's other people in the
4 project are very clear of this aspect for us. So we
5 build it anywhere we're allowed to do.

6 But yes, to answer your question, some of the
7 project that I've been involved in in my professional
8 life have to a sensitive ecological part.

9 Q Have any of you worked in a watershed area
10 before? Do you know what a watershed is?

11 A (Bucci) Generally. I have an idea generally of
12 what it is, but I have not, you know, specifically
13 constructed that I'm aware of in a watershed area.

14 Q What about you, Mr. Moujtahed?

15 A (Moujtahed) I am not very familiar with the
16 term itself. I might be familiar with what it means.
17 However, I'm not sure on that.

18 Q May I tell you?

19 A (Moujtahed) Please.

20 Q Just for purposes of our discussion --

21 A (Moujtahed) I mean, I do know the general sense
22 of that, but not to any extent of detail.

23 Q A watershed area is a geographic area --

24 A (Moujtahed) Adjacent.

1 Q -- denoted by streams and water bodies and
2 surface-water reservoir areas that provide drinking
3 water to a given population. So have you done any
4 projects that would be considered to traverse a
5 watershed area?

6 A (Bucci) I -- personally, I don't know if I
7 would even know that necessarily.

8 (Moujtahed) You know, the -- my answer would be
9 is I may, but have not been aware it was in that area.

10 Q Okay. Fair enough, yeah.

11 Mr. Pichardo?

12 A (Pichardo) As a matter of fact, I work on the
13 watershed of one of the sources for the water of New
14 York City, all the distribution power required for the
15 pumping station and all this thing. Working back in the
16 Ebasco in early '90.

17 Q Were you constructing a transmission line in
18 that area?

19 A (Pichardo) No, not transmission line. Talking
20 about the distribution system.

21 Q Oh, so you were involved in engineering or
22 design of the system that --

23 A (Pichardo) The power associated with the cable,
24 underground, some overhead, but not the bold power

1 high-voltage system.

2 Q Okay. Thanks.

3 JUDGE STOCKHOLM: When you say "distribution,"
4 you mean lower voltage?

5 MR. PICHARDO: Yeah. It's the voltage --

6 JUDGE STOCKHOLM: What voltage, if you
7 remember?

8 MR. PICHARDO: 15 kV class.

9 JUDGE STOCKHOLM: Thank you.

10 Q I'd like to turn to your direct testimony if
11 you would, gentlemen, page 3, and it's lines 17 through
12 20.

13 Mr. Bucci, would -- do you have that in front
14 of you?

15 A (Bucci) Yes.

16 Q Would you read into the record lines 17 through
17 20?

18 A (Bucci) "Exhibit E-3 of the application
19 describes the construction methods that will be used to
20 install cables underground for underground sections of
21 the project. It includes the description of the cables.
22 Oil pumping stations are not required --"

23 JUDGE STOCKHOLM: Mr. Bucci, slightly slow
24 down.

1 MR. BUCCI: Sorry.

2 A (Bucci) "It includes description of the cables.
3 Oil pumping stations are not required and maintenance is
4 not anticipated once the cables are installed unless
5 damage or failure occurs."

6 Q Now, this is one of those answers that raised
7 more questions because of your use of the words "oil
8 pumping stations". And, again, we're talking about, as
9 I understand it, underground cables.

10 Can you -- can you explain what oil pumping
11 stations would be and why they're not required, or do
12 you mean needed? Strike that last part.

13 Would you explain what oil pumping stations
14 are, what you mean here by oil pumping stations?

15 A (Bucci) Yes. Certain types of underground
16 cables use oil pumped through the conduit for cooling,
17 heat dissipation reasons. The type of cable we're
18 proposing on this project does not utilize oil as a --
19 flowing through the -- flowing through the conduit.
20 It's a -- the insulation of the cable is called mass
21 impregnated, meaning it is impregnated with oil, but it
22 doesn't require any oil to be pumped.

23 JUDGE STOCKHOLM: The old technology for
24 high-voltage underground construction required oil to

1 cool the conductor. The technology I believe that's
2 being proposed here does not require that oil. As a
3 matter of fact, the Long Island Power Authority recently
4 replaced some across sound cables that were oil-filled
5 with these new types of cables that do not require that
6 cooling.

7 Q And you mentioned impregnated, so the oil would
8 not be available for release to the environment; is that
9 correct? In other words, it's not -- that's not a
10 danger of this type of cable that there would be a
11 release of oil or petroleum product to the environment?

12 A (Bucci) It's not normally the -- it's certainly
13 not a consideration like it is with the pipe type oil --
14 oil cable or oil-filled cable. There is no oil flowing
15 that could -- that could flow out. I mean, so it's --

16 Q Have you worked with this kind of cable before?

17 A (Bucci) Yes.

18 Q And have you seen a release to the environment
19 of any petroleum product or oil?

20 A (Bucci) No, I haven't.

21 Q No spill, nothing like that?

22 A (Bucci) No, no, no. There's nothing to spill.

23 Q Thank you for the explanation.

24 You talked earlier about -- with a number of

1 questioners about the areas for storage, which, frankly,
2 I'm not certain if they're called laydown areas or
3 marshaling areas or what they would be called.

4 Can you give me the appropriate terminology
5 that you use in the industry, those areas along --
6 during construction where you would store materials,
7 equipment and that type of thing?

8 A (Bucci) Any of those terms would apply.

9 Q Any. Oh, good. Thank you.

10 Are you familiar with the -- how you would
11 estimate on a route of this size the size of those areas
12 that would be necessary?

13 A (Bucci) Yes, generally.

14 Q Does anyone else on the panel have more than a
15 general knowledge of estimating the size of those areas?

16 A (Bucci) Well, I would just say that I wouldn't
17 be doing this on my own. A construction team would be
18 working with me.

19 (Moujtahed) Same thing. I mean, it's typical
20 for a construction project, it depends on just your
21 layout; for instance, if you have a staging -- staging
22 area for your work, you want that staging area to let's
23 say serve 20 miles, 30 miles, 40 miles. I mean, it
24 varies. It depends on how much land available. It

1 depends on the scope of the project, the length of the
2 project, how many dead ends versus, you know, some
3 projects require less -- more than others. I mean, all
4 of these are factors, but, you know, there is a round
5 number that we utilize, but once you go into detail,
6 then you become more precise.

7 Q And what's the round number that you utilize?

8 A (Moujtahed) We have put here in the
9 application.

10 Q Let's not -- I don't want to spend a lot of
11 time looking up the round number. I know -- I know
12 roughly how you -- where you're going. Let me move to
13 the next question.

14 A (Bucci) By the way, generally, when we say
15 "generally," generally doesn't mean -- I didn't mean
16 generally to mean that we didn't have the knowledge.
17 Generally just means we didn't have the specific
18 knowledge of the specific locations.

19 Q In the projects in which you've been involved,
20 have you had occasion to realize at some point in
21 construction that that area that you previously
22 estimated had been underestimated and you were required
23 to go back and ask for approval of a bigger area for
24 storage, laydown, marshaling, et cetera?

1 A (Bucci) Not that I can recall, no.

2 Q Mr. Moujtahed?

3 A (Moujtahed) Moujtahed.

4 Q Moujtahed. I can do it.

5 A (Moujtahed) Not really. Not -- I don't have
6 that -- again, also, this can -- a lot of times you
7 would work it out with the contractor, because, you
8 know, the contractor is the one who will plan how to go
9 along the construction. So it's just a feedback between
10 various people.

11 Q So have you been involved in any projects in
12 which that area had been underestimated and you needed
13 to expand the area for marshaling?

14 A (Moujtahed) No, not at all.

15 Q Mr. Pichardo, how about you?

16 A (Pichardo) No, ma'am. I will try not to do it
17 because we know the implication in the project.

18 Q Thank you.

19 I wanted to clarify one thing, Mr. Bucci, that
20 you talked about when you were discussing soil
21 conditions. And you referred to a number of times poor
22 soils, they wouldn't support, you know, the core, you
23 would need a cap, et cetera.

24 What are poor soils? Are they wet soils? Are

1 they sandy soils? Can you identify what you meant by
2 "poor soils" earlier today?

3 A (Bucci) Well, due to whatever reason, the
4 bearing pressure of the soil is low.

5 Q Well, give me an example of situations that you
6 have come across where that is the case.

7 A (Bucci) Sand, wet soil.

8 Q So it would include wetland areas or sandy soil
9 areas. Anything else?

10 A (Bucci) The wetland areas could have good
11 foundation. Area could be rock, could be -- doesn't
12 necessarily mean that it would be poor soil, but
13 certainly something like a river bed, you know, would be
14 poor.

15 Q Maybe what I meant to say was that portion of
16 the wetland that had saturated soil.

17 A (Bucci) Saturated soil that's totally, you
18 know, saturated with water, right. Does not have the --
19 the strength --

20 Q To bear --

21 A (Bucci) -- To bear the pressure of -- basically
22 what we're talking about is bearing the pressure of a
23 pole and not letting it move.

24 Q Another clarification I wanted to ask you,

1 Mr. Bucci, was about the construction on the railroad
2 right-of-way that you talked about earlier. And this
3 does, to some degree, deal with access roads, because
4 I'm trying to get the sense of whether there would
5 actually be a road right next to the railroad bed where
6 trucks would come and go and other equipment would come
7 and go. Is there a road, I thought that that's what you
8 said earlier, along that right-of-way?

9 A (Bucci) I didn't say it would be a road. I
10 said trucks can sometimes travel up and down that
11 portion of the right-of-way adjacent to the track, as
12 the railroad does with its own vehicles.

13 Q So there's already a road there?

14 A (Bucci) I wouldn't call it a road. It's a flat
15 area that you can drive on.

16 Q You can put a vehicle up there?

17 A (Bucci) It's a cleared area. Yes.

18 Q Okay. That's all I needed to clarify.

19 You also indicate in the application that the
20 access roads are 16-feet wide. Do you anticipate those
21 roads being any wider than that, or is that the maximum?

22 A (Bucci) We don't -- we didn't give out any
23 maximum sizes, but we anticipate 16-and-a-half feet.

24 Q Sixteen-and-a-half feet?

1 A (Bucci) I think that was the dimension on the
2 drawing, right? Or in the write-up of the application.

3 (Moujtahed) Sixteen.

4 A (Bucci) I'm sorry. It's 16 feet.

5 Q I know.

6 In the transmission projects in which you've
7 been involved, has that been approximately the same
8 width of the access roads for those projects?

9 A (Bucci) Well --

10 Q If they had access roads?

11 A (Bucci) A project of this size with this size
12 equipment, you know, that's the range, yes. Smaller
13 projects would -- there hadn't been any bigger projects.
14 Smaller projects -- well, there have been bigger
15 projects, actually.

16 (Moujtahed) Just a qualification. That access
17 road, 16 feet is one way because you don't need both
18 ways. And you would have the room for pull out.

19 Q Turn around?

20 A (Bucci) We're talking about limited -- limited
21 access here is we're considering the whole route to be
22 limited access in that respect. You know, if we had
23 completely open area, we'd make it wider, but this is --
24 you know, the limited -- you know, narrow as feasibly

1 possible is what we're trying to achieve.

2 Q Well, the question I have is whether they could
3 be wider. How likely is it that they'd be wider than
4 that?

5 A (Bucci) That they would have to be wider? Not
6 likely.

7 Q Okay. And the reason I'm asking is because
8 your testimony this morning was that that was a, quote,
9 "general description". And I wanted to know how much
10 variation on that.

11 A (Bucci) Yes. Well, similar to the answer on
12 the converter station, and this would apply to most
13 dimensions that I can think of where we took a
14 conservative approach, we feel it's representative. The
15 likelihood that it's greater I guess is less than the
16 likelihood that it's smaller.

17 Q Okay. Great. That's a perfect segue.

18 Speaking of converter stations, I don't recall
19 who talked about the Neptune project. Maybe it was
20 Mr. Moujtahed.

21 A (Moujtahed) Neptune?

22 (Pichardo) I did.

23 Q No? I'm sorry. That's right. I'm sorry.

24 Mr. Pichardo, you talked about the Neptune

1 project having a prefabricated building. Is that what
2 is planned for the converter stations here?

3 JUDGE PHILLIPS: Before you answer, please move
4 the mic closer.

5 A (Pichardo) It's not ruling out the possibility
6 to do that, but it's not defined yet.

7 Now, one thing that we know for sure, we have
8 the valve on the converter station is hanging from the
9 ceiling. On each of them, they may be sizable weight.
10 So we have to design the building to hold the valve, you
11 know, made of thyristor.

12 So that defines pretty much the building. This
13 is no sizement zone, so we're expecting it to be a
14 pre-engineering. Maybe I mislead you before. I said
15 prefabricated building, but most of the time, most
16 projects of this nature, we prefer for convenience and
17 cost-effective to have a pre-engineering building.

18 Q Prefabricate anything?

19 A (Pichardo) Well, pre-engineering, sometimes the
20 wording. We don't want to get caught in semantic here.

21 Q Okay. Fair enough.

22 And it sounds to me like because a valve is
23 hanging from the ceiling, you may not be able to use a
24 pre-engineered building or prefabricated building. Is

1 that what you're implying?

2 A (Pichardo) It's not determined yet.

3 Q It's not determined yet. Okay.

4 On the horizontal drilling questions that you
5 responded to, I'm assuming when you go into a water
6 body, it's shallow at the edges. Assume for a moment
7 it's shallow at the edges, and then it gets deeper in
8 the middle, and so you're going in at some point
9 underneath the deepest part; is that correct?

10 A (Bucci) You will be under the deepest part when
11 you get to that part. You go in at an angle.

12 Q Okay. So it would be sort of like this?

13 A (Bucci) Yes.

14 Q Okay. Is there any --

15 JUDGE STOCKHOLM: I'm not sure "sort of like
16 this" is going to be useful in the record.

17 Q So let me -- let me see if we can verbalize for
18 the record what you and I just are seeing in front of
19 us, which is sort of a kind of a cup that I --

20 A (Bucci) The profile would be -- I guess would
21 be parabolic with the lowest point being at the low
22 point of the -- if it's a body of water, river bed, say.
23 And the low point could be longer than that. The point
24 is that you go in and you -- you exit and enter at an

1 angle, which is within the capability of the drilling
2 rig.

3 Q And there would be a special contractor for
4 that?

5 A (Bucci) There are specialty contractors
6 certainly that do that. We haven't -- we haven't
7 selected anyone yet.

8 Q Okay. My question, though, is, how do you
9 assure that you do not have a breach of the bottom of
10 the water body? What types of measurements or other
11 things would you do not to have that happen?

12 A (Bucci) You would -- that you don't have a
13 breach of the --

14 Q In other words, are there measurements of the
15 depth of the water body that you would absolutely --

16 A (Bucci) Yes.

17 Q -- stay -- okay. So there -- it would make it
18 unlikely?

19 A (Bucci) Well, that is -- that's the definition
20 of directional drilling. The directional part means
21 that you're drilling to a prescribed or designed
22 profile. And the technology available today allows you
23 to be fairly accurate with that drilling equipment. So
24 they call it directional drilling as opposed to just

1 boring, you know, straight boring, let's say.

2 Q And it sounds like you would not need any type
3 of monitoring to assure that there would be a breach of
4 the bottom; is that correct, meaning --

5 A (Bucci) If that's how it sounds to you. I
6 couldn't judge --

7 Q I guess -- can you explain to me --

8 A (Bucci) Well, I can tell you that it is
9 monitored. The drilling equipment itself monitors the
10 entire operation.

11 Q Okay. That's what I'm --

12 A (Bucci) Allows you to -- to stay on course.

13 Q Okay. So it sounds computerized and very
14 high-tech. Okay.

15 A (Bucci) Yes.

16 Q You talked a little bit about access roads
17 being built in one of three ways, either they're going
18 to be concrete, they're going to be gravel, or they're
19 going to be native soil; is that correct?

20 A (Bucci) I didn't -- I didn't -- we didn't
21 propose concrete. I said that anything we anticipated
22 could be done on gravel. So gravel or -- or native
23 soil.

24 Q And native soil will be used for access roads

1 that are temporary, permanent, or both?

2 A (Bucci) It would be used for temporary access
3 roads.

4 Q And do you have any idea of how long those
5 roads would remain -- strike that.

6 The temporary roads, how -- how do you restore
7 them? How do you -- what measures would you undertake
8 to put them back to preconstruction status?

9 Maybe I should ask you, do you intend to put
10 the temporary roads back to preconstruction status?

11 A (Bucci) Well, we -- as we stated in the -- I
12 believe it's Exhibit 4, it describes construction
13 methods and environmental impacts. We said that we
14 would return just any disturbed areas to its
15 preconstruction condition.

16 Q So is that seeding? What -- what would be
17 undertaken on temporary access roads to return them to
18 preconstruction status?

19 A (Bucci) I guess it would depend on what was
20 necessary -- what was done to the road. I don't --

21 Q Would you see --

22 A (Bucci) I'm not sure that -- we don't make the
23 requirements for the construction. We do the
24 construction. So the -- and there may be cases

1 certainly where the roads would just be -- you know, the
2 natural habitat will prevail.

3 Q So nothing, no particular measures?

4 A (Bucci) Like I say, I'm not -- I'm not prepared
5 to answer that -- that kind of question. My background
6 is doing the construction, not necessarily designing the
7 environmental.

8 Q How about Mr. Wood. Mr. Wood, you've been
9 quiet today.

10 A (Wood) I had one.

11 (Bucci) He had one, one very important one.

12 Q That's quiet, though.

13 A (Wood) I think that as Mr. Bucci said, it would
14 depend on where it is, but generally, you know, the soil
15 would be decompacted if it had -- if it needed to be,
16 topsoil applied if needed to be, and seeding, you know,
17 in order to hold -- to hold the soil and material in
18 place while it, you know, revegetated. It would be
19 allowed to revegetate.

20 Q So that would be an in-the-field decision later
21 or --

22 A (Wood) No, no. That would all be defined in
23 the EM&CP.

24 Q Okay. That's great. Let me stay with you,

1 Mr. Wood, because this is a question about seeding,
2 because the application indicates that you would seed
3 within one growing season, is that accurate, for
4 disturbed areas?

5 A (Wood) Yeah, I think that's what it said. And
6 the idea would be to as soon as the -- as soon as the
7 construction work is done in that area, the seed would
8 be applied. Depending on the time of year might dictate
9 what type of seed was applied, and that it would be
10 monitored for the growing season as we indicated and,
11 you know, reseeded if need be and to the point until it
12 got established, it was stable.

13 Q So construction, if I understand your
14 testimony, construction that happened, say, in March or
15 April and goes through the summer, it would be seeded at
16 some point before, say, November?

17 A (Wood) I think it would -- generally, it would
18 be seeded, you know, as soon as the construction work
19 was -- was complete and, you know, construction
20 equipment didn't need to get into that location again.
21 So if it was completed in March, then, you know, we
22 would -- we would stabilize and use the seed and so
23 forth in March.

24 Q Okay. Thank you.

1 Can you talk to me a little bit about blasting?
2 Have you taken a look at areas where you're absolutely
3 sure you're going to have to do some blasting? Any idea
4 about where those areas are, how many times you're going
5 to have to blast, if you're going to have to blast at
6 all?

