

STATE OF MISSOURI
PUBLIC SERVICE COMMISSION

TRANSCRIPT OF PROCEEDINGS

Hearing

August 2, 2007
Jefferson City, Missouri
Volume 5

In the Matter of an Investigation)
Into an Incident in December 2005)
at the Taum Sauk Pumped Storage)Case No.
Project Owned and Operated by the)ES-2007-0474
Union Electric Company, doing)
business as AmerenUE)

COLLEEN M. DALE, Presiding
CHIEF REGULATORY LAW JUDGE

JEFF DAVIS, Chairman,
STEVE GAW,
ROBERT M. CLAYTON, III,
LINWARD "LIN" APPLING,
COMMISSIONERS

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

2 JUDGE DALE: Okay. We are back on the record in
3 ES-2007-0474 on August 2nd. And we're ready to begin with
4 more witnesses. Mr. Byrne?

5 MR. BYRNE: Yes. We have Mr. Fitzgerald here as
6 our first witness, and Mr. Witt will be the second
7 witness.

8 JUDGE DALE: Okay. Thank you.

9 MS. BRUEGGEMANN: And, your Honor, a couple of
10 preliminary matters. As I understand it, the FERC staff
11 report from April 28th, 2006, has not been entered into
12 evidence yet.

13 So just so that the Commission has all three --
14 the reservoir report, the FERC Independent Panel of
15 Consultants and the staff report from FERC, that would
16 complete the series.

17 JUDGE DALE: Okay. So you're offering that?

18 MS. BRUEGGEMANN: I would. And we have it in a
19 booklet. I can let everyone look at it to make sure they
20 don't have objection to it.

21 JUDGE DALE: It would be Exhibit No. 22.

22 (Exhibit No. 22 was marked for identification.)

23 JUDGE DALE: While you're doing that,
24 Mr. Fitzgerald -- Ms. Baker, could you --

25 MS. BAKER: Certainly.

1 JUDGE DALE: Thank you, ma'am.

2 MS. BAKER: Thank you.

3 MR. SCHAEFER: And, Judge, just to follow up on
4 that -- on that last issue just because I'm kind of --
5 Exhibits 1 through 9, I'm a little fuzzy on. The FERC
6 independent panel report has already been admitted into
7 evidence, correct?

8 JUDGE DALE: Yes. We have in evidence already
9 the FERC independent report and the Rizzo report.

10 MS. PAKE: What's the Rizzo report?

11 MS. HOUSE: Which exhibit is the Rizzo report?
12 I apologize. I don't have that on my list.

13 JUDGE DALE: No. 8.

14 MS. HOUSE: Thank you.

15 JUDGE DALE: Oh, and while we're talking about
16 exhibits, Exhibit No. 18 on my list doesn't show as
17 having been admitted. Is there any objection to Exhibit
18 18, which is the --

19 MS. HOUSE: There is -- there is not, your
20 Honor.

21 JUDGE DALE: Okay.

22 MR. SCHAEFER: Which was 18, your Honor?

23 JUDGE DALE: 18 is the e-mail package beginning
24 with Cooper to OSAG 10/11/05.

25 MR. SCHAEFER: All right.

1 JUDGE DALE: Mr. Fitzgerald?

2 DAVID FITZGERALD,

3 being first duly sworn to testify the truth, the whole
4 truth, and nothing but the truth, testified as follows:

5 DIRECT EXAMINATION

6 BY MS. BRUEGGEMAN:

7 JUDGE DALE: Thank you. You may inquire.

8 MS. BRUEGGEMANN: Thank you, your Honor.

9 Q (By Ms. Brueggemann) Mr. Fitzgerald, my name is
10 Shelley Brueggemann. I am with the General Counsel's
11 office at the PSC. I believe you've probably been waiting
12 a while to testify here this morning, so we appreciate
13 your attendance.

14 A Thank you.

15 Q Now, who do you work for currently?

16 A I work for AmerenUE.

17 Q And how many years have you been with Ameren?

18 A I've been with Ameren and its predecessor, Union
19 Electric, for 26-plus years.

20 Q Okay. Now, would you mind filling us in on the
21 positions that you've held with Ameren?

22 A Certainly. I -- I've had a lot of different
23 positions. I started at the Callaway Nuclear Plant in
24 1980 as an Assistant Equipment Operator. That's a
25 bargaining unit position.

1 And I've progressed, line of promotion, to an
2 Equipment Operator and Reactor Operator. And as a Reactor
3 Operator, I was licensed by the Nuclear Regulatory
4 Commission to operate the controls and direct activities
5 of Callaway Nuclear Plant.

6 Subsequently, in 1985, I took a management
7 position as a supervisor and received a Senior Wrecker
8 Operator's license from the Nuclear Regulatory Commission.
9 I was an Operating Supervisor, directed activities at the
10 Callaway Nuclear Plant, maintained my operating license
11 and was in the Callaway plant Operations Department in a
12 variety of roles.

13 In 1994, I became the Superintendent of Security
14 at Callaway Nuclear plant. And for the next approximately
15 five years, I was a Superintendent. I was also the
16 Assistant -- or, actually, the acting Manager of
17 Operations Support. I had security training materials and
18 administration functions at the Callaway Nuclear Plant.

19 I was Outage Director at the Callaway Nuclear
20 Plant. In the summer of 1999, I was asked to go to the
21 Taum Sauk plant and arrive there first part of July of
22 1999.

23 I was there through August of 2002, at which
24 point I became the Strategic Outage Manager for AmerenUE
25 over the fleet outages for our company, primarily the

1 fossil hydro combustion turbines.

2 At -- February of 2003, I became the Plant
3 Manger at the Osage plant at Bagnell Dam.

4 Q Wait. Will you say that again. I didn't -- I
5 didn't catch that. When was that?

6 A Okay. Certainly. In February of 2003, I became
7 the Plant Manager at the Osage plant, at Lake of the
8 Ozarks, Bagnell Dam. And I remained there until October
9 of 2004, at which time I was requested to return to the
10 Callaway plant.

11 And I was the Manager of Planning, Scheduling
12 and Outages at the Callaway plant. And October the 1st of
13 2006, I was requested to become the Manager of Regulatory
14 Affairs. And in that position, I had responsibility for
15 probability risk assessment, safety analysis, licensing,
16 regional regulatory affairs with the Nuclear Regulatory
17 Commission, security, emergency preparedness and
18 industrial safety.

19 I remained in that position until the 1st of
20 June, at which time I was requested to return to the Taum
21 Sauk plant as manager. And I'm currently the manager of
22 Ameren Union Electric's Taum Sauk plant.

23 And I'm sure I