7 A (Bucci) We haven't found any areas where we
8 have to blast.

9 Q Okay. Have any of you gentlemen worked with --
10 during construction with an environmental monitor on any
11 of your projects, that is someone who monitors
12 environmental impacts and those types of things?

13 A (Bucci) Again, I can answer it from the
14 constructor. He can answer it from the monitor.

15 Yes. I mean, typically we have a monitor out
16 there, make sure that we're meeting environmental
17 requirements.

18 Q Would that be someone in the Washington Group?

19 A (Bucci) Could be, sure.

20 Q But you have someone on staff that does that
21 type of thing, Washington Group does?

22 A (Bucci) Yes, we do.

23 Q Thought so.

24 A (Bucci) URS Corporation, Washington division.

1 Q Okay. That's probably much more accurate.
2 Thank you for correcting the record.

3 Have you -- have you had any experience with
4 the implementation of a storm-water pollution prevention
5 plan?

6 A (Bucci) Yes. We normally do that when
7 required, construction sites of all kinds.

8 Q When required?

9 A (Bucci) As required.

10 Q As required. I was going to ask you, is there
11 a situation or a state that does not require storm-water
12 pollution prevention?

13 A (Bucci) I really don't know, but my experience
14 has been we provide storm-water management. Normally
15 that's a part of the construction package.

16 Q Have you ever reviewed a storm-water pollution
17 prevention plan -- I'm going to call it a SWPPP from now
18 on. I only have a couple more questions about it. Have
19 you ever reviewed a SWPPP?

20 A (Bucci) Review in what sense?

21 Q Looked at it, read it.

22 A (Bucci) For correctness? Looked at it, yes.
23 Understood what it's telling me to do, yes. Determined
24 if it's appropriate and correct, that's not my area.

1 Q Okay. But you are familiar with its terms and
2 requirements?

3 A (Bucci) No. I looked at it, though. I
4 couldn't say that I'd be familiar with every term that's
5 used.

6 Q Well, give me a better sense of your
7 understanding of one that you have read. I mean, did
8 you understand what it --

9 A (Bucci) I'm not proposing to be a storm-water
10 management implementor. We have -- our civil crews
11 would be doing that. And that's -- that's not an area
12 that I'm intimately familiar with.

13 Q I was assuming you would work with them,
14 though; is that correct?

15 A (Bucci) Work with them?

16 Q Work with your civil crew.

17 A (Bucci) Yeah. I mean, I could be responsible,
18 for example, for the overall -- I can have overall
19 responsibility for a job that included that, in which
20 case I'd be, you know, relying to a large extent on the
21 expertise of my civil engineer.

22 JUDGE STOCKHOLM: Are you familiar, sir, with
23 the techniques that are used to address storm-water
24 pollution issues, what is done in the field?

1 MR. BUCCI: I couldn't give you a good
2 description, Your Honor, of those --

3 JUDGE STOCKHOLM: Okay. That's fine.

4 Q So you have not constructed storm-water
5 pollution prevention measures? You have not
6 participated in their construction?

7 A (Bucci) I have -- I have participated in
8 projects that included that as -- that construction, but
9 I, myself, didn't design, nor actually perform the labor
10 to do the -- to take the measures required from -- by
11 the plan.

12 Q Who does that? Who did it in the project
13 you're referring to?

14 A (Bucci) It would be the -- like I say, it would
15 be our -- like I said, it would be our civil -- civil
16 engineering representative on the team of the project.

17 Q Well, who would do the construction piece of
18 that?

19 A (Bucci) And the construction contractor would
20 do that.

21 Q You wouldn't do that, though?

22 A (Bucci) If we were the construction contractor,
23 we would. I personally have not, you know --

24 Q You haven't done it before?

1 A (Bucci) I haven't done -- I haven't done the
2 labor for the construction myself for civil, no.

3 Q Well, I guess let me just repeat this question
4 so I understand your testimony. Have you participated
5 in the construction and implementation of storm-water
6 pollution prevention measures that would prevent erosion
7 and sedimentation, you know, built the --

8 A (Bucci) I said --

9 JUDGE PHILLIPS: Before you answer, can I just
10 ask, are you asking him if he participated in the
11 construction, or are you asking him if he participated
12 in the implementation of a SWPPP, because it seems like
13 those are two different things. I mean, it doesn't
14 sound like he's constructed any kind of SWPPP, but he --
15 and I guess you need to separate it, because that
16 question was not clear to me. Do you want to know if he
17 implemented SWPPP measures?

18 MS. LEARY: I was assuming that the
19 construction and implementation were the same thing.

20 Q If they're a different things to you, let's
21 split it up. Are they different? Is construction and
22 implementation --

23 A (Bucci) Well, construction starts from day one
24 with the planning of the construction, which -- which

1 involves the specifications and requirements, and that
2 gets laid out on plans, and those plans get drawn up and
3 developed and implemented. So "participate" could mean
4 participate in any part of that process. You know, I
5 wouldn't be able to describe to you detailed, you know,
6 means of achieving the, you know, what was required by
7 the plans, no.

8 Q Okay. Anyone else? Mr. Moujtahed or
9 Mr. Pichardo, have you participated in the construction
10 of storm-water pollution prevention measures as part of
11 a SWPPP?

12 A (Moujtahed) Well, I may have in an indirect
13 way, meaning when you are doing a project and requires
14 this could be taken care with other expertise or other
15 team. So if you're asking me myself directly, the
16 answer is no.

17 (Pichardo) I don't know exactly where we're
18 going, but let me just mention something that may
19 clarify what we're saying here. When you belong to a
20 corporation of 55,000 permanent employees, we're not
21 counting the people that employ in the field --

22 When you are in the multidisciplinary
23 environment in an organization with 55,000 permanent
24 employees, hopefully we have a division of work,

1 division of discipline, division of responsibility. And
2 not necessarily one man on this table is capable to do
3 everything on the particular discipline.

4 In the way that we organize, I thought is
5 better serve the project in particular if we take a
6 specialized individual available to serve a particular
7 need of the project. And this is the way we're doing
8 everything. So we take the best man available to serve
9 the project, not necessary have to be us, not necessary
10 have to be in the discipline.

11 Now, answer your question going back to that,
12 as part of the project, a leading project on the
13 electrical field, which more is kind of a discipline, we
14 have supporting people that working with us, working for
15 us, working a team together, sometime even come from a
16 different environment on different companies, not
17 necessarily one single company. Yes, we're aware of
18 what's going on with the construction. We should be
19 aware what's going there, even though we don't have full
20 responsibility to deal with those detail of plan or
21 water storm plan or any other kind of discipline of this
22 nature.

23 Q My question was a lot simpler. Who puts the
24 hay bails and the silt fences if not the construction

1 crew? That's really what I'm asking.

2 A (Pichardo) The construction crew is a larger
3 group of people involved: Electrical, civil,
4 environment.

5 Q So I understand now the context. So the civil
6 engineers would actually also do the construction or
7 oversee the construction?

8 A (Bucci) I did say that the construction
9 contractor would put down the matting and put down the,
10 you know, whatever was necessary, deal with the
11 watering.

12 Q My last question is simply whether you have
13 seen instances in your experience where a SWPPP, or
14 storm-water prevention plan, is successful, in other
15 words, sedimentation, erosion has largely been
16 prevented?

17 A (Bucci) Has withstood a storm?

18 Q Yes.

19 A (Bucci) Well, as an expert, no. As a layman, I
20 mean, I see construction sites all the time where they
21 do not damage the -- I mean, major construction sites
22 that do not damage the surrounding area. So, certainly
23 I have not seen any damage in any of the transmission
24 projects that I've -- that I've worked on, you know,

1 from individual tower sites or something like that.

2 Q When you say "damage," you mean erosion
3 sedimentation reaching a water body?

4 A (Bucci) That as a non-expert would be able to
5 see, yeah.

6 Q Okay.

7 A (Moujtahed) No, not in a direct way, but there
8 has been incident maybe not directly related to what
9 you're asking, but when we use swamp mat to minimize any
10 potential damage to water, et cetera, that's yeah, but
11 back to your direct question, no.

12 Q So my direct question was, have you seen those
13 measures be successful? I think that was my question.

14 JUDGE STOCKHOLM: That was the question. And
15 I'm -- I'm not positive that the panel actually
16 understood it that way.

17 A (Moujtahed) Now that she restated the question,
18 I can answer it this way: I was not aware of any -- any
19 damages happen to a project. So I would presume that,
20 yeah, it was successfully done.

21 (Bucci) Yeah, I answered it in the same way. I
22 see that there was -- damage was not done, but whether
23 there was -- that damage was because there was a SWPPP
24 in place --

1 Q Is another question.

2 A (Bucci) I do know that there are transmission
3 projects done that do not require extensive storm-water
4 management other than, you know, protecting the property
5 that adjoining --

6 Q Okay. So I'm going to ask you the other
7 question, which is, have you seen transmission
8 construction projects where a storm-water pollution
9 prevention -- where storm-water pollution prevention
10 measures have been unsuccessful, in other words, there
11 has been erosion and sedimentation that has resulted
12 from construction activities?

13 A (Bucci) Due to a faulty SWPPP or due to --

14 Q From construction activities, regardless --

15 A (Bucci) Regardless of whether there was a
16 storm-water management plan in place or should have been
17 in place?

18 Q Right.

19 A (Bucci) Have I ever seen damage from a
20 construction site?

21 Q Right.

22 A (Bucci) I guess I -- I couldn't answer that. I
23 mean --

24 JUDGE STOCKHOLM: Do you remember -- do you

1 remember seeing earlier in this proceeding some
2 photographs, I believe they were entered into the record
3 by DEC, showing photographs along the Millennium
4 Pipeline? Do you recall that --

5 MR. BUCCI: I --

6 JUDGE STOCKHOLM: -- with regard to erosion and
7 so on?

8 MR. BUCCI: No, I don't. I wasn't here on
9 those days. Was that late last week?

10 JUDGE STOCKHOLM: I don't recall the exact day.

11 MS. WILKINSON: Your Honor, it was Friday. It
12 was with the testimony of Mr. Ferracane.

13 JUDGE STOCKHOLM: And he was the one that took
14 those pictures; is that right?

15 MS. WILKINSON: Well, we established he took
16 three of the four, and the one he didn't take he had
17 personal knowledge of.

18 JUDGE STOCKHOLM: Right. That's correct. I
19 remember now.

20 MS. WILKINSON: And I have a copy of the
21 exhibit if you want.

22 MS. LEARY: Let me just make this easier for
23 the panel, if you would. May I approach the witnesses,
24 Your Honor?

1 JUDGE STOCKHOLM: You may. I was just trying
2 to clear up the question of have you ever seen it not
3 work. And I think -- I'll leave it to the experts, but
4 I think it did not work in those circumstances.

5 Counselor, you have to identify what you handed
6 out first.

7 MS. LEARY: Yes, I will. I just provided the
8 panel with two photographs that represent what appears
9 to be some damage, some erosion and sedimentation
10 damage. Just for illustration purposes, and I'd like to
11 mark these two perhaps as one exhibit for identification
12 and ask the panel if -- if they have seen this type of
13 situation before at a transmission construction facility
14 project in which they've been involved.

15 JUDGE STOCKHOLM: Counselor -- counselor, can
16 you please identify who took these photographs and what
17 they are --

18 MS. LEARY: Yes.

19 JUDGE STOCKHOLM: -- about?

20 MS. LEARY: They were taken by a member of the
21 New York City Department of Environmental Protection
22 watershed program. They are -- they represent, I
23 believe one, as you will see, an access road into a
24 development. And the second represents some what I'll

1 call storm-water prevention measures that aren't -- do
2 not appear to be quite successful, or appear to have
3 resulted, in any event, in sediment and some erosion.

4 JUDGE STOCKHOLM: What kind of project?

5 MS. LEARY: This was a construction project
6 within the New York City watershed that involved
7 building of homes and commercial -- I'm sorry, just
8 homes. And I believe it's called Baldwin Homes.

9 JUDGE STOCKHOLM: Okay.

10 MS. LEARY: But let me give you much more
11 specifics on that if I can reach back into my file. May
12 I provide you that --

13 JUDGE STOCKHOLM: You're welcome to give more
14 specifics if you want to, but in my opinion, we have an
15 adequate basis to mark this for identification.

16 MS. LEARY: Thank you.

17 JUDGE STOCKHOLM: The two photographs that we
18 were just discussing will be marked for identification
19 as Exhibit Number 205.

20 (Exhibit 205 marked for identification.)

21 BY MS. LEARY:

22 Q So, gentlemen, we've been sort of talking in
23 concept. And I just wanted to show you this photograph
24 to give you an idea of what I was referring to, because

1 one photograph shows you what is an access road which
2 has some level of erosion and sedimentation and damage.
3 The other is, you can actually see the storm-water
4 prevention measures in the photo. And I wanted to get
5 your impression of whether you've seen anything like
6 this happen before.

7 MR. SINGER: Your Honor, I object. It's
8 completely irrelevant what happened at some site unless
9 the witnesses have some knowledge about it. Also, as
10 counsel for the Attorney General indicated, this is not
11 anything that is a site for a transmission line. So
12 whether they have any -- any knowledge of something like
13 this, I don't think it's going to add anything to the
14 record in this case.

15 MS. LEARY: I think it's simply illustrative
16 for purposes of the panel understanding, you know, what
17 we've been discussing for the past few minutes. I'm
18 simply asking them in their experience in construction
19 projects for transmission facilities whether they have
20 seen this type of situation develop in those projects.
21 And it doesn't have to be exact or precise, but
22 obviously my question is not even referring to the
23 photos, whether you've seen this kind of erosion and
24 sedimentation happen in those projects with which you

1 have experience.

2 MR. BLOW: Your Honor, without -- if Ms. Leary
3 is not going to refer to the photos, which she just said
4 you don't need to, then the characterization of this
5 kind of situation doesn't help the record. So either
6 the photos need to be referred to, or there has to be a
7 greater characterization of what is going on, either
8 by -- probably by the witnesses, actually.

9 JUDGE STOCKHOLM: Well, I think we'll -- we'll
10 get to the witnesses here in a minute, but let me see if
11 I can simplify this a little bit.

12 Have the witnesses ever seen erosion,
13 unintentional erosion on a transmission line
14 construction project, erosion to the point where mud or
15 silt, or whatever you want to call it, gets into
16 streams?

17 MR. BUCCI: The last part of your question
18 helps me immensely in answering that. No, I have not,
19 and that's seen any damage to streams from transmission
20 sites. In fact, usually the towers are not, you know,
21 close to streams. And if there is damage, it's usually
22 localized in the area around the foundation excavation
23 activity.

24 JUDGE STOCKHOLM: So you've never seen water

1 from storms overwhelm the protections that were provided
2 during construction?

3 MR. BUCCI: Well, with a transmission line,
4 it's always a question. Not at a specific tower site.
5 It's not like there's a long --

6 JUDGE STOCKHOLM: Understood. Understood. I'm
7 getting there. I'll be there in a second.

8 MR. BUCCI: So the answer is no, not at -- not
9 for tower sites.

10 JUDGE STOCKHOLM: Has anybody seen storm-water
11 protection measures break down?

12 MR. MOUJTAHED: Well, in general, I have seen
13 eroded road, but not necessarily related to specific
14 transmission route. But in general, yes, I have seen
15 similar to the pictures that was handed.

16 JUDGE STOCKHOLM: Okay. Let me ask one more
17 question and I'll turn it back over to counsel.

18 In these two pictures in this -- these two
19 photographs identified as Exhibit 205, if you can
20 determine from these pictures, is the kind of clearing
21 that you see here that has facilitated the erosion the
22 kind of clearing that would ordinarily take place in
23 constructing a transmission line?

24 MR. BUCCI: Well, certainly this one is not.

1 This is a huge --

2 JUDGE STOCKHOLM: That's the first -- you're
3 referring to the first photograph? Yes, it's the first
4 of two, yes.

5 MR. BUCCI: Yes. Looks like a wide area has
6 been cleared.

7 MS. LEARY: That's actually an access road.

8 MR. BUCCI: Part of which has been driven on.
9 I don't know if it's intended to be an access road or
10 the whole area was cleared and they just drove on one
11 portion of it, but it's not a transmission familiar
12 site. It looks like a much larger area.

13 JUDGE STOCKHOLM: And the second photograph,
14 can you tell from that?

15 MR. BUCCI: I can't really tell much from the
16 second photograph other than what it shows, which is,
17 you know, some attempt at -- at a fencing. And I'm not
18 sure what the intent of it was, if it was intended to --
19 to prevent water damage. You know, I'm not -- if --
20 certainly if something is subject to an environment it
21 wasn't designed for, a storm that it wasn't designed
22 for, it wouldn't work.

23 JUDGE STOCKHOLM: Understood. Thank you.

24 Ms. Leary, please proceed.

1 MS. LEARY: I have no other questions, Your
2 Honor. Thank you.

3 JUDGE STOCKHOLM: Yes, Mr. Malone.

4 MR. MALONE: Thank you, Judge.

5 BY MR. MALONE:

6 Q With regard to the horizontal directional
7 drilling, do you need to determine the soil's thermal
8 characteristics before you can start drilling?

9 A (Bucci) Thermal characteristics of the soil,
10 sort of like heat conductivity?

11 Q Correct.

12 A (Bucci) No.

13 Q If thermal characteristics of the existing soil
14 didn't meet certain requirements, would you have to use
15 the thermal backfill that we talked about?

16 A (Bucci) No, not in directional drilling. We're
17 only speaking of the drilling operation, not -- not
18 trenching. You're talking about directional drilling?

19 Q Right.

20 A (Bucci) You know, directional drilling, the
21 whole concept is everything is intact and you drill
22 through it or under it, as the case may be, but you
23 don't -- there's no need to replace soil.

24 Q So with the directional drilling, there's no

1 need to use that thermal backfill?

2 A (Bucci) That's correct. And let me expand the
3 answer a little bit, which there is no need. Thermal
4 backfill is to provide heat dissipation from the cable,
5 but when you directional drill, you're deep enough so
6 that the ground generally remains cool enough.
7 There's -- the heat from the cable will not cause the
8 surrounding -- the ground to change its -- to get
9 hotter. There's sufficient cooling for the cable
10 without disturbing anything.

11 Q So the directional drilling is deeper and,
12 therefore, the cable doesn't heat the soil on top; is
13 that correct?

14 A (Bucci) That's generally correct, yes, because
15 the -- yes, that's correct.

16 Q Would you use directional drilling, for
17 instance, on the Marcy South line, the first 7.7 miles,
18 this underground, would you use directional drilling for
19 that entire span?

20 A (Bucci) No. I'm not sure if we have any
21 sensitive streams in that area, certainly not -- the
22 whole length, no.

23 Q And you only use it for sensitive areas, is
24 that --

1 A (Bucci) Oh, absolutely. Yes. It's quite
2 costly compared to the trenching for one thing, also
3 more time-consuming.

4 Q So if you didn't use the horizontal directional
5 drilling, you'd have to use the trenching method?

6 A (Bucci) If we did -- the first -- first
7 approach is to use the trenching unless there's
8 something that prevents you from doing that. And we
9 would go to horizontal directional drilling. There are
10 other methods of getting underground and digging tunnels
11 and such, which would be even more elaborate, and we're
12 not considering for this project at all.

13 Q And when you use the trenching method, that's
14 when you would have to use this thermal backfill?

15 A (Bucci) You might. It's not a given that you
16 have to use the thermal backfill. Tests on the soil
17 will determine whether the thermal conductivity of the
18 native soil would be sufficient. But it would only
19 apply to trenching, yes.

20 Q When you said you'd have to test the soil to
21 determine whether you need the thermal backfill, what
22 type of testing would that be?

23 A (Bucci) Thermal conductivity testing.

24 Q And how is that done?

1 A (Bucci) Take a sample of the soil. A
2 specialized laboratory would monitor the thermal
3 conductivity. And during -- and that would give us a
4 report, and we'd have it analyzed by a specialist and --

5 Q Are you done with your answer?

6 A (Bucci) Yes.

7 Q On the 7.7 miles on the Marcy South Alternate,
8 will open-trenching be used through any agricultural
9 areas?

10 A (Bucci) We would have to look on the --

11 (Wood) I would just say on the -- on the
12 section that is underground, I'm not aware that it goes
13 through agricultural lands. We'd have to check that.
14 But if -- if there were agricultural lands, then yes, we
15 would be trenching through the agricultural lands, at
16 least that's the plan at this point.

17 Q And if I ask the same question on the
18 7.7 miles, would you use open-trenching on any wetland
19 areas that you encountered?

20 A (Wood) Well, I think the one wetland that we
21 encounter is the Barge Canal. And we are proposing to
22 do a directional drill under the Thruway and the Barge
23 Canal.

24 Q And the same with any stream crossings on that

1 7.7 miles?

2 A (Bucci) Any stream at all or just sensitive --

3 (Wood) Well, subject to what we talked about
4 the other day, directional drill would be used for any
5 stream crossings CT or higher is what we talked about
6 the other day, so.

7 Q With regard to the proposed route, are there
8 any crossings under NYPA's Marcy South line?

9 A (Bucci) Yes, there are.

10 Q How many?

11 A (Bucci) I don't recall offhand. We're going to
12 have to look that up.

13 Q That would be great if you could do that.

14 A (Bucci) We're not sure if there's more than
15 one, actually.

16 Q Well, my next question is, where are they? So
17 you can take a look at the map.

18 JUDGE STOCKHOLM: Is that in Orange County?
19 Are those crossings in Orange County? I'm trying to get
20 an idea of where they are.

21 JUDGE PHILLIPS: Basically at the southern
22 end -- are the crossings at the southern end of the
23 line, is that --

24 MR. BUCCI: Of the proposed route.

1 MR. WOOD: At the proposed route, the one that
2 I'm aware of is just north of Otisville where it crosses
3 under the Marcy South line.

4 JUDGE STOCKHOLM: And as far as you know,
5 there's just that one crossing for the proposed route?

6 MR. WOOD: I believe so.

7 BY MR. MALONE:

8 Q Can you take a look at Section E-1.1.5 entitled
9 "Buss Spans"?

10 MR. MCCARTHY: Your Honor, we have the second
11 crossing. Can we approach the witnesses?

12 JUDGE STOCKHOLM: Yes, absolutely. Go ahead.

13 JUDGE PHILLIPS: Can you just indicate the
14 figure and exhibit you're looking at?

15 MR. WOOD: It's Exhibit 37, Figure 247.

16 A (Bucci) We have the crossing in -- the crossing
17 location was the question that you asked?

18 Q Well, there were two questions. One, how many
19 are there?

20 A (Bucci) I guess we're still researching to
21 decide if there's one or two. We have one.

22 Q Let me just ask you, would it help you guys out
23 in your -- in Exhibit E-1, E-1.1.5, it says,
24 "Specialized facilities will be required where there are

1 proposed crossings - plural - under the existing New
2 York Power Authority 345 kV double circuit AC
3 transmission line."

4 Where's the one that you know about?

5 A (Bucci) Figure 247 in Orange County.

6 MR. BLOW: Your Honor, I think we can help.

7 JUDGE PHILLIPS: Do you know where the second
8 crossing is, or does this help? What are you handing
9 them?

10 MR. DE WAAL MALEFYT: Figure 224.

11 A (Bucci) Two crossings.

12 Q Thank you. And where's the second one?

13 A (Bucci) Just outside of Otisville, Figure 224
14 and 223.

15 JUDGE PHILLIPS: And I just want you to confirm
16 for me, 224 and 223 are showing the same crossing,
17 correct?

18 MR. BUCCI: Yes, that's correct, Your Honor.

19 JUDGE PHILLIPS: Thank you.

20 Q And just to confirm, there's only two?

21 A (Bucci) Yes.

22 Q Did you want to confer with them?

23 A (Bucci) No.

24 Q With regard to the buss crossing in Orange

1 County, I think you referred to Figure 247, can you tell
2 me what the dimensions of that buss crossing are?

3 A (Bucci) We provide a figure for the rigid buss
4 span and overhead line crossing, Figure E-1.2.5, which
5 shows the dimensions.

6 Q And what are they?

7 A (Bucci) Which dimensions are you interested in?

8 Q Let's start with height.

9 A (Bucci) Well, the height of our tower on each
10 side of the Marcy South line, approximately 85 feet.

11 Q I'm not sure. I'm looking for -- let's start
12 this way. Describe to me what a buss crossing is.

13 A (Bucci) There's a -- the rigid -- okay. A buss
14 span generally is a -- a rigid buss that crosses
15 underneath the Marcy South transmission line for a span
16 between two poles. And on either side of that rigid
17 span, there's -- again, there's normal conductors that
18 are -- will return up to the taller poles on each side.
19 So the portion that's directly -- that's rigid and
20 directly under the Marcy South, approximately 60 feet in
21 width. Height off the ground -- the height is
22 approximately 28 feet off the ground.

23 A rigid buss is a conductor, aluminum pipe,
24 conduit pipe about 4 to 6 inches in diameter, maybe 3,

1 one for each phase. I'm sorry. That would be two --
2 no, there would be two and the return. Yeah, there
3 would be three.

4 Q I'm sorry. Now you lost me. There will be
5 three what?

6 A (Bucci) Three conductors comprising this rigid
7 buss.

8 Q And --

9 MR. KLUCSIK: Mr. Malone, can I interrupt you
10 for just a clarifying question so --

11 MR. MALONE: Absolutely.

12 MR. KLUCSIK: I'm unclear on the picture of a
13 rigid buss structure.

14 Mr. Bucci, would it be fair to say that a rigid
15 buss structure has a stiff or rigid conductor rather
16 than a flexible wire conductor?

17 MR. BUCCI: Yes.

18 MR. KLUCSIK: Thank you.

19 MR. THOMPSON: For a portion of it.

20 MR. KLUCSIK: Thank you, Mr. Malone.

21 BY MR. MALONE:

22 Q Mr. Bucci, let me ask you, why -- why was a
23 buss crossing proposed here in the Orange County area?

24 A (Bucci) There's two ways to interpret that

1 question. You mean why did we cross the Marcy South
2 line at all?

3 Q Why did you use a buss crossing to do it?

4 A (Bucci) Oh, as opposed to some other type of
5 crossing? The only other way to cross it is to cross it
6 overhead. And it would be tremendously -- you know,
7 much taller towers are required to get over the -- over
8 the height of the line in the necessary clearance.

9 JUDGE STOCKHOLM: Couldn't you put it
10 underground?

11 MR. BUCCI: It wasn't -- it wasn't necessary to
12 even consider going underground to meet any clearance
13 requirements that are necessary this way. So
14 underground is not a choice that we would -- we would
15 consider necessary to look at in this case.

16 JUDGE STOCKHOLM: Are you suggesting that
17 underground for such a crossing would be more expensive?

18 MR. BUCCI: Well, it would be more expensive,
19 but that's not the only reason. Significant issues:
20 You go underground for a short section such as this,
21 which is -- actually would be approximately 60 feet,
22 would introduce unreliability into the line because of
23 the additional components, you know, presenting a weak
24 point in the line unnecessarily.

1 JUDGE STOCKHOLM: Understood.

2 I'm sorry, Mr. Malone. Go ahead.

3 BY MR. MALONE:

4 Q Would an overhead crossing under Marcy South
5 create reliability problems?

6 A (Bucci) An overhead crossing under Marcy South
7 such as we propose?

8 Q Right.

9 A (Bucci) It shouldn't create reliability
10 problems.

11 Q None?

12 A (Bucci) Well, certainly it would be a minimum
13 impact on reliability. Now, it would not impact the
14 reliability of the Marcy South line. There would be
15 some risk that we'd be taking that Marcy South line
16 could fall on our -- you know, in the event of a failure
17 on the Marcy South line, we would be subjecting our line
18 to potential outage. °

19 Q So in that case, reliability would be enhanced
20 if you went underground because it's something -- if
21 Marcy South fell on top of your overhead line, it
22 could -- it could force you out.

23 A (Bucci) I understand.

24 Q But if you put it underground, that wouldn't

1 be -- that situation wouldn't exist?

2 A (Bucci) The likelihood of the -- of the
3 scenario of Marcy South falling on our line is -- is --
4 you'd have to weigh that likelihood and probability
5 versus the introduction of unreliability due to the
6 components that you would have to install for the
7 splicing, et cetera, of the underground portion. In our
8 judgment, the underground portion would be a less
9 reliable end result than the risk of a Marcy line
10 falling on that spot.

11 Q Let's jump to the Otisville.

12 A (Bucci) That is another point I didn't mention
13 in terms of the not going underground is the restoration
14 if, indeed, there was a failure of the -- of our line.
15 Then that underground portion restoration would be a lot
16 more difficult and time-consuming than it would be for a
17 rigid buss. If Marcy South fell on our rigid buss,
18 we -- we would be able to just remove the Marcy South
19 conductor when it was de-energized and we would be back
20 in business.

21 Q I thought you just told me if Marcy South fell
22 and the line were underground, it wouldn't cause you any
23 problems.

24 A (Bucci) That's correct, but our own line would

1 be more likely to fail being -- excuse me, not more
2 likely to fail, but a failure on our underground line
3 would be more likely to cause a sustained outage,
4 because being underground, it's harder to get to it to
5 repair it.

6 Q Let's go to the Otisville buss crossing. Can
7 you tell me what the dimensions of that -- what's the
8 footprint of that Otisville buss crossing?

9 A (Bucci) I guess subject to final design, we're
10 talking about a typical buss crossing in this figure
11 that would apply to both cases.

12 JUDGE STOCKHOLM: Is the Otisville buss
13 crossing on Figure 224? Just so I know what we're
14 talking about.

15 MR. MALONE: And I think they also said 223,
16 Your Honor.

17 JUDGE STOCKHOLM: Yes, I think it shows up
18 there, too.

19 MR. BUCCI: Yes, Your Honor.

20 JUDGE STOCKHOLM: Thank you.

21 A (Bucci) So in general, it would look the same.
22 If necessary, we could always adjust, you know, these
23 typical figures to match some specific at the site that
24 we find. It would be minor adjustments.

1 Q And is this type of crossing typically used?

2 A (Bucci) Well, "typical" is a word that -- it's
3 a subjective word. It's definitely used in the
4 industry. Most substations open -- substations have
5 rigid buss. And most substations have, you know,
6 overhead lines, you know, nearby or directly crossing
7 over that buss. So in that sense, it's a common
8 situation.

9 Q Well, would the rigid buss typically be used to
10 go under other power lines?

11 A (Bucci) In a sub -- in or approaching a
12 substation, it's -- it is -- it is common, yes.

13 Q Can you tell me -- well, is the -- is there a
14 fence around the Orange County buss crossing that's
15 depicted in Figure 247?

16 A (Bucci) On the figure -- on the figure, we show
17 the fence. It would be applied to both crossings that
18 we spoke about, approximately of 120 feet by 120 feet.
19 So it extends out beyond the buss approximately 30 feet.

20 Q And does it completely surround the buss?

21 A (Bucci) Yes.

22 Q And that's for both of the buss crossings?

23 A (Bucci) Yes.

24 Q I noticed in the text of E-1.1.5 you indicate

1 the buss span will be fenced like in a substation.

2 Would you compare this buss crossing to a substation?

3 A (Bucci) You want me to compare them now, or are
4 you saying would I consider them analogous in some way?

5 Q Well, it appears to me in the text you've
6 compared this buss crossing with its fence to a
7 substation. And I'm asking you, is that comparison
8 valid?

9 A (Bucci) Well, yes, in the sense that the
10 fenced-in rigid buss aboveground is typically what you
11 find in a substation, in addition to the overhead lines
12 nearby.

13 Q And you indicated that both of these buss
14 crossings, both the Orange County and the Otisville
15 would be fenced in?

16 A (Bucci) Yes. Yes, they would have to be, yes.

17 Q And approximately the same dimensions. I
18 believe you indicated approximately --

19 A (Bucci) Yes. And these dimensions are -- meet
20 safety clearance requirements in accordance with the
21 applicable standard.

22 Q And -- and how far from the NYPA towers would
23 these crossings be located?

24 A (Bucci) We show in the diagram a minimum of

1 75 feet away from the Marcy South tower.

2 Q Just one tower?

3 A (Bucci) Excuse me?

4 Q Just one tower? It's 75 feet from one tower?

5 A (Bucci) Well, Marcy South tower or pole, we
6 would be 75 feet in the horizontal direction away from
7 that, minimum.

8 Q And would you anticipate using NYPA access
9 roads to construct the buss crossings?

10 A (Bucci) We would certainly consider that. I
11 think as we mentioned the other day, we're not sure of
12 all the locations and sizes, et cetera, but that would
13 be -- that would be a desirable way to go, yes.

14 Q Would you anticipate building any new access
15 roads in order to construct the buss crossing?

16 A (Bucci) Well, actually, the buss crossing is
17 less material-intensive than a normal tower. So I don't
18 see any special access being needed for -- for a buss
19 crossing. The towers are actually -- the poles would be
20 shorter actually at that point than the rigid busses,
21 you know, rather small in comparison with the tower.

22 Q Would the buss crossings be constructed
23 completely within NYPA's existing right-of-way?

24 A (Bucci) The rigid buss crossing would be --

1 including its fence would be within the right-of-way,
2 yes.

3 Q The NYPA right-of-way?

4 A (Bucci) The NYPA -- yes, the NYPA right-of-way.
5 Yes.

6 Q Would you anticipate acquiring land to build
7 these crossings in fee?

8 A (Bucci) Just let me clarify that. At that
9 point, the NYPA right-of-way and the proposed NYRI
10 right-of-way cross. So I guess -- but my answer meant
11 in the direction of the NYPA right-of-way would be
12 within its boundaries, yes, the outside of it, because
13 our right-of-way is actually outside of NYPA's
14 right-of-way. You can see that in the figure.

15 Q If the -- the NYRI Marcy South Alternate were
16 certified and NYRI was required to cross from one side
17 of the right-of-way to the other, how would you do it?

18 A (Bucci) We haven't done it. We haven't
19 designed it. Certainly there are feasible ways to do
20 it, this rigid buss being certainly one of them.

21 Q Do you --

22 A (Bucci) We'd work with NYPA on the concepts for
23 that. I would want -- I definitely would want, you
24 know, the NYPA to be a part of that concept and design.

1 Q Well, do you think you'd use additional buss
2 crossings?

3 A (Bucci) Well, it would be presuming that we'd
4 need to cross the Marcy South. We're trying to run
5 alongside. If we had to cross, and that's not a plan,
6 but I suppose it could be, could happen, we'd proceed,
7 as I had mentioned, you know, with NYPA's input and come
8 up with the design.

9 Q Well, do you recall reading the DPS testimony
10 in which one of the recommendations was to cross over
11 the Marcy South lines?

12 A (Bucci) As an alternate to -- yeah, to maybe
13 crossing some other property. Yes, I have read that.

14 Q And so --

15 A (Bucci) So that may be an example where we
16 would cross and we would -- we would -- I don't see any
17 reason why we wouldn't be able to cross under it with
18 rigid buss, or maybe, you know, non-rigid buss depending
19 on the heights involved and the clearances. But
20 certainly in working with the NYPA, we would propose a
21 design to NYPA's engineers and meet with them as
22 necessary and work it out.

23 Q And would that be something that you would be
24 willing to include in the certificate conditions if the

1 PSC were to certify?

2 A (Bucci) Would what be --

3 Q That you would need concurrence of NYPA before
4 you designed and built these buss crossings?

5 A (Bucci) Well, if we were directed to, you know,
6 take an alternate at that point which forced us to cross
7 the NYPA line, I guess NYPA would -- I mean, certainly
8 we would work with NYPA to come up with a mutual --
9 mutually acceptable design.

10 Q And would you be agreeable to including that as
11 part of the certificate conditions?

12 MR. SINGER: Can I answer that, or do you want
13 to answer that?

14 MR. THOMPSON: No. I'll let you. Get the
15 right caveats.

16 MR. SINGER: As Mr. Bucci stated, we would be
17 agreeable to a certificate condition that required New
18 York Regional Interconnect to work with NYPA to develop
19 a mutually acceptable design for buss span crossings.

20 JUDGE STOCKHOLM: Thank you.

21 Q Let me just ask you, would multiple crossings
22 increase or decrease reliability?

23 A (Bucci) Of the -- it wouldn't have -- it
24 wouldn't have an impact on the -- on the Marcy South --

1 presuming we were crossing underneath, it wouldn't have
2 an impact on the Marcy South line. On the NYRI line,
3 you know, what's the probability of the -- of the Marcy
4 South line falling down on that one particular spot
5 where we happen to be crossing underneath? By the laws
6 of probability, other than Murphy's law of probability,
7 that would be unlikely. So it would be a very small
8 amount. It would be a risk that our line would be
9 taking, but a very small one compared to the, you know,
10 availability of the line.

11 MR. MOUJTAHED: Your Honor, would it be
12 possible to consider a short break?

13 JUDGE STOCKHOLM: How much more do you have,
14 Mr. Malone? That's on to three pages. Yes, we will
15 take ten minutes.

16 (A brief recess was taken.)

17 JUDGE STOCKHOLM: Mr. Malone.

18 MR. MALONE: Thank you, Your Honor.

19 BY MR. MALONE:

20 Q Mr. Bucci, I'm not completely -- I don't know
21 if I completely understood your answer. Did you
22 indicate that rigid buss had typically been used to
23 cross right-of-ways for transmission lines?

24 A (Bucci) And approaches to the substations and

1 the substation itself, there would be rigid buss under
2 or nearby -- under and nearby -- and/or nearby overhead
3 lines coming into the substations.

4 Q But in this case, we have -- it's more of an
5 open field type of situation; would you agree?

6 A (Bucci) Yes.

7 Q And I guess my question is, for what you are
8 proposing, which is not a substation, for what you are
9 proposing, is this type of structure typically used to
10 cross transmission lines?

11 A (Bucci) No. It's used in this case to minimize
12 the height of any poles or towers that we would have to
13 add. Typically the lines are crossed by other lines,
14 but it does result in the line above it having -- being
15 higher and having a taller pole at that span than the
16 method we're proposing here.

17 Q So the method that you're proposing here is not
18 really typical; would that be fair to say?

19 A (Bucci) Well, it is commonly used in a
20 substation, and that -- you know, if you're talking
21 about what's the impact on the electrical circuit, the
22 circuit doesn't know -- doesn't care whether it's on the
23 upward field or in the substation. It's still a
24 potential of wires falling on the buss, you know, if

1 that's -- that's one example of how they're similar.

2 JUDGE STOCKHOLM: Have you ever seen this
3 construction done outside of the immediate vicinity of a
4 substation?

5 MR. BUCCI: Well, I have -- I have seen it
6 outside of a substation, but on -- for example, if it's
7 a large generation project site, you know, within the
8 site boundaries, yes.

9 JUDGE STOCKHOLM: But not going through the
10 open country as here?

11 MR. BUCCI: No. To be honest, you know, what
12 you typically see out in the open countryside is one
13 line crossing another line.

14 JUDGE STOCKHOLM: How tall would the poles have
15 to be, if you can tell, to cross above Marcy South?

16 MR. BUCCI: Well, I can just say -- what I
17 could say about that is that they have to be at least
18 about 30 feet taller than the existing poles in order to
19 get the clearance between the highest conductor of one
20 line and the lowest conductor of ours, and that's
21 assuming the poles were very close to each other. The
22 further away you go, the more sag, the 30 feet
23 increases, approximately 30 feet, I guess, difference.

24 JUDGE STOCKHOLM: And if I remember testimony

1 from earlier, most of the poles are in the 100 to
2 130-foot range; is that correct, as NYRI's proposed it?

3 MR. SINGER: Your Honor, is that most of our
4 poles or most of the Marcy South poles in this area?

5 JUDGE STOCKHOLM: No, no. Most of your poles.
6 Most of NYRI's poles are --

7 MR. BUCCI: What was it, 85 to 130?

8 JUDGE STOCKHOLM: It might have been 85 to 130.

9 So somewhere in the middle is a hundred. Would
10 it be reasonable to assume that the pole would have to
11 be approximately 130 feet?

12 MR. THOMPSON: No. It's going to be 30 feet
13 more than the Marcy South pole.

14 MR. BUCCI: Yeah, 30 feet more than the Marcy
15 South pole.

16 JUDGE STOCKHOLM: Okay. Understood.

17 Do you know how tall the Marcy South poles are
18 in those locations? It should be in that drawing,
19 shouldn't it?

20 MR. BUCCI: No.

21 JUDGE STOCKHOLM: If you don't know, that's
22 fine. I just --

23 MR. BUCCI: Just to clarify, not 30 feet taller
24 than the pole necessarily, but 30 feet -- the bottom of

1 our lowest conductor would have to be 30 feet above the
2 bottom of their highest conductor. So my 30 feet in
3 terms of translating that -- I just translated that to
4 the height of the pole.

5 JUDGE STOCKHOLM: Understood. I understood how
6 you answered the question. I just wondered if you
7 had -- that's all right. That's fine.

8 Mr. Malone.

9 MR. MALONE: Thank you, Your Honor.

10 BY MR. MALONE:

11 Q Mr. Bucci, at the Orange County proposed buss
12 crossing, is the Marcy South line a double-circuit,
13 vertical configuration?

14 A (Bucci) Yeah. Our understanding, that one, as
15 shown on the figure, is a vertical, double-circuit
16 configuration --

17 Q And how about --

18 A (Bucci) -- to the monopole, both cases.

19 Q In both the Orange County and the Otisville
20 case?

21 A (Bucci) I should also point out that the --
22 that's the -- that Marcy South span crosses a railroad.
23 And so those towers are -- yeah, I would say that, you
24 know, that would be a judicial place to cross in terms

1 of the reliability if it's already built into that
2 crossing because of the railroad being underneath. And
3 those -- those poles may be taller than -- than
4 otherwise if they weren't crossing -- if there wasn't a
5 railroad crossing there.

6 Q So at the point, that the judge asked whether
7 you could go over the Marcy South line. Do you recall
8 that, as opposed to going under?

9 JUDGE STOCKHOLM: That's what I was just asking
10 you.

11 A (Bucci) Oh, yes. Yeah.

12 MR. BLOW: Your Honor, either now or when
13 Mr. Malone is done, because you asked that question, I
14 have a follow-up.

15 If you were to cross over -- if the NYRI line
16 were to cross over the Marcy South line, would you do it
17 at the point of maximum sag of the Marcy South line, the
18 lowest point?

19 MR. BUCCI: That would be one of the criteria.
20 Certainly we would attempt to do that, keep the poles as
21 low as possible. And we wouldn't know if we'd be able
22 to do that until we got into the specifics.

23 MR. BLOW: Thank you.

24 BY MR. MALONE:

1 Q At the two locations that you're proposing for
2 the buss crossings, if you were to go on top of, over
3 the Marcy South line, how tall would your poles have to
4 be?

5 A (Bucci) Yeah, that was my estimate of -- a
6 relative estimate of about 30 feet taller than the --
7 than our existing poles.

8 Q So that would provide a clearance of
9 approximately 30 feet?

10 A (Bucci) Yeah. Although, all things being
11 approximately equal, you need to have that -- that --
12 increased height of the poles will increase the
13 conductor at all points.

14 Q Okay. So my question is, if you're going over
15 Marcy -- over the Marcy South line at those two points,
16 you're saying that your poles have to be 30 feet higher?

17 A (Bucci) I'm not sure I understand.

18 Q Okay. Explain to me. If you go over the Marcy
19 South in those two points in Orange County and
20 Otisville, how tall do your poles have to be? Just for
21 point of reference, we indicated, I think, that at these
22 two places, it's a double-circuit, vertical
23 configuration.

24 A (Bucci) Yes.

1 Q So how tall would your poles have to be?

2 A (Bucci) I don't know the height of the Marcy
3 South poles, but to be 30 feet above their highest
4 conductor, potentially we would be -- our poles would be
5 30 feet higher than the Marcy South poles.

6 Q And what kind of clearance would that give you
7 between the two lines?

8 A (Bucci) Approximately 30 feet. I'm giving you
9 rough numbers, but --

10 Q How rough?

11 A (Bucci) Let me refer to one other figure.
12 Thirty feet is approximately the required distance
13 between the two conductors at that voltage.

14 Q Now, let's go back to your proposal to put the
15 rigid buses underneath Marcy South.

16 A (Bucci) Yes.

17 Q How high would the rigid buses be off of the
18 ground?

19 A (Bucci) Approximately 25 feet.

20 Q Twenty-five or 28?

21 A (Bucci) I'm sorry. Twenty-eight. I did say
22 that before. Yeah, it's 28. It's 28 in the figure,
23 again, Figure E-1.2.5.

24 Q I'm sorry. Can you give me that again?

1 A (Bucci) E-1.2.5.

2 Q And how much clearance would that allow between
3 your rigid buss and the Marcy South transmission line at
4 the Orange County location?

5 A (Bucci) A minimum of 18 feet.

6 Q When you say "a minimum", is there a range?

7 A (Bucci) Well, it depends -- that would be at
8 the lowest point of the Marcy South sag. Since our --
9 our height is the same, it would be more clearance the
10 closer we get to the Marcy South pole.

11 Q And we talked before about a substation. What
12 would the clearances typically be at a substation
13 between the sub -- the lines from the substation and the
14 overhead transmission line?

15 A (Bucci) Between the conductor and the rigid
16 buss, it would be approximately the same, 18 feet.

17 Q Would you anticipate taking outages on NYPA's
18 two circuits in order to construct these crossings?

19 A (Pichardo) The clearance between the buss is
20 within the OSHA requirement, so you don't have to get an
21 outage to build a rigid buss. So you don't -- it was a
22 matter you can do the work without taking outage on the
23 transmission line.

24 Q And you're saying that that 18 feet is within

1 the OSHA regulations?

2 A (Pichardo) That's the intent, to do it within
3 the OSHA regulation.

4 Q I'm sorry. Can you say that again?

5 A (Pichardo) The intent is to do it within the
6 OSHA regulation.

7 Q And I'm asking you, is that 18 feet sufficient
8 to comply with the OSHA regulations?

9 A (Pichardo) I have to double-check the OSHA
10 regulations, but when we develop those sketches, we
11 believe that we were in compliance with the OSHA
12 regulation.

13 JUDGE STOCKHOLM: Is the 18 feet that you're
14 referring to under maximum sag conditions for the NYPA
15 line, that would be emergency operational limits for
16 that line?

17 MR. PICHARDO: The clearance required is not
18 within the sagging. It's the separation from the live
19 conductor for this voltage level, 345 kV, to any
20 operator working have to be at any point, no matter if
21 it was the lower point or any point, have to be certain
22 clearance. At this moment, I cannot confirm if the
23 18 feet is the right number within the OSHA. We can
24 take a look at that.

1 JUDGE STOCKHOLM: That's not really my
2 question. The 18 feet that you've shown on your
3 diagrams, does that represent the maximum sag and --
4 doesn't it have to represent the maximum sag on the
5 Marcy South line?

6 MR. PICHARDO: The answer is that represent the
7 sag of the conductor when it's 270 degrees C, the sag in
8 the lowest point that we expected from the transmission
9 line. The distance 18 feet would be within the
10 clearance of that number, yes.

11 JUDGE STOCKHOLM: That's exactly my question.
12 Thank you.

13 MR. MALONE: May I continue, Your Honor?

14 JUDGE STOCKHOLM: Yes, sir, absolutely.

15 BY MR. MALONE:

16 Q If you were permitted to construct the NYRI
17 Marcy South Alternate in NYPA's right-of-way, do you
18 anticipate clearance problems using your construction
19 equipment under NYPA's energized lines?

20 A (Bucci) Do I anticipate clearance problems?

21 Q Correct.

22 A (Bucci) No, I wouldn't anticipate problems.

23 Q How much clearance is required, do you know?

24 A (Bucci) For a working clearance safely under

1 energized conductors?

2 Q Correct.

3 A (Bucci) I don't know the exact -- the exact
4 number offhand. It depends on the kind of construction
5 activities as well, but I'm not saying that we would not
6 require an outage in certain, you know, certain
7 instances depending on what was going on. But we would
8 design our construction operation to the extent possible
9 to be able to be performed, you know, alongside the NYRI
10 line without encroaching on the unsafe area or the area
11 that's, you know -- without encroaching on the minimum
12 clearance for construction purposes.

13 Q What type of construction equipment would you
14 need?

15 A (Bucci) I don't anticipate any construction
16 equipment crossing under the Marcy South line.
17 Remember, we'd be working alongside Marcy South line.

18 Q Can you take a look at Panel A's rebuttal
19 testimony?

20 A (Moujtahed) Did you say Panel A?

21 Q Yes.

22 A (Bucci) Okay. We have that, Your Honor.

23 Q Can you take a look at page 40, specifically
24 lines 21 through 23?

1 A (Bucci) Yes.

2 Q Do you see that portion that says, "NYRI
3 acknowledges that during construction of the buss spans,
4 the Marcy South lines may need to be removed from
5 service for limited amounts of time to ensure worker
6 safety"?

7 A (Bucci) Yes.

8 Q What's a limited amount of time?

9 A (Bucci) Not continuous, but a time that was
10 reasonable and agreed to mutually with NYPA.

11 Q Well, would it be for the full term of the
12 construction, let's say, of the rigid buss?

13 A (Bucci) It wouldn't have to be, no.

14 JUDGE STOCKHOLM: Could you schedule that
15 construction at times of limited electricity demand?

16 MR. BUCCI: Yes, we would. In fact, as it
17 states in here, in our testimony on the same page, we
18 would coordinate that -- yes. The answer to your
19 question, yes, it could be done during limits of low --
20 of low demand for that line, for the power in that line.

21 JUDGE STOCKHOLM: Could you do it in the dark?
22 Could you do it at night?

23 MR. BUCCI: Yes.

24 MR. MOUJTAHED: Off-peak hours.

1 JUDGE STOCKHOLM: Thank you.

2 MR. BUCCI: Weekends. Other times when we
3 would coordinate with NYPA.

4 Q Mr. Bucci, I believe you testified that you
5 would use either native soil or gravel for new access
6 roads; is that correct?

7 A (Bucci) Yes. That's what we propose, yes.

8 Q Would you -- in the course of constructing the
9 Marcy South Alternate, would you drive construction
10 vehicles on the native soil or the gravel?

11 A (Bucci) Yes, we would.

12 Q Did you testify that for one structure, in
13 order to erect one structure, you'd need to pour a
14 concrete foundation of approximately 55 cubic yards of
15 concrete?

16 A (Bucci) That was -- that was the number -- I
17 think we said that was for typical tangent structure, or
18 however we qualified that, but yes, that was the number
19 we talked about for tower construction.

20 Q And you estimated there were approximately
21 seven of these structures per mile?

22 A (Bucci) Yes.

23 Q And would you drive the concrete truck on the
24 native soil or the gravel access roads to deliver the

1 concrete to the area where you were going to pour that
2 foundation?

3 A (Bucci) Yes, we would.

4 Q And roughly, do you know how many cement trucks
5 it would take to transport 55 cubic yards of concrete to
6 a particular location?

7 A (Bucci) Approximately six or seven trucks.

8 Q So for that mile, that one-mile stretch where
9 you have seven towers, it would be somewhere between 42
10 and 49 cement trucks that would be involved?

11 A (Bucci) Truckloads, yes. Truckloads.

12 Q Do you have any idea how much a fully loaded
13 cement truck weighs?

14 A (Bucci) I'll say it again, no. I need to look
15 up the specific weight of cement to really answer your
16 question. I don't know. We normally estimate cement in
17 cubic yards, but I, you know, have to look it up.

18 MR. KLUCSIK: Your Honor.

19 JUDGE STOCKHOLM: Yes.

20 MR. KLUCSIK: Less the record suffer any
21 confusion, I'd ask either the witness or Mr. Malone to
22 clarify whether the reference is correct regarding
23 cement trucks or whether we're talking about ready-mix
24 concrete trucks. I believe there is a significant

1 difference.

2 JUDGE STOCKHOLM: Oh, well, that's something I
3 didn't know, that they're -- did you know that,
4 Mr. Malone?

5 MR. MALONE: Didn't have a clue, Your Honor.

6 JUDGE STOCKHOLM: Would you inform the record
7 as to the difference, Mr. Klucsik?

8 MR. KLUCSIK: I suppose it would be better to
9 do that by asking Mr. Bucci, who I suspect may be
10 familiar with the difference.

11 Mr. Bucci.

12 JUDGE STOCKHOLM: Mr. Bucci.

13 MR. BUCCI: Yes.

14 MR. KLUCSIK: Is it your understanding that
15 cement is generally hauled by pneumatic tanker?

16 MR. BUCCI: Yes.

17 MR. KLUCSIK: And is it your understanding that
18 concrete, wet concrete is typically hauled by
19 ready-mix -- what is referred to as a ready-mix concrete
20 truck?

21 MR. BUCCI: Yes.

22 MR. KLUCSIK: And that the difference between
23 the two is that the pneumatic tank car is a dry bulk
24 tanker that is loaded and unloaded with air pressure?

1 JUDGE STOCKHOLM: You actually have to say yes.

2 MR. BUCCI: Yes.

3 MR. KLUCSIK: And a ready-mix concrete truck is
4 the one you see on the road with the barrel that
5 revolves?

6 MR. BUCCI: Yes.

7 MR. KLUCSIK: Thank you, Your Honor.

8 JUDGE STOCKHOLM: Which one of those two
9 described trucks would be the trucks that would be
10 bringing the materials that you're going to put the
11 poles in?

12 MR. BUCCI: The ready-mix concrete with the
13 barrel that you'd normally see on the roads.

14 JUDGE STOCKHOLM: Okay. Very good. Thank you.

15 BY MR. MALONE:

16 Q And it would take approximately 42 to 49 of
17 those trucks to pour the foundations for the seven
18 structures?

19 A (Bucci) Trips or truckloads, yes.

20 Q If -- if the soil -- if you were driving on a
21 native soil new access road and the soil became
22 saturated, would you suspend operations, construction
23 operations?

24 A (Bucci) There would be parameters in which we

1 would need to stop until, you know, the road could be
2 made passable. I can't tell you exactly what those
3 parameters are, but certainly a road that was made
4 impassable to being saturated, we wouldn't pass over it
5 until we could make it passable.

6 Q And at what point would you determine that you
7 wouldn't drive on that soil?

8 A (Bucci) There would be specific parameters for
9 that in the EM&CP and the construction specifications.

10 Q And what would those parameters be?

11 A I couldn't tell you right now.

12 Q If you were to construct new access roads on
13 the Marcy South Alternate, would those access roads be
14 wide enough for two vehicles to pass?

15 A (Bucci) If we were to construct access roads to
16 the Marcy South Alternate? I'm sorry.

17 Q If you were to put new access roads on the
18 Marcy South Alternate in order to build your facility in
19 the event that it was certified and you were permitted
20 to do that, would you construct them with a width such
21 that two vehicles could pass on them, or would they be
22 one-way? Would it just be so narrow that --

23 A (Bucci) I understand your question. I don't
24 really have enough information on the Marcy South

1 right-of-way at this time to -- if it -- if a two-way
2 would -- would fit appropriately, sure. Certainly we
3 have used one-way access roads to -- to construct
4 transmission lines also.

5 Q Would any of the access roads that you
6 constructed, new access roads that you constructed on
7 the Marcy South right-of-way be a dead end?

8 A (Bucci) The vehicles would have to be spaced to
9 turn around the vehicles.

10 Q Well, do you -- do you contemplate --

11 A (Bucci) Not necessarily a continuous road along
12 the entire length of the right-of-way, no. It would
13 certainly -- could be --

14 Q So there would be a dead end?

15 A (Bucci) -- a way to turn around in the road.

16 Q I'm sorry, I didn't hear.

17 A (Bucci) It could be, yes.

18 Q In a case where an access road that was made up
19 of native soil became saturated, would NYRI add fill,
20 replace gravel or logs or mats to make it passable?

21 A (Bucci) Yes. One or more of those options
22 would be --

23 Q What would be your first option? Would you
24 place fill?

1 A (Bucci) I'm not sure what the first option
2 would be, but certainly mats are commonly, you know,
3 obtained for those -- for the purposes of crossing wet
4 soil. So matting is a common way to traverse those
5 unstable portions.

6 Q If you were to add that, would you change the
7 EM&CP? If you would have to add mats or logs to a
8 particular area access road, would you then change the
9 EM&CP?

10 A (Bucci) I wouldn't -- I would anticipate that
11 the EM&CP would have this -- this method described in
12 detail so that we'd be -- could be employed without
13 going back to revise the EM&CP.

14 MR. MALONE: I think that's it for me, Your
15 Honor.

16 JUDGE STOCKHOLM: Any other cross-examination
17 for this panel?

18 Okay. Before I turn this back to NYRI for
19 redirect, I have a couple of questions. And I'm not
20 really sure this is the right panel. So, counselor,
21 please advise me if I should be asking this to a
22 different group. However, Mr. Thompson is on this
23 panel. And it strikes me that, perhaps, at least he may
24 be able to answer these questions.

1 BY JUDGE STOCKHOLM:

2 Q You've been working for a couple of years, in
3 any event, on this project, Mr. Thompson?

4 A (Thompson) Correct.

5 Q And I would assume that somewhere toward the
6 beginning of this project you looked into the issue of
7 financing. The world has changed significantly I'm sure
8 in the financial areas since you began working on this
9 project.

10 And my question is, do you have the financing
11 available to build it, and if so, could you describe
12 that?

13 A (Thompson) Sure, Your Honor. Let me describe
14 the financing in a couple of stages.

15 Certainly the immediate period we're in and the
16 foreseeable future, for probably the next we've
17 estimated a minimum of 18 to 24 months, all of the
18 financing would be done under what we would call equity
19 financing. And the equity financing is basically put
20 forth by the investor partners that are financing the
21 project to date. ACI --

22 Q Would you remind me who those people are?

23 A (Thompson) ACI and Borialis. And they feel
24 comfortable and committed to that. By the end of that

1 environmental exposures. In 2004, I was promoted to Chief Scientist in the OAG's EPB. From 1978
2 to 1999, I was a scientist with the New York State Department of Health ("DOH"), first in the Bureau
3 of Public Water Supply, and then in the Special Investigations Section, Bureau of Toxic Substance
4 Assessment, Center for Environmental Health, where I was responsible for supervising twelve
5 professional staff with varied scientific and technical expertise. During my tenure at DOH, I was
6 responsible for designing and conducting studies that assessed the public's exposure to environmental
7 chemicals and evaluated health and environmental effects. I reviewed scientific literature on human
8 exposure to, and toxicity of, chemicals in water and air, and performed and reviewed risk assessments
9 concerning human exposure to environmental contaminants. These responsibilities entailed detailed
10 evaluation of exposure pathways of chemicals found in the environment, and technical assessment of
11 the human health risks associated with exposure to such chemicals.

12

13 Q. Please explain your responsibilities as EPB Chief Scientist in the OAG.

14 A. As Chief Scientist, I supervise senior level scientists, contact and collaborate with experts,
15 federal, State and local officials, and respond to the public regarding health risks. I review and evaluate
16 scientific studies, data and information related to human exposure to toxic substances. I prepare
17 affidavits, testimony, reports, and other written analysis related to human health risks from
18 environmental exposures. I also provide technical guidance on a wide variety of environmental and
19 public health issues related to toxic substances in air, soil, water, and food. In this context, I evaluate
20 human exposure pathways. I have extensive experience evaluating human health and environmental
21 effects caused by pesticides. I provide scientific guidance to OAG attorneys in making litigation and
22 policy decisions.

23

24 Q. As part of your professional responsibilities in the OAG, have you participated in any
25 administrative or judicial proceedings related to human exposure and environmental harm to toxic
26 substances?

27 A. Yes. I have testified and submitted affidavits in judicial proceedings in which I provided

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1 toxicological and health information regarding the risks of human exposure and human exposure
2 pathways, as well as environmental impacts. I have also submitted formal scientific comments to the
3 United States Environmental Protection Agency ("EPA") in proceedings related to the risks to human
4 health from pesticide exposure. I have provided expert opinions on pesticide and chemical exposure to
5 children and pregnant and nursing women. I have evaluated technical reports, data and information on
6 pesticides and other chemicals, including both human (particularly with respect to women and children)
7 and ecological risk assessments, and have extensive experience in evaluating human health and
8 ecological impacts. I have evaluated the persistence, solubility, transport, and potential exposure
9 pathways and the resulting health and environmental impacts of pesticides and other chemical toxins.

10

11 Q. What is the purpose of your testimony?

12 A. The purpose of my testimony is to provide an assessment of the NYRI application insofar as it
13 discusses the Marcy South Alternative, which traverses the New York City Watershed ("NYC
14 Watershed"), and to rebut testimony with respect to the environmental impacts of the Marcy South
15 Alternative on the NYC Watershed. In addition, the purpose of my testimony is to discuss whether the
16 application sufficiently discusses the potential adverse environmental impacts and minimization of those
17 impacts in the NYC Watershed, and to rebut the testimony in this proceeding that purports to indicate
18 the Marcy South Alternative has fewer adverse environmental impacts than the Proposed Route. Based
19 upon the direct testimony filed in this proceeding, the Marcy South Alternative, rather than the original
20 Proposed Route, is alleged to be the route with fewer impacts, as stated by certain witnesses.

21

22 Q. What information have you reviewed in preparation for providing your testimony.

23 A. I have reviewed the February 2008 NYRI application, including Exhibits 1 through 9; Exhibits
24 E1 through E6; and Appendices A through U. I paid particular attention to those portions of the
25 application that dealt with the use of pesticides/herbicides in the Marcy South Alternative that runs for
26 approximately 18 miles through the NYC Watershed. I reviewed in detail Exhibit 4 (Environmental
27 Impact); Appendix C (Environmental Management and Construction Plan); Appendix E (Vegetation

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1 Management Plan); and Appendix L (New York State Thruway Evaluation and Comparison of Proposed
2 Route to the Marcy South Alternate Route.

3 I also reviewed the testimony of Thomas R. Snow, Jr. submitted in this proceeding on behalf of
4 the New York State Department of Environmental Conservation ("DEC"); the January 2009 testimony
5 Matthew Giannetta, submitted on behalf of the New York City Department of Environmental Protection
6 ("DEP"); the January 2009 testimony of James J. de Waal Malefyt, submitted on behalf of the New York
7 State Department of Public Service ("DPS"); and the January 2009 testimony of Robert C. LaFleur,
8 submitted on behalf of the Communities Against Regional Interconnect ("CARI"). This testimony in
9 part addresses the environmental impacts of the NYRI project on the NYC Watershed.

10

11 Q. Please explain what the NYC Watershed is.

12 A. The NYC Watershed is a 2,000 square mile geographic area that supplies water to several
13 reservoirs that are the drinking water source to approximately 9 million people located in New York City
14 and its northern suburbs. The NYC Watershed is protected from development by a Long Term
15 Watershed Protection Program pursuant to the United States Environmental Protection Agency 2007
16 Filtration Avoidance Determination (*See* March 2, 2009 Testimony of Charles S. Silver, Ph.D, submitted
17 on behalf of the OAG and the NYC Watershed Inspector General; Testimony of Thomas R. Snow, Jr.).

18

19 Q. Will the Marcy South Alternative require development activities in the NYC Watershed?

20 A. Yes. The Marcy South Alternative will require construction of transmission lines that traverse
21 the NYC Watershed for approximately 18 miles, requiring extensive land disturbance, road and other
22 construction activities, right-of-way pesticide treatment, and other measures that will adversely impact
23 the NYC Watershed environment.

24

25 Q. What was the purpose of your review of the NYRI application and the direct testimony?

26 A. My review of the NYRI application and direct testimony was for the purpose of determining the
27 specific nature and extent of the proposed pesticide and chemical use during construction and right-of-

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1 way management and maintenance, including the types of pesticides and other hazardous substances that
2 would be used, their toxicity, the application methodology and equipment, treatment techniques,
3 application rates, volume of pesticides applied, location of use, potential for spills or releases, and
4 prevention plans, mitigation and monitoring measures to protect natural resources in the NYC
5 Watershed, including drinking water sources. I also reviewed the application to determine whether it
6 proposed minimizing adverse impacts posed by the use of pesticides and other chemical contaminants
7 during construction and right-of-way vegetation management and maintenance.

8

9 Q. Did you form an opinion as to whether the NYRI application contains information sufficient to
10 assess the impact of pesticide use in the NYC Watershed?

11 A. Yes. The Marcy South Alternative as discussed in the NYRI application appears not to consider
12 the impacts from the use of pesticides and other chemicals in the NYC Watershed. Furthermore, the
13 application does not contain sufficient information about the nature and extent of pesticide and other
14 chemical use during construction and right-of-way maintenance in the Watershed. The NYRI
15 application therefore does not identify the potential adverse impacts of pesticide/chemical use, nor reflect
16 any effort to minimize that impact in the Watershed. Notably, the application does not identify any
17 specific pesticides that will be used, although in response to a DEC discovery request, NYRI stated that
18 it will use only "herbicides that are labeled, registered, and approved" by EPA and DEC and that four
19 pesticides may meet this "criteria:" glyphosate, picloram, triclopyr, and 2,4-D. (See NYRI Panel E
20 Responses to DEC - 9, attached as Exhibit JS-2). NYRI's statement that it will only use herbicides that
21 are approved is a reiteration of the requirements of New York and federal law. Merely complying with
22 existing law does not adequately address specific measures necessary to protect the sensitive NYC
23 Watershed and minimize impacts from pesticide and chemical use near drinking water sources.

24

25 Q. Please explain the terms "pesticide" and "herbicide."

26 A. The term pesticide includes chemical poisons designed to kill or eliminate target organisms or
27 vegetation. Pesticides include herbicides, insecticides and rodenticides. Herbicides are poisons designed

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1 to kill or eliminate vegetation.

2

3 Q. In your experience, are there potential adverse impacts from the use of pesticides and other
4 construction-related chemicals in that portion of the Marcy South Alternative that encompasses the NYC
5 Watershed?

6 A. Yes. Based on my experience in evaluating pesticide use, it is my opinion that the application
7 of pesticides during construction and right-of-way maintenance has the potential to result in significant
8 adverse impacts in the NYC Watershed. Streams, wetlands and reservoirs may become contaminated
9 with pesticides, including herbicides, that are toxic to terrestrial and aquatic wildlife and birds. The use
10 of pesticides also has the potential to result in unintended contamination of the drinking water source
11 serving 9 million people because the proposed NYRI transmission line traverses numerous streams and
12 wetlands, which feed reservoirs that provide drinking water. Moreover, pesticides can have adverse
13 affects on non-target vegetation through transport, drift, spills, and misapplication.

14

15 Q. Did you form an opinion as to whether the NYRI application contains sufficient information to
16 indicate that potential impacts from pesticide and other chemical use will be minimized in the NYC
17 Watershed?

18 A. The NYRI application, including Exhibit 4 and Appendices C, E, and L, does not contain
19 sufficient information to show that the use of pesticides and other chemicals during construction or in
20 right-of-way maintenance would be minimized in the Watershed. The general statements in the
21 Vegetation Management Plan (Appendix E) regarding pesticides are insufficient to disclose how the use
22 of pesticides will be limited, nor how impacts from pesticide use will be minimized. The Environmental
23 Management and Construction Plan (Appendix C), discusses additional vegetation clearing for the
24 Proposed Route along the railroad property right-of-way, which is already subject to vegetation
25 management (Section 5.0). It does not discuss the separate and distinct environmental impacts of
26 vegetation management in the Marcy South Alternative, where there is no railroad right-of way. The
27 Marcy South Alternative provides for a new right-of-way adjacent to the New York Power Authority's

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1 existing right-of-way, which is already subject to vegetation management and pesticide use. NYRI's
2 application does not discuss the cumulative impact of the use of pesticides for vegetation management
3 in this additional right-of-way when considered with NYPA's vegetation management practices.
4

5 Q. What specific information regarding pesticide and chemical use in the NYC Watershed is lacking
6 in NYRI's application?

7 A. One of the most protective methodologies for minimizing potential adverse human health and
8 environmental impacts from pesticide use is the implementation of an Integrated Pest Management
9 Program ("IPM"). IPM is designed to minimize the use of pesticides not only in sensitive areas where
10 it is most critical, but in all areas in New York State. Under IPM principles, the hierarchy of vegetation
11 and pest management options includes use of non-chemical measures first, with pesticide application
12 being used only sparingly as a last resort. IPM emphasizes an evaluation of the role of toxicity and an
13 assessment of health and environmental risks when selecting particular pesticide products for use. IPM
14 minimizes potential health and environmental impacts posed by pesticide use and is considered the most
15 acceptable standard in New York if chemicals must be used at all.

16 I was unable to find any discussion of IPM in the NYRI application or direct testimony, nor any
17 evaluation of the toxicity risk posed by the use of pesticides during construction and right-of-way
18 maintenance in the Watershed. This is particularly problematic in the Watershed, where the Marcy
19 South Alternative would traverse extremely steep slopes covered by severely erosive soils (See Rebuttal
20 Testimony of Charles Silver, pp. 5-9 and Exhibit CS-5, Table 1). The use of pesticides and the erosion
21 of soil during construction and right-of-way maintenance provides a conduit for pesticides to reach water
22 bodies in the NYC Watershed. Pesticides have the potential to contaminate drinking water sources,
23 including the Pepacton Reservoir, a source of drinking water. The streams that are crossed several
24 times by the NYRI project in the Watershed feed the Pepacton Reservoir and other drinking water
25 sources (See Silver Testimony, pp.4-5).

26 The electric power transmission industry generally practices a methodology for pesticide use in
27 right-of-way management known as Integrated Vegetation Management ("IVM"). IVM has as its core
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1 concept the minimal use of pesticide treatment and the preferential use of biological and ecological
2 controls. See Nowak "Performance Standards for Assessing Vegetation Management Rights-of-Way"
3 Part 2, p. 2-8 (December 2005) (JS-3). A comprehensive IVM plan contains site-specific
4 implementation of pesticide treatments considering streams, wetlands, drinking water sources, wildlife,
5 and other resources that require concerted protection. Furthermore, under principles of IVM, vegetation
6 is not routinely treated with pesticides. Vegetation is only treated as necessary and the effects of
7 treatments on vegetation and the environment are closely monitored. Thus, pesticides are not routinely
8 used under principles of IVM. The NYRI application proposes the routine and repeated use of
9 pesticides to maintain the right-of-way and discusses neither IVM nor IPM. This cannot be considered
10 minimization of pesticide use or mitigation of its adverse effects, and is inconsistent with the widely
11 accepted principles of IPM and IVM.

12
13 Q. Upon reviewing NYRI's Vegetation Management Plan (NYRI Application, Appendix E), did
14 you form any opinion with respect to whether it provided sufficient information to assess impacts in the
15 Watershed or the Proposed Route?

16 A. Yes. NYRI's application lacks a comprehensive, environmentally protective, state of the art
17 approach to construction and right-of-way management and the use of pesticides, including herbicides.
18 The Vegetation Management Plan is a mere 8 pages, covering corridor clearing (Appendix E, Section
19 2.0), access road clearing and construction (Section 3.0), transmission corridor/right-of-way maintenance
20 and operation (Section 4.0), and protection of resources (Section 5.0). The Plan provides that herbicides
21 will be used in the transmission corridor "except in areas designated for no herbicide use, such as where
22 there are sensitive resources including wetlands, streams and other water bodies, threatened and
23 endangered species habitat, and public water supplies" (Vegetation Plan, p.2). The NYC Watershed is
24 itself a "sensitive resource" in light of the fact that it provides drinking water for 9 million New Yorkers.
25 There is nothing in the plan that indicates, however, that pesticides will not be used during construction
26 or right-of-way maintenance. As such, NYRI's application fails to propose the protection of the
27 Watershed as an important resource, or to minimize the adverse impact posed by the use of pesticides

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1 within its borders.

2 The Plan is also insufficient to determine precisely how - and by whom - other sensitive
3 resources will be "designated" and what protocol will be followed to minimize the impact of herbicide
4 use. Only 2 short paragraphs in the Plan are devoted to protection of resources," in which NYRI
5 summarily states it "will supervise vegetation clearing and construction crew activities to ensure that
6 environmental protection objectives are met."

7 This Plan, when compared with other right-of-way vegetation management and maintenance
8 plans, is seriously deficient. These other more comprehensive plans approach resource protection and
9 minimization of adverse impacts from pesticide use by including geographic information system
10 mapping and information that would record, plan, and execute not only the right-of-way vegetation
11 management using IPM methodologies but landowner and regulatory agency notification of applications,
12 spill notification, and overall land stewardship. There is nothing in the application that provides this
13 information or even mentions it. Consequently the application does not propose measures to minimize
14 the impact from pesticides through technological and practical measures currently in use.

15 I have also evaluated the transport of pesticides beyond the "target" area and their entry into
16 surface and drinking water sources, through misapplication or "drift", and the transport to non-target
17 areas through rain, precipitation, runoff and mobility in soils. These topics were not discussed in the
18 NYRI application. All pesticide vegetation management treatments result in off-target deposition of
19 pesticides. *See Nowak, C.A. and Ballard, B.D.(2005) (JS-4)*. Certain kinds of treatments, such as basal
20 and cut stump, result in 200 to 4,000 times more herbicide at ground level than other kinds of treatments.
21 Off-target pesticide deposition can result in killed or damaged vegetation not intended to be eliminated,
22 as well as deposition in soil and water beyond the treated area.

23
24 Q. Will there be a different environmental impact in the Marcy Alternative Route as compared to
25 the Proposed Route?

26 A. Yes. As NYRI States in its Comparison of the Proposed Route to the Marcy South Alternative
27 (Appendix L, pp. 2-3), the Marcy South Alternative will result in more clearing of vegetation. The Marcy

28

1 South Alternative will clear 350 acres more than the Proposed Route, including 42 acres of forested
2 areas. Consequently, it appears that there will be more pesticide use in the Marcy South Alternative
3 because more acres must be cleared and maintained.

4

5 Q. Did you form an opinion with respect to the absence of this information in the application?

6 A. Yes. The NYRI application is seriously flawed by the omission of specific information on
7 pesticide use, including the types of pesticides, volumes of use, methodologies of use such as IPM or
8 IVM, and the potential human health and environmental impacts posed by its use in the Watershed. The
9 application does not disclose the cumulative impact of pesticide use in the Watershed from both the
10 NYRI and NYPA right-of-way maintenance programs. In addition, the NYRI application lacks any
11 meaningful discussion of how those impacts will be minimized. It is my opinion that without an analysis
12 of the impact of pesticide use during construction and for right-of-way maintenance in the Watershed,
13 the Commission cannot determine the adverse impacts of the Marcy South Alternative, nor find that they
14 have been minimized.

15

16 Q. Do you have an opinion regarding the adequacy of the NYRI application and whether it enables
17 the Commission to determine the environmental impact of pesticide use in the NYC Watershed?

18 A. Yes. The NYRI application does not contain adequate information to assess environmental
19 impacts that may be caused by pesticide use during construction or in right-of-way maintenance.
20 Without specific details about the types of pesticides, toxicity, application methodology, application rates
21 and equipment, volumes to be used, location of use, and appropriate mitigation measures to protect
22 natural resources, there is inadequate information upon which the Commission can make a determination
23 with respect to whether the Marcy South Alternative represents the minimum adverse environmental
24 impact. I concur with the testimony of Thomas R. Snow, Jr. that the NYRI application has not
25 demonstrated that the Marcy South Alternative would meet the statutory criteria for approval by the
26 Commission.

27

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1 Q. Do you have an opinion regarding the adequacy of the NYRI application and whether it enables
2 the Commission to determine whether the environmental impact of pesticide use in the NYC Watershed
3 will be minimized?

4 A. Yes. The NYRI application does not contain adequate information to determine whether
5 environmental impacts caused by pesticide use will be minimized. In the absence of an identification
6 of specific mitigation measures, such as those outlined in an IPM or IVM plan, it is not possible to
7 determine that the impacts caused by pesticide use will be minimized.

8
9 Q. Does the Marcy South Alternative have the potential to jeopardize water quality in the NYC
10 Watershed?

11 A. Yes. As discussed above and in the Testimony of Charles S. Silver, the Marcy South Alternative
12 would cause access road and right-of-way construction, and vegetation clearing and maintenance
13 activities in areas of the NYC Watershed with steep slopes and erosive soils (Silver, pp. 5-9). These
14 activities will result in run-off into streams and wetlands, carrying soil, silt, sediment, pesticides, and
15 other contaminants to enter streams that feed drinking water sources, including the Pepactan Reservoir.
16 This run-off causes turbidity and degrades water quality. The Marcy South Alternative will have
17 impacts regardless of whether the transmission line is overhead or buried.

18
19 Q. Is the Marcy South Alternative consistent with the goals of the EPA Filtration Avoidance
20 Determination?

21 A. No. The Marcy South Alternative is considered a large scale development project under the FAD
22 which, as proposed, would result in construction, land disturbance, pesticide use, and other activities
23 over an 18 mile corridor. These activities are inconsistent with the goals of the FAD to protect the NYC
24 Watershed from development, and would undermine on-going efforts to protect drinking water sources
25 located in the Watershed. If these drinking water sources become degraded, the FAD would be
26 compromised and could be withdrawn, thereby requiring the construction of a costly filtration plant
27 (approximately \$8 to \$10 billion) for treatment of water supplies serving the City and its northern
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1 Counties. The NYRI Application, with respect to the Marcy South Alternative, fails to show that the
2 project will comply with water quality requirements and not cause degradation of drinking water. (*See*
3 *Testimony of Charles S. Silver*).

4

5 Q. Do you have an opinion whether the Marcy South Alternative should be approved by the Public
6 Service Commission?

7 A. Yes. Based on the concerns I have set forth above, the Marcy South Alternative should not be
8 approved by the Commission.

9

10 Q. Does that complete your testimony?

11 A. Yes.

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27 **Date: March 2, 2009**

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1 **LIST OF EXHIBIT APPENDED TO THE TESTIMONY OF JUDITH S. SCHREIBER, Ph.D.**

- 2 JS-1 Curriculum Vitae for Judith S. Schreiber, Ph.D.
- 3 JS-2 NYRI Panel E Responses to DEC - 9 (Pesticide Use).
- 4 JS-3 Nowak , C.A., "Performance Standards for Assessing Vegetation Management Rights-of-Way"
5 Part 2, p. 2-8 (December 2005).
- 6 JS-4 Nowak, C.A. and Ballard, B.D., "Off-Target Herbicide Deposition Associated With Treating
7 Individual Trees," Environmental Management, Vol. 36, No. 2, pp. 237-247 (June 2005).

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1 period, assuming we're successful in getting certified
2 and achieving our other approvals, then we would be able
3 to put into place the debt financing to augment the
4 equity financing as well.

5 And we've had numerous discussions, both in the
6 past and more currently, obviously, with various
7 investors, including commercial banks, insurance
8 companies and whatnot. And basically what we've been
9 told and reassured on several occasions is, because our
10 project is basically a rate recovery-- rate-regulated
11 project, that they were very comfortable and confident
12 that we're a very desirable type investment because of
13 the long duration. We're basically a 40-year expected
14 period with basically the security of rate regulation.
15 And so that would not be an issue or a problem.

16 Q Have you had any current conversations with
17 these lenders?

18 A (Thompson) We have. The number of lenders out
19 there has shrunk, as we all know, they've consolidated,
20 but the ones that are still active and strong still view
21 this even more so as a desirable investment asset, as it
22 were, to lend money against.

23 Q Can I ask you when the last time you had
24 conversations with those lenders?

1 A (Thompson) The investors, one of which is
2 Borialis, which is basically an investment arm of the
3 OMERS, the Ontario Municipal Employee Retirement System,
4 has ongoing regular discussions and, in fact, is looking
5 to possibly be a lender as well as an equity
6 participant.

7 I know ACI also has regular dialogue because
8 they act both as a consultant in financing other
9 projects as well as financing their own projects. And I
10 know they had a, I'll call it a retreat for potential
11 financial firms recently; I believe it was either
12 January or February. And basically, that was what they
13 were told again.

14 The time duration being two years out,
15 especially everyone expects fully that the markets will
16 return much closer to some sense of normality. If we
17 were to be financing today, it would be a difficult
18 market, but they still thought we would be successful,
19 but it would be a much more restrictive one. But given
20 another two years, they absolutely felt confident that
21 there would be no issues

22 Q What is your planned equity ratio in the final
23 financing for the deal?

24 A (Thompson) At the what's called the operating

1 company right now is anticipated to be a 50/50 debt
2 equity.

3 Q The operating company or NYRI?

4 A (Thompson) NYRI is considered to be the
5 operating company thus far.

6 Q Okay. I just wanted to make sure.

7 A (Thompson) Yes.

8 Q So you anticipate a 50/50 debt equity ratio?

9 A (Thompson) Correct.

10 Q There was testimony by I think more than one
11 party, but certainly by one or two of the staff
12 witnesses in the past few days about projects that have
13 been proposed, even projects that have been certified,
14 but not built. Were you here to hear that testimony as
15 general --

16 A (Thompson) I've heard some of it. Yes, I
17 recall that.

18 Q What assurance can you give us that, if this
19 project is certified, that it will be built?

20 A (Thompson) One thing I can say is that the
21 investors now have over \$20-some million of their equity
22 invested that they will not even get returned to them
23 until the project is built and operational. And the
24 further we go along, obviously that number continues to

1 grow dramatically.

2 Q It's your understanding those funds are not
3 available through FERC or through the NYISO or anyplace
4 else?

5 A (Thompson) It's not just my understanding. I
6 can state unequivocally that they are not available.
7 They are totally at risk.

8 Q Is this project, to your knowledge -- or would
9 this project, to your knowledge, qualify for any of the
10 stimulus funds that the federal government is
11 dispersing?

12 A (Thompson) It's my understanding currently
13 what's being proposed is stimulus in the transmission
14 area is not, quote, "stimulus funds" as much as funds
15 available to provide loan guarantees. And being a
16 regulated project loan guarantee is really -- doesn't
17 help us, because once we get all of our approvals and
18 certifications, we already are basically next to a loan
19 guarantee rate.

20 JUDGE STOCKHOLM: That's all I have on those
21 points.

22 Now, those points were not in this witness'
23 direct testimony, certainly not on this panel. And so
24 in a sense, I have solicited additional direct testimony

1 from this witness, not for the balance of the panel, but
2 with regard to the topics that I raised, I will allow
3 the parties additional cross-examination before I go
4 back to NYRI for redirect. Does anyone have additional
5 cross-examination questions?

6 MS. WILKINSON: Your Honor, just a question
7 about process.

8 JUDGE STOCKHOLM: Certainly.

9 MS. WILKINSON: Would we have the opportunity
10 for Panel A to pose the same questions or for -- well,
11 first for Panel A, could we pose some questions in a
12 similar vein?

13 JUDGE STOCKHOLM: Certainly you could.
14 Mr. Thompson is on Panel A as well.

15 MS. WILKINSON: And also for the economic
16 witnesses then?

17 JUDGE STOCKHOLM: Yes, that's fine.

18 MS. WILKINSON: Okay. I just have one question
19 now.

20 JUDGE STOCKHOLM: Sure. Go ahead.

21 BY MS. WILKINSON:

22 Q Mr. Thompson, and I apologize if I'm not using
23 the right -- the right -- correct terms, but you
24 mentioned that you're going to get a FERC regulated rate

1 of return?

2 A (Thompson) That's correct.

3 Q And I believe you already have approved an
4 incentive rate of return?

5 A (Thompson) That's correct.

6 Q And what is that rate?

7 A (Thompson) It was 275 basis points.

8 Q And can you describe what an incentive rate of
9 return is?

10 A (Thompson) Basically, as part of the, what is
11 it, the 2005 energy act, Congress determined that
12 investment in transmission projects, transmission system
13 expansion upgrades throughout the country were
14 continuing to fall behind, and that they were looking
15 for ways to encourage investment in transmission
16 projects, transmission upgrades and expansions. And so
17 as part of that, they passed -- and I apologize, I don't
18 know the specific numbers, we can probably ask the
19 counselor for the specific rulings and programs, but
20 basically they set up a program that does offer
21 incentive rates for investment in transmission, to
22 encourage investment in transmission. There are a
23 number of categories that you can apply for. I know we
24 were successful in receiving incentives for being an

1 independent transmission company. We received
2 incentives for agreeing to join the New York ISO and
3 participate there. We received an incentive for using
4 advanced technology because of the HVDC line. I believe
5 those were the three bases.

6 Q Okay. And what rate of return has been
7 approved, or is NYRI seeking for --

8 A (Thompson) The incentives are basically added
9 to a FERC-established-base rate of return, and that will
10 not be set or established I think it's just before we go
11 into commercial operation whenever we file, what is it,
12 a 205? Is it okay if I ask the counselor for --

13 JUDGE STOCKHOLM: Yes, you can. Yes, you can.

14 MR. SINGER: Yes. Under FERC Order 679, FERC
15 does, as Mr. Thompson states, award incentive rates to
16 transmission facilities. In this case, NYRI received
17 275 basis points. That would be in addition to a return
18 on equity that would be set using typical FERC
19 rate-making practices they use, as this Commission does,
20 the DCF methodology for return on equity.

21 Under Order 679 and FERC's decisions following
22 that, the total amount of the return, which would be the
23 return set using the DCF methodology, plus the incentive
24 basis points, has to fall within the determined zone of

1 reasonableness. And both of those levels would be set
2 at the time we make our 205 filing.

3 BY MS. WILKINSON:

4 Q Okay. Has NYRI sought approval of the rate of
5 return?

6 A (Thompson) We did make a filing looking for a
7 rate of return at our initial filing. And the FERC
8 determined that they did not want to set rate of return
9 at that point, that they only wanted to set the -- the
10 incentives.

11 Q Right. But what rate was requested at that
12 time?

13 A (Thompson) I believe we asked for a
14 13-and-a-half percent ROE was one of our options.

15 Q Okay. Thank you.

16 MS. WILKINSON: That's it for now, Your Honor.

17 JUDGE STOCKHOLM: Thank you.

18 Ms. Leary, did you say you had a question or
19 two?

20 MS. LEARY: Just a couple of follow-ups.

21 BY MS. LEARY:

22 Q The \$20 million that you indicated,
23 Mr. Thompson, was already invested --

24 A (Thompson) Correct.

1 Q -- can you give me the categories of expenses
2 on which that 20 million has been expended?

3 A (Thompson) You're looking at a big portion of
4 it.

5 Q Of course, you're referring to Mr. Bucci
6 personally?

7 A (Thompson) Yes, Mr. Bucci personally. We're
8 now well over five years into the development of this
9 project. We've had somewhere in excess of 30
10 consultants ranging from engineering consultants,
11 environmental consultants. You're going to hear from a
12 whole bunch of some of the specialty consultants that
13 have studied the MF, environmental impacts, all the
14 things -- Mr. Singer has been a major portion of that.

15 Q He's worth it.

16 A (Thompson) He absolutely is. We have obviously
17 lawyers down in Washington D.C. that are basically
18 specialized in FERC processes and working on our FERC
19 applications.

20 Q So if I can capture this, it's your
21 consultants, your attorneys, it's not necessarily land
22 acquisition or those kinds of things?

23 A (Thompson) We have options on the railroad
24 leases that we've made payments on. We have options on

1 the northern converter station site that we've made
2 payments on.

3 Q So it does include those kinds of things?

4 A (Thompson) It does include those kinds of
5 things.

6 Q Okay. Anything else you can think of?

7 A (Thompson) Yeah. That's a good point. We have
8 proceeded through the New York ISO process, and so we've
9 funded a system -- actually, we started with a
10 feasibility study. We've paid and passed that. The
11 SRIS, we've paid for and passed that. We've recently
12 made some large deposits with them to begin the facility
13 studies. So we've done that.

14 Q Okay. Great. And you indicated also that that
15 will grow dramatically I think is what you said?

16 A (Thompson) Yes.

17 Q You referred to dramatically. Can you tell me
18 why that is the case, if --

19 A (Thompson) As we continue to move forward and
20 we get into the EM&CP, all of a sudden we're no longer
21 just doing preliminary designs, we're doing detail
22 designs. We're no longer doing preliminary surveys and
23 environmental analysis, we're doing detailed field
24 analysis. Everything goes up significantly, and it just

1 continues to climb.

2 Q And my last question is, can you tell me very
3 specifically by name who your investors are? I
4 understand it's Borialis and ACI.

5 A (Thompson) Borialis is one company. And as I
6 just mentioned, they're the investment arm of OMERS,
7 which is the Ontario Municipal Employee Retirement
8 System. ACI, American Consumer Industries, is an
9 independent power development company here in the U.S.

10 Q Anyone else among the investors?

11 A (Thompson) As far as --

12 Q Like a name?

13 A (Thompson) -- people currently investing? No.
14 Those are the two that are matching 50/50 each on all of
15 our ongoing --

16 Q Thank you very much.

17 JUDGE STOCKHOLM: Yes. Go ahead, Mr. Klucsik.

18 BY MR. KLUCSIK:

19 Q Mr. Thompson, is NYRI a party in a FERC
20 proceeding dealing with the NYISO open access tariff
21 process as it relates to allocation of transmission
22 system upgrade costs?

23 A (Thompson) I guess that's -- are we a party?
24 Is that the -- can I ask counselor for --

1 JUDGE STOCKHOLM: Yes, you may.

2 MR. KLUCSIK: I'm sorry. I don't have the
3 docket number handy.

4 MR. SINGER: If Mr. Klucsik is referring to the
5 Order 890 process under FERC where FERC has approved a
6 NYISO tariff regarding economic planning, we are not a
7 party to that case, but NYRI has submitted a request for
8 rehearing of the FERC order.

9 MR. KLUCSIK: I believe that is the case that
10 I'm -- that I have in mind. Perhaps Mr. Singer can
11 confirm further that one of the issues --

12 JUDGE STOCKHOLM: You can ask the witness in
13 the first instance.

14 BY MR. KLUCSIK:

15 Q Mr. Thompson, in that case --

16 A (Thompson) So I'll defer to --

17 JUDGE STOCKHOLM: If that's the case, but you
18 never know. You may know the answer to the question.

19 Q In that case, is one of the issues that
20 prompted that request for a rehearing NYRI's concern
21 over the voting process within NYISO?

22 JUDGE STOCKHOLM: The witness doesn't know.
23 And the -- we can -- we can take notice of their filings
24 at FERC as well as, obviously, FERC's orders without a

1 witness having to necessarily discuss it.

2 MR. KLUCSIK: Then I'll get right to the heart
3 of my question, Your Honor.

4 JUDGE STOCKHOLM: Excellent.

5 Q Mr. Thompson, in that request for a rehearing,
6 has the company -- has NYRI suggested that if FERC
7 upholds the NYISO voting system as it currently is
8 proposed and as it currently operates, NYRI's investors
9 would be less enthusiastic about continuing in their
10 investment?

11 A (Thompson) I believe that's a fair
12 characterization.

13 MR. KLUCSIK: Thank you. That's all, Your
14 Honor.

15 JUDGE STOCKHOLM: I'm not sure that this is the
16 same exact issue as counsel just asked you about, but my
17 understanding is that NYRI has filed a protest in early
18 February dealing with the issue of rate regulation for
19 this project. Are you familiar with that?

20 MR. THOMPSON: I believe that's the same
21 subject that Counselor Singer was just --

22 JUDGE STOCKHOLM: And my question is simple.
23 Has it been decided?

24 MR. SINGER: Your Honor, I wouldn't

1 characterize it as a protest. What we filed in February
2 was a request to expedite our request for rehearing,
3 which was filed in November, so.

4 JUDGE STOCKHOLM: Okay. Well, I'll be happy to
5 withdraw "protest". I thought that's what I read, but
6 it's probably a different document.

7 In any event, has FERC issued a decision with
8 regard to your petition for rehearing?

9 MR. SINGER: No, it hasn't.

10 JUDGE STOCKHOLM: Do you have any particular
11 expectation of when you may hear from the authorities on
12 that? Would it be within a 12-month time frame by any
13 chance?

14 MR. SINGER: These regulators, you just
15 don't --

16 JUDGE STOCKHOLM: I understand. I understand.

17 MR. SINGER: Even if you need a decision
18 quickly, sometimes you just don't get it.

19 JUDGE STOCKHOLM: Do you have any idea?

20 MR. SINGER: I do not.

21 JUDGE STOCKHOLM: Okay. That's really all the
22 record needs.

23 Okay. I think that we're turning back to NYRI
24 for redirect, yes?

1 MR. SINGER: We have no redirect.

2 JUDGE STOCKHOLM: No redirect. Excellent.

3 Well, gentlemen, I suspect I'll see you pop up
4 again on a few panels. So I won't say permanent
5 good-bye, but I will say thank you for your time and
6 your testimony.

7 JUDGE PHILLIPS: Mr. Leary.

8 MS. LEARY: Yes.

9 JUDGE PHILLIPS: I know that you wanted Witness
10 Schreiber to slip in between Panels A and D if possible.
11 Are you ready to go?

12 MS. LEARY: She's prepared and we're ready to
13 go.

14 JUDGE PHILLIPS: Great.

15 MS. LEARY: Your Honor, if I could have two
16 minutes.

17 JUDGE PHILLIPS: Okay. And I won't even
18 stopwatch you.

19 JUDGE STOCKHOLM: Let's go off the record.

20 (A brief recess was taken.)

21 JUDGE PHILLIPS: We're going back on the
22 record.

23 If you could, please, stand and raise your
24 right hand, Ms. Schreiber.

1 JUDITH S. SCHREIBER, Ph.D.

2 after first having been duly sworn, was examined and
3 testified as follows:

4 JUDGE PHILLIPS: If you could state your name
5 for the court reporter, please.

6 MS. SCHREIBER: Judith S. Schreiber.

7 JUDGE PHILLIPS: And you'll have to use your
8 microphone, so make sure you pull it closer to you. And
9 you can be seated now.

10 MS. SCHREIBER: Thank you.

11 DIRECT EXAMINATION

12 BY MS. LEARY:

13 Q Dr. Schreiber, do you have a document before
14 you dated March 2nd, 2009 and revised on March 12th,
15 2009 that represents your written rebuttal testimony in
16 this matter, Case Number 06-T-0650?

17 A Yes.

18 Q Did you prepare that testimony?

19 A Yes, I did.

20 Q And did you revise it?

21 A Yes.

22 Q And what was the nature of that revision?

23 A The revision was a correction to change 2,000
24 square -- I'm sorry, 2,000 acres to 2,000 square miles

1 as the geographic area of the New York City watershed.

2 Q Would you identify for the record the page and
3 line number at which that correction appears?

4 A That's on page 4 at line 12.

5 Q And that corrected testimony was filed in this
6 proceeding?

7 A Yes, it was.

8 Q Do you have any further changes, additions or
9 amendments to your testimony today?

10 A No, I don't.

11 Q If I asked you the same written questions set
12 forth in that testimony, would you provide the same
13 answers to those questions today?

14 A Yes, I would.

15 Q And do you adopt this testimony as your sworn
16 testimony today?

17 A Yes.

18 MS. LEARY: Your Honors, I move that the
19 testimony -- the rebuttal testimony of Dr. Judith
20 Schreiber be included in the record as if given orally.

21 JUDGE STOCKHOLM: Granted. Let me ask you,
22 counselor. Is the CD that you provided with the
23 witness' testimony corrected?

24 MS. LEARY: It is.

1 JUDGE STOCKHOLM: Thank you.

2 MS. LEARY: I hope. I am absolutely certain,
3 but, Your Honor, if I have a duplicate of that CD, and I
4 will check that and make absolutely certain.

5 JUDGE STOCKHOLM: Okay. Let me know if you
6 find out that's not the case, and we can correct the
7 transcript after it gets copied in.

8 MS. LEARY: I'm almost certain, but I do want
9 to check.

10 (The following is the prefiled rebuttal
11 testimony of Judith S. Schreiber, Ph.D.:)

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1 BY MS. LEARY:

2 Q Dr. Schreiber, there are four exhibits attached
3 to your testimony; is that correct?

4 A Yes, it is.

5 Q And would you identify for the record each
6 of -- well, identify Exhibit 1.

7 A Exhibit 1 is my CV.

8 Q And Exhibit 2?

9 A Exhibit 2 is the NYRI Panel E responses
10 identified as DEC-9.

11 Q And Exhibit 3?

12 A Exhibit 3 is a technical report by Nowak
13 entitled "Performance Standards for Assessing Vegetation
14 Management Rights-Of-Way" dated December 2005.

15 Q And Exhibit 4?

16 A And Exhibit 4 is another technical report.
17 This one by Nowak and Ballard, 2005, entitled "Off
18 Target Herbicide Deposition Associated with Treating
19 Individual Trees."

20 Q Thank you.

21 MS. LEARY: And, Your Honors, I would request
22 Exhibits 1 through 4 attached to Dr. Schreiber's
23 testimonies be marked for identification, and I think as
24 Exhibits 206, 207, 208, and 209.

1 JUDGE PHILLIPS: That is correct, and they are
2 so marked.

3 (Exhibits 206 through 209 marked for
4 identification.)

5 MS. LEARY: Your Honors, the witness is
6 available for cross-examination.

7 JUDGE PHILLIPS: Thank you. I believe Staff
8 has cross-examination for this witness.

9 MR. BLOW: Yes. I don't know if anybody else
10 does, but --

11 JUDGE STOCKHOLM: We don't think so, Steve.

12 MR. BLOW: Okay.

13 JUDGE STOCKHOLM: Although, once you ask a
14 question, that may change.

15 MR. BLOW: Just a few questions.

16 CROSS-EXAMINATION

17 BY MR. BLOW:

18 Q Good afternoon, Dr. Schreiber.

19 A Good afternoon.

20 Q Isn't it true that NYPA and NYSEG electric
21 transmission lines exist in the New York City watershed?

22 A There are some lines existing within the
23 watershed, that's correct.

24 Q Do you know whether NYSEG or NYPA use

1 herbicides in the watershed?

2 A I have reviewed the NYPA information, which
3 does suggest that they use some herbicides for treatment
4 in the right-of-way. And I understand that those are
5 being reviewed by DEC to determine whether such use will
6 be able to continue.

7 Q Do you know which herbicides are being used?

8 A No. I believe there were four that were
9 mentioned in response to a request for information
10 regarding the NYRI application, but I'm not familiar
11 with what NYPA herbicides are used.

12 Q Are you aware of any documented contamination
13 of the New York City water supply from the NYSEG or NYPA
14 rights-of-way?

15 A We do have information that was provided by the
16 United States Geological Survey, USGS, which has done
17 some testing in the watershed, which has shown
18 contamination by pesticides both in the streams and in
19 the reservoirs, yes.

20 Q They were -- that was general in nature,
21 though. Are you aware of whether it's causally related
22 to the NYPA or NYSEG rights-of-way?

23 A These are surveys that have been conducted over
24 a number of years looking at the quality of water within

1 the watershed from numbers of different uses of
2 pesticides within the watershed.

3 Q Do these studies show or are you aware of the
4 types of pesticides that are used?

5 A Well, the studies report which pesticides they
6 identified, yes.

7 Q Could you provide a list of those pesticides,
8 or do you know -- first of all, let me ask, do you know
9 the list -- which pesticides were used or were studied?

10 A I certainly know which ones were reported in
11 these reports, yes, certainly.

12 JUDGE STOCKHOLM: And the reports that you just
13 mentioned to counsel are the exhibits that you've
14 attached to your testimony?

15 MS. SCHREIBER: No, they're not.

16 JUDGE STOCKHOLM: I just wanted to be clear.

17 Q And you said you know which -- which pesticides
18 are reflected in those reports?

19 A Well, they identified actually quite a few both
20 sampling areas and pesticides as being detected in the
21 watershed. It's an extensive list. If you'd like, we
22 can -- I can run through them now, or you might be more
23 interested in getting -- we can submit this in the
24 record to look at those pesticides. I'd be happy to go

1 through them if you'd like.

2 JUDGE STOCKHOLM: Have you by any chance
3 cross-referenced the pesticides from those reports with
4 the pesticides that either NYPA or NYSEG are permitted
5 to use at the present time?

6 MS. SCHREIBER: I have -- yes. I don't have
7 that with me, but there are overlaps between what was
8 detected and pesticides that have been used for
9 rights-of-way management, including the four that were
10 in response to I believe Lisa Wilkinson's interrogatory
11 as DEC-9 that is in my testimony attached.

12 MS. LEARY: I believe the witness is referring
13 to Exhibit 208 -- I'm sorry, 207, which is Exhibit 2 to
14 Dr. Schreiber's testimony.

15 JUDGE STOCKHOLM: Is that what you're referring
16 to, Doctor?

17 MS. SCHREIBER: Let me find that. Which one is
18 that, counselor?

19 MS. LEARY: I believe it's Exhibit 2.

20 MS. SCHREIBER: Yes, Exhibit 2. It is Exhibit
21 2. NYRI responds to the DEC-9 request and specifies
22 that herbicides that would be used -- the way they
23 phrase it is examples of current herbicide products that
24 may satisfy these governing factors includes glyphosate,

1 picloram, triclopyr, and 2,4-D.

2 Glyphosate, that's G-L-Y-P-H-O-S-A-T-E.

3 Picloram, P-I-C-L-O-R-A-M.

4 Triclopyr, T-R-I-C-L-O-P-Y-R.

5 And 2,4-D, which is 2, comma, 4, dash, D.

6 And of those, at least two have been identified
7 in the watershed in the USGS reports that I have here
8 dated December 2000 and September 2002.

9 BY MR. BLOW:

10 Q Since you have the list, would you go through
11 the list of the herbicide -- pesticides that are in the
12 reports?

13 A Yes. In the USGS report entitled "Pesticides
14 And Their Metabolites In Selected Surface Water Public
15 Supplies In New York State, 1999," they examined water
16 for 16 different pesticides and their metabolites that
17 were detected in water samples collected in 1999.

18 Those pesticides included -- let me correct
19 that. There were 60, six-zero, pesticides and
20 metabolites for which samples were, you know, examined.
21 And of those, 16 different pesticides were actually
22 detected. So the list of 60 is quite lengthy, but I can
23 go through the ones that were detected.

24 We have the herbicides --

1 Q Before -- before you go on, am I correct that
2 there -- I'm not sure whether I heard you right, but am
3 I correct that the reports deal with water supply beyond
4 the New York City watershed?

5 A No. This is within the New York City
6 watershed.

7 JUDGE STOCKHOLM: Does it cover anything
8 beyond? The title of the report sounds more general
9 than just the New York City watershed.

10 MS. SCHREIBER: Yes. This one looks at the
11 Finger Lakes, which is outside of the watershed, the
12 Great Lakes, as well as the information within the
13 watershed.

14 The second study is specifically with regard to
15 the Croton River watershed, which is part of the New
16 York City watershed.

17 JUDGE STOCKHOLM: I think putting a list of
18 chemicals into this record would, at the very least,
19 delay us for some period of time. Can staff deal with
20 this issue with a list, or it -- perhaps can you look at
21 the report that the witness has and -- and do your
22 cross-examination from there. How exactly would you
23 like to handle it?

24 MR. BLOW: Well, the concern -- I thought if

1 there were a few, even 10 or 15, that we were sure were
2 related to the New York City watershed, that we could
3 get the list relatively quickly. However, since
4 Dr. Schreiber testified that there are 60 in the one
5 report and it relates to a broader area than just the
6 New York City watershed, it's sounding like that report
7 may not be quite as relevant as I might have originally
8 thought. So if --

9 JUDGE STOCKHOLM: What about -- let's go to the
10 one report that deals just with the New York City
11 watershed. Could you give us some numbers and ideas
12 about what that found?

13 MS. SCHREIBER: Sure. The sampling that was
14 conducted there examined quite a few herbicides and
15 pesticides. And nine compounds were detected including
16 diazinon, carbaril, and imidacloprid - let me spell that
17 one for you, I-M-I-D-A-C-L-O-P-R-I-D - as well as a
18 fungicide micobutanil, and five herbicides: Simazine,
19 2,4-D, diuron, hexazinone, and 2,4-D methyl ester, which
20 is a breakdown product of the 2,4-D.

21 And as you might notice, the 2,4-D is one of
22 the pesticides that was in response to the list of
23 pesticides that might be used in the NYRI application.

24 Does that answer your question?

1 JUDGE STOCKHOLM: It answered my question. I
2 appreciate that.

3 MS. SCHREIBER: Oh, I'm sorry. Yes.

4 JUDGE STOCKHOLM: That's all right.

5 MR. BLOW: Just one second, Your Honor.

6 BY MR. BLOW:

7 Q Has the -- the fact that these pesticides have
8 been detected resulted in a water supply that is unsafe
9 for drinking?

10 A The detection of these chemicals indicates that
11 there are pathways of a dispersal of material that is
12 applied within the watershed to become contaminated --
13 to contaminate both tributaries and the reservoirs to
14 which they end up.

15 Q Would -- would you explain for us what
16 activities -- what are the major activities or pathways
17 that result in -- in contamination by such pesticides?

18 A Yes. Well, wherever they might be applied.
19 And then there is a disturbance of the soil, for
20 example, provides a pathway because of runoff directly
21 from water, as well as from silt and soil that becomes
22 part of the tributaries, and later on the reservoirs,
23 which contains pesticides that were applied in the
24 right-of-way during many different types of phases of

1 the construction; for example, with soil disturbance,
2 while creating the trenches for the transmission lines,
3 roads, equipment, staging areas, setup areas and so on
4 that are then treated. Those disturbances can result in
5 potential contamination to the New York City watershed.

6 We are very interested in the protection of
7 that watershed, which supplies drinking water to
8 9 million New Yorkers. And in order to maintain that
9 pristine water quality that we all desire for drinking
10 water, a multi-barrier approach has been utilized so
11 that the water remains safe to drink.

12 Q In your -- the answer you just gave, you jumped
13 into electric transmission construction, and I was
14 asking about activities in general.

15 Would you say that agricultural activities have
16 resulted and are resulting in the contamination of the
17 water supply with such pesticides?

18 A There's the potential for activities that use
19 these pesticides to contribute to runoff and concerns in
20 terms of tributaries, yes.

21 Q Would other sources be urban, residential,
22 commercial, industrial, transportation activities, all
23 these activities, right?

24 A Well, it depends which chemicals are used

1 where, but yes, theoretically, activities that apply
2 pesticides within the watershed also could contribute,
3 yes.

4 Q Would you agree that that's what's stated on
5 page 17 of the report regarding the Croton watershed?

6 A Bear with me. Let me get to page 17.

7 Q The right-hand column, first full paragraph.

8 A Yes, I see it. Yes. The presence of these
9 compounds can be attributed to many of those sources.

10 Q Now, have you observed the construction of
11 electric transmission lines in the watershed?

12 A I'm familiar with reviewing the documents that
13 I have looked at in preparation for this testimony --

14 Q Right. Documents, but --

15 A -- which describe the methodology and the
16 construction activities for electric power lines.

17 Q But you haven't observed -- directly observed
18 the construction; is that right?

19 A No. I'm a toxicologist and public health
20 specialist.

21 Q Are you aware of any documented problems of
22 water supply contamination from the construction of the
23 Marcy South line in the mid 1980s?

24 A Well, the 1980s were a long time ago, and the

1 requirements for using pesticides during that time
2 period were quite different, as I'm sure the
3 construction requirements I imagine also were quite
4 different.

5 MR. BLOW: Thank you, Dr. Schreiber.

6 That's all I have, Your Honor.

7 JUDGE STOCKHOLM: Any other cross-examination
8 for this witness?

9 Mr. Malone.

10 BY MR. MALONE:

11 Q Dr. Schreiber, do you know how often NYPA
12 applies pesticide as part of its integrated vegetation
13 management policy on the Marcy South right-of-way?

14 JUDGE STOCKHOLM: In the watershed?

15 MR. MALONE: I'm sorry. Yes, in the watershed.

16 JUDGE STOCKHOLM: Thank you.

17 A Well, I recall reviewing the NYPA management
18 plan, about a 3-inch thick review document if I recall,
19 and I -- I would have to go back to make sure, but I
20 believe it was on a cycle of four to eight years, on a
21 cycle to maintain woody growth plants.

22 MR. MALONE: Just one second, Your Honor.

23 JUDGE STOCKHOLM: Sure.

24 MR. MALONE: I have nothing further.

1 JUDGE STOCKHOLM: Doctor, the four pesticides
2 or herbicides that were listed that you mentioned
3 earlier that NYRI gave as examples, are you aware of any
4 efforts by the appropriate regulatory authorities to
5 rereview the licensability -- I'm sorry, these words are
6 not right, but --

7 MS. SCHREIBER: Registration.

8 JUDGE STOCKHOLM: Registration, right. Are any
9 of these subject to that kind of review at this point?

10 MS. SCHREIBER: Yes, I believe a number of them
11 are by the New York State DEC, the New York State DEC
12 who's looking at the ecological and human health impacts
13 of these, particularly 2,4-D, which there are some
14 concerns about.

15 JUDGE STOCKHOLM: 2,4-D was the one that was in
16 my mind. How about the other three that were listed by
17 NYRI?

18 MS. SCHREIBER: The others, well, there are
19 periodic reviews of, you know, registrations. The EPA,
20 the Environmental Protection Agency, gives a
21 registration and label for pesticides, and then the New
22 York State DEC reviews them with regard to particular
23 uses in New York State. And I believe that within the
24 watershed, there are additional safeguards for their use

1 because of concern about the drinking water supply.

2 JUDGE STOCKHOLM: Thank you.

3 Any further questions for this witness?

4 Any redirect, counsel?

5 MS. LEARY: I would like to introduce the
6 reports that Dr. Schreiber was referring to because
7 there's a little bit of a mischaracterization in the
8 record about one of them. If I may, Your Honor,
9 approach the witness and distribute.

10 JUDGE STOCKHOLM: Yes. Yes. Please do. Do
11 you have extra copies of those so that we can mark them?
12 I think Staff already has a copy of each.

13 (Exhibits 210 and 211 marked for
14 identification.)

15 MR. BLOW: Your Honor.

16 JUDGE PHILLIPS: Yes.

17 MR. BLOW: May I inquire of Ms. Leary?

18 Are these available online?

19 MS. LEARY: Yes, they are. Well, I do not know
20 that for sure. We obtained them online, but some years
21 ago. So whether you can get these from the federal
22 government now is truly a mystery.

23 MS. SCHREIBER: I would say they probably can.

24 The citation which we've provided on there, it's the

1 United States Department of the Interior, U.S.
2 Geological Survey, and it has an identification number
3 as well as a date. So you can probably get them on
4 Google.

5 MR. BLOW: It's just -- we're just trying to
6 get the exhibits in a form that is easy to put into one
7 place for all the Staff to review. And if they're
8 available online, we can just do it that way rather than
9 scanning them in.

10 MS. LEARY: We may have them available for you,
11 Mr. Blow, by pdf. And that's something I'm going to
12 have to get back to you about.

13 MR. BLOW: I didn't want you necessarily to do
14 a lot of work, it's just a question of whether --

15 JUDGE STOCKHOLM: Mr. Blow, can I suggest you
16 ask Staff to see if they can find them online?

17 MR. BLOW: Yes, we will.

18 JUDGE STOCKHOLM: Thank you.

19 MS. LEARY: And I'll help you out if that's not
20 possible.

21 MR. BLOW: We will. Thanks.

22 REDIRECT EXAMINATION

23 BY MS. LEARY:

24 Q Dr. Schreiber, I want to refer you to Exhibits

1 210 and 211. And I want to clarify one thing about
2 Exhibit 210, which is entitled, quote, "Concentrations
3 of Pesticides and Pesticide Degredates in the Croton
4 River Watershed in Southeastern New York."

5 JUDGE PHILLIPS: No. That's 211.

6 MS. LEARY: Oh, dear. I'm sorry.

7 Q So let me go to 210, which is entitled, quote,
8 "Pesticides And Their Metabolites In Selected Surface
9 Water Public Supplies In New York State, 1999."

10 Can you tell me reviewing page 2 whether there
11 are, in fact, sampling points for pesticides in the New
12 York City watershed?

13 A Yes, there are. If you look at page 2, Figure
14 A, which is a map, it lists a number of sampling points,
15 and it identifies them as New York City reservoirs
16 network.

17 Q And can you identify, based on your knowledge
18 of where NYRI's proposed Marcy South Alternative is
19 located, whether those sampling points are anywhere near
20 the NYRI line?

21 A Yes. Two in particular identified as N-1 and
22 N-2. N-1 is in the Canonsville drainage basin area for
23 the New York City Reservoir, and N-2 is in the Pepacton
24 Reservoir. The proposed Marcy South NYRI line is

1 roughly between those two points, N-1 and N-2, and runs
2 18 miles through the New York City watershed.

3 Q So in reviewing this report, were you able to
4 determine whether, in fact, there were pesticides
5 detected in the New York City watershed as a result of
6 this USGS sampling study?

7 A Yes, there were pesticides identified at N-1
8 and N-2, as well as some of the other sampling areas
9 within the -- the New York City Watershed, yes.

10 Q And were -- among those pesticides detected,
11 were there herbicides detected?

12 A Yes, there were.

13 Q And would you explain for the record what an
14 herbicide is?

15 A An herbicide is a chemical pesticide, which by
16 its nature is toxic and is capable of either destroying
17 or slowing the growth of various materials, including
18 plants.

19 Q Vegetation?

20 A Vegetation, yes.

21 Q Foliage?

22 A Yes.

23 Q And I want to refer you to a word in the title
24 of this, that is "metabolite." Would you explain for

1 the record what a metabolite is, a pesticide metabolite?

2 A Yes. A pesticide metabolite is a breakdown
3 product or a chemical that results from some action
4 chemically that changes the specific structure of that
5 herbicide to another usually similar herbicide with some
6 changes in the structure of the chemical.

7 Q Let me refer you to what's been marked as
8 Exhibit 211, which is entitled, quote, "Concentrations
9 of Pesticides and Pesticide Degredates in the Croton
10 River Watershed in Southeastern New York,
11 July-September 2000."

12 Is this a report that focuses on an area of the
13 New York City watershed?

14 A Yes, it does.

15 Q And were there pesticides detected as evidenced
16 in this report in the New York City watershed?

17 A Yes. In the New York City watershed, of the
18 herbicides, they detected 2,4-D in 16 percent of the
19 samples that were taken, and they also detected picloram
20 in 4 percent of the samples that were selected for
21 analysis.

22 Q Now, you indicated those two pesticides. Why
23 did you -- why did you choose those two pesticides?

24 A Well, I focused on those in particular because

1 they were ones that have been suggested as pesticides to
2 be used in the NYRI line.

3 Q And you say "suggested." Can you explain
4 whether you know whether those pesticides will actually
5 be used? On what -- on what basis are you saying they
6 were suggested to be used by, I believe NYRI; is that
7 correct?

8 A Well, in the NYRI application itself, there's
9 no mention of any of the pesticides that they propose to
10 use. However, in the DEC-9 request by Lisa Wilkinson,
11 Panel E, I believe it was, responded that examples of
12 current herbicide products that may satisfy the
13 governing factors include glyphosate, picloram,
14 triclopyr, and 2,4-D.

15 So other than what was provided there, I -- I
16 don't think any of us, and I don't, have any knowledge
17 about how these pesticides would be applied, the volumes
18 that would be used, the toxicity or persistence of these
19 chemicals, application rates or methods, their water
20 solubility, ecological impact, concerns, for example,
21 about a drift or off-target impacts were not discussed
22 at all in the NYRI application.

23 Q Mr. Blow asked you about the activities that
24 you would be concerned about. And I want to very

1 specifically focus on the activities that you believe as
2 a result of your -- have you, in fact, reviewed the NYRI
3 application?

4 A Yes, I have.

5 Q What activities that are proposed in the NYRI
6 application are of concern to you with respect to the
7 New York City watershed and pesticide contamination of
8 the watershed waters?

9 JUDGE STOCKHOLM: Isn't that exactly the
10 question that Mr. Blow asked?

11 MS. LEARY: No. In fact, it was -- it was a
12 little bit mixed up. That's why I'm trying to sort of
13 clarify it for the record.

14 JUDGE STOCKHOLM: Okay.

15 MR. BLOW: Your Honor, I do believe --

16 JUDGE PHILLIPS: Sorry. I had a different
17 question. I didn't think you asked her about her
18 concerns. I thought you asked her about what activities
19 might cause the, was it pesticides and herbicides to be
20 dispersed? Am I correct or --

21 MR. BLOW: The first -- Your Honor, the first
22 time I asked that question, Dr. Schreiber started
23 talking about concerns with construction. And then I
24 asked the question again, and she -- and then she listed

1 the various activities -- or we suggested the various
2 activities, and she answered about the various
3 activities. But the first answer that she gave was,
4 even though it was not an answer to my specific
5 question, it did discuss her concerns regarding
6 construction of the NYRI line.

7 JUDGE STOCKHOLM: Are there any concerns,
8 Doctor, that you have that were not expressed with
9 regard to activities?

10 MS. SCHREIBER: Any concerns that I have?

11 JUDGE STOCKHOLM: Any concerns that you have
12 that were not expressed in response to Mr. Blow's
13 questions?

14 MS. SCHREIBER: Yes, there are certainly some.
15 We are very concerned about the lack of protection
16 against silt and runoff from the application of
17 pesticides to an area within the New York City watershed
18 that can result from the disturbance of soil, again,
19 from the trucks and other activities that will be there
20 traversing the proposed South Marcy route.

21 We're very concerned as well about historical
22 remnant pesticides that may exist from past application
23 generally in the area, as well as from NYPA and other
24 transmission lines.

1 In addition, besides pesticides, the soil
2 disturbance also can lead to other concerns, for
3 example, pathogens and microbiological contaminants that
4 arise because of soil disturbance and runoff into --
5 into the watershed area; concerns about the steep slopes
6 that are present and the soil types that were referred
7 to in the testimonies of Dr. Silver and Mr. Snow. Soil
8 transport and sediment is an extremely important concern
9 because of effects potentially on fish and wildlife who
10 need certain oxygen and other requirements in the
11 streams where they -- where they live.

12 Those are some of the concerns that I have with
13 regard to soil disturbance in the area as a result of
14 constructing a line and as a result of pesticide
15 application.

16 MS. LEARY: I don't have anything further.

17 JUDGE STOCKHOLM: Let me just ask the witness.
18 You indicated in your testimony that you read the --
19 you're familiar, more or less, with the application
20 itself?

21 MS. SCHREIBER: Yes.

22 JUDGE STOCKHOLM: Are you aware of the position
23 that NYRI has taken with regard to use of herbicides in
24 the watershed in this case during -- in these hearings?

1 MS. SCHREIBER: I understand there was
2 something subsequent to the application.

3 JUDGE STOCKHOLM: Well, in these -- in the last
4 week-and-a-half, there has been cross-examination, and
5 NYRI has taken certain positions. And I hesitate to
6 repeat them because I know counsel will rephrase it for
7 me, but are you familiar with that?

8 MS. SCHREIBER: Could I see the document?

9 JUDGE STOCKHOLM: No, it wasn't a document. It
10 was during --

11 MR. SINGER: It was.

12 JUDGE STOCKHOLM: It was a document?

13 MR. SINGER: It was -- we stated that in our
14 rebuttal testimony.

15 JUDGE STOCKHOLM: Oh, I apologize. I
16 apologize.

17 Are you familiar with the statements they made
18 in their rebuttal testimony with regard to the use of
19 herbicides in the New York City watershed?

20 MS. SCHREIBER: Well, I haven't been following
21 each day of these hearings, but I understand that there
22 was some remarks made to the extent that pesticides
23 would not be used or used in a limited way within the
24 watershed.

1 MS. LEARY: Well, Dr. Schreiber, if I may,
2 Dr. Schreiber is -- we had a discussion about it. Not
3 to breach any confidence, but Dr. Schreiber, probably
4 because she found out right when she got back from
5 California, I believe you, do you not, know that NYRI
6 has stated that they will not use pesticides without New
7 York City DEP approval?

8 MS. SCHREIBER: Yes, I do recall that. And the
9 concerns with regard to that, the concerns that I have
10 are that the DEP lacks expertise in determining whether
11 the nature of the pesticide is suitable within the
12 watershed. And it's my belief that the New York State
13 DEC, who has a regulatory authority with regard to
14 pesticide usage in New York State, is the more
15 appropriate regulatory body to make that determination.

16 JUDGE STOCKHOLM: Who, if you know, makes that
17 determination today?

18 MS. SCHREIBER: I don't know. Within the
19 watershed?

20 JUDGE STOCKHOLM: Yes, within the watershed.

21 MS. SCHREIBER: Within NYRI or -- I believe
22 it's New York State DEC.

23 MS. LEARY: There are actually two regulatory
24 roles, Your Honor. And if I could just outline them for

1 you. DEP has regulations which I can provide for you, I
2 have them here, in which they have very specific
3 requirements on pesticide use and approval. The
4 regulatory role that DEC fulfills, however, is one of
5 looking at what I will call the technical information
6 and data about the pesticide from an environmental fate
7 and ecological and toxicity perspective, as well as
8 solubility components, inert ingredients, metabolites,
9 and all of the things --

10 JUDGE STOCKHOLM: I appreciate the distinction
11 you're making, but my question is, to whom does NYPA
12 have to go to get permission to use herbicides on the
13 right-of-way in the watershed?

14 MS. LEARY: Both.

15 MS. WILKINSON: Yeah, they come to DEC, Your
16 Honor.

17 JUDGE STOCKHOLM: They come to both?

18 MS. LEARY: They do come to both.

19 JUDGE STOCKHOLM: Okay.

20 MS. WILKINSON: And we're currently processing
21 one of their permits.

22 JUDGE STOCKHOLM: Okay. So they have to have
23 both a DEC and a DEP permit?

24 MS. LEARY: Well, the permit -- the program at

1 DEC is a -- is a registration program. So in the state,
2 pesticides are registered. It is also an applicator
3 program, so they certify applicators. And so from that
4 perspective, there is some level of permission, but the
5 permit that DEC is now reviewing, Ms. Wilkinson can
6 expand upon it, is a right-of-way, what would you call
7 it, Mark, long-term --

8 MS. WILKINSON: Vegetation management.

9 MS. LEARY: -- vegetation management plan that
10 DEC is approving. And, of course, DEP also has a role
11 in that. Is that right?

12 MS. WILKINSON: We're currently reviewing --
13 the application is pending. And it's pending with other
14 people, so I can't be more specific about it.

15 JUDGE STOCKHOLM: If they -- if they get
16 permission ultimately to use pesticides in this area,
17 what permits will they have in their hands and from
18 whom, assuming they're doing it legally, of course?

19 MS. WILKINSON: Yeah. I believe we're going to
20 be giving them, if they get permission, an Article 15
21 and 24 permit.

22 JUDGE STOCKHOLM: Okay. So there would be DEC
23 permits?

24 MS. WILKINSON: Yeah, that's my understanding.

1 And I can confirm that for you, but that is my
2 understanding.

3 Mark, is that your understanding?

4 MS. LEARY: Lisa's talking --

5 JUDGE STOCKHOLM: One at a time.

6 MS. WILKINSON: I'm talking about the New York
7 Power Authority, their --

8 JUDGE STOCKHOLM: I understand.

9 MS. WILKINSON: -- system-wide vegetation
10 management plan.

11 JUDGE STOCKHOLM: Yes.

12 MS. WILKINSON: And my understanding is we
13 currently have an application pending pursuant to
14 Articles 15 and 24 of Environmental Conservation Law.

15 JUDGE STOCKHOLM: Okay. So at some point in
16 the future, when their current permission runs out,
17 whenever that may be, and NYPA wants to use herbicides
18 in the New York City watershed, for them to do that
19 legally, what permits do they need? I think I heard
20 with some certainty, although you said you'd check, but
21 with some certainty, they would need DEC permits?

22 MS. WILKINSON: That's my understanding.
23 They're currently -- there's currently applications
24 pending. And I don't have the application before me, so

1 I can't be more specific.

2 JUDGE STOCKHOLM: That's fine.

3 MS. WILKINSON: And I apologize, but it's just
4 my understanding at this point.

5 JUDGE STOCKHOLM: I'm not looking at great
6 detail here. I just want to understand what they have
7 to do in order to get permission to use herbicides in
8 that watershed. And the first part of the answer is DEC
9 permits. Is a second part of the answer also a permit
10 from the New York City Department of Environmental
11 Protection?

12 MS. LEARY: I'm not necessarily the person to
13 answer that. I do have the regulations. And as a
14 lawyer who does not administer these regulations, I can
15 give you my opinion, but not at this very moment. It
16 would be probably better for me to go back and talk to
17 corporation counsel Linda Geary and William Claje (ph),
18 just to see exactly what their process is, but there is
19 a complete appendix in their regs devoted to pesticide
20 use, and there is some approval process, it is my
21 understanding, and some prohibitions.

22 MR. BLOW: Your Honor.

23 JUDGE STOCKHOLM: Yes, Mr. Blow.

24 MR. BLOW: I really don't mean to prolong this.

1 JUDGE STOCKHOLM: Good.

2 MR. BLOW: But I have some concern because the
3 "they" you were talking about I believe is NYPA.

4 JUDGE STOCKHOLM: That's correct. I was
5 talking about what NYPA had to do in order to accomplish
6 this.

7 MR. BLOW: And -- and I am a little concerned
8 or have some questions, which I don't want to burden
9 this record with, because NYPA is an Article -- the NYPA
10 line is an Article VII line, which is subject to the
11 Article VII certificate, which unless they -- unless the
12 Commission didn't do this in the 1980s, normally has
13 conditions regarding right-of-way -- long-range
14 right-of-way management even though the Commission
15 doesn't have approval over NYPA's long-range
16 right-of-way management plan --

17 JUDGE STOCKHOLM: Okay.

18 MR. BLOW: -- anyway. So that's a concern.

19 JUDGE STOCKHOLM: All right. I'm going to ask
20 Mr. Malone to please provide -- not now, but please
21 provide NYPA's understanding of what permits you have to
22 have in your hands. I think we now have three on the
23 table -- three as possibles on the table: DEC, DEP and
24 PSC. Could you inform the record at least as to what

1 NYPA's position on this question is?

2 MR. MALONE: I can't do it now, Your Honor.

3 JUDGE STOCKHOLM: No, no, no. I was not asking
4 you to.

5 MR. MALONE: Yes, I can do that.

6 JUDGE STOCKHOLM: Thank you.

7 MS. WILKINSON: Your Honor, if you give me one
8 minute, it may have been referenced in Mr. Snow's
9 rebuttal testimony. And if I -- I might have a line
10 number and page number that might clear it up. I'm not
11 positive.

12 JUDGE STOCKHOLM: Talk to me about that
13 tomorrow, if you would.

14 MS. WILKINSON: Okay.

15 MR. BLOW: Your Honor, I also --

16 JUDGE STOCKHOLM: I'll be interested in getting
17 answers to these questions from both sides, both from
18 the regulator side as well as the regulatee side.

19 Yes, Mr. Blow.

20 MR. BLOW: I also have a question, and it's
21 prompted by your questions, but I believe I know the
22 answer, but I'd like some of the other lawyers who know
23 about this more than I do --

24 JUDGE PHILLIPS: Do you have a question for the

1 witness or --

2 MR. BLOW: No. I have a question for the
3 lawyers because -- unless the witness knows. My
4 question is whether the -- whether the New York City DEP
5 regulations are -- have the force of state law?

6 MS. LEARY: Yes, they do.

7 JUDGE STOCKHOLM: Interesting question.

8 MS. LEARY: Well, the answer is yes. They are
9 found in 16 -- no. Health is 10. Are you 10 or --

10 JUDGE STOCKHOLM: We are 16.

11 MS. LEARY: 10 NYCRR Part 128. And I can
12 provide a copy of that to you, too.

13 MR. BLOW: That's my understanding. And I just
14 wanted to confirm that. Sorry. Thank you.

15 MS. LEARY: In other words --

16 JUDGE STOCKHOLM: He's got his answer. Thank
17 you.

18 Anything else on the record today? Anything
19 further for this witness?

20 Dr. Schreiber, thank you very much for your
21 testimony. You are excused.

22 MS. SCHREIBER: Thank you.

23 JUDGE STOCKHOLM: And thank you for your
24 patience.

1 MS. SCHREIBER: No problem.

2 JUDGE PHILLIPS: We have marked for
3 identification Exhibits 198 through 211 inclusive.
4 Absent any objection, I'm going to move those into
5 evidence. Are there any objections?

6 MR. SINGER: Yes. We object to Exhibit 205.
7 It wasn't authenticated and it's not relevant.

8 MS. LEARY: In defense of 205, which were two
9 photographs of sedimentation and storm-water runoff in
10 the New York City watershed, we believe that they are
11 relevant because they reflect construction activities.
12 And it's irrelevant whether that comes from a
13 transmission line or a housing development.

14 This is the concern that's been expressed by
15 the panel, including Charles Silver, Thomas Snow, Angus
16 Eaton, and Patrick Ferracane. This is a visual that
17 virtually duplicates a document that was admitted
18 yesterday. But if you give me a moment, it was a
19 response that Mr. Malefyt provided to a discovery
20 request that also included erosion information, and it
21 is one of the principal points of discussion among the
22 Environmental Panel.

23 So I do think it's relevant. And I don't think
24 that that is necessarily the standard in this tribunal,

1 which as I understand it, the rules of evidence are
2 somewhat relaxed.

3 MR. BLOW: Your Honor, just a point if I might.
4 Mr. de Waal Malefyt was on the stand when the -- when
5 the response that he prepared was introduced.
6 Mr. Giannetta was at least -- was at least, or is at
7 least, a New York City DEP employee and perhaps could
8 have authenticated the photographs had they been
9 introduced at that point. They weren't, though.

10 MS. LEARY: Well, Mr. Giannetta did include
11 that very -- those very photographs in response to a DPS
12 information request. And we, in the interest of time,
13 decided that it was unnecessary to introduce that --
14 that information request -- a response to information
15 request to Mr. Giannetta.

16 JUDGE PHILLIPS: I'm sorry. You're saying that
17 these are either in the record already or will be in the
18 record, these exact photos?

19 MS. LEARY: These exact -- these exact photos
20 are part of an answer, a response to an information
21 request --

22 MR. BLOW: Which was not included in the
23 record, Your Honor.

24 MS. LEARY: -- which we --

1 JUDGE PHILLIPS: That's what I wanted to know.

2 MS. LEARY: That's right. It was not. And I'm
3 just explaining that the reason we didn't include it was
4 simply in the interest of time.

5 JUDGE STOCKHOLM: We are not going to admit
6 these two documents into the record.

7 With regard to the first picture in the
8 documents marked -- with regard to the first picture,
9 which is a picture of a construction road with a small
10 ponding of water off on the right-hand side, my
11 recollection of the witnesses' testimony when asked
12 about this is that this is atypical, this is not
13 typical, of the kind of construction that is actually
14 done for transmission lines.

15 With regard to the second picture, the
16 witnesses indicated that other than the obvious barriers
17 to storm-water that were constructed and do not appear
18 from this photo to have worked very well, the witnesses
19 did not know enough to express an opinion on it.

20 We do have in the record authenticated --
21 authenticated photographs of the Millennium Pipeline
22 construction that DEC put into the record that I think
23 show, at least as starkly as these photographs, if not
24 more starkly, what can happen with either an inadequate

1 program or an inadequate execution of a SWPPP.

2 So for those reasons, I'm not going to enter
3 this document into evidence. The document, however,
4 will continue to exist as a document marked for
5 identification. It's not that it won't be in the record
6 of the case, we are just not putting it into evidence.
7 In other words, if the Commission were to ultimately
8 overrule this ruling, and under our rules you can appeal
9 this ruling at the time of your briefs, or within 10
10 days, but if you're going to do it within 10 days, it's
11 got to be extraordinary, I don't think this is, but
12 that's your choice, that way, the document will exist in
13 the files of the Commission so that they can refer to it
14 if, in fact, you want to make this part of the record.
15 But for the time being, these documents are not part of
16 the record -- or not entered into evidence.

17 Is all of that clear? Clear enough.

18 JUDGE PHILLIPS: Okay. With that, we will be
19 moving into evidence exhibits marked 198 through 204,
20 and 206 through 211.

21 (Exhibits 198 through 204 and 206 through 211
22 received in evidence.)

23 JUDGE PHILLIPS: Is there anything else before
24 we go off the record?

1 Starting time for tomorrow is 9:30 a.m. Thank
2 you very much. You're excused.

3 (Whereupon, the proceedings adjourned at
4 6:34 p.m.)

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EXHIBITS:

MARKED

210	"Pesticides And Their Metabolites In Selected Surface Water Public Supplies In New York State, 1999."	2724
211	"Concentrations of Pesticides and Pesticide Degredates in the Croton River Watershed in Southeastern New York, July-September 2000."	2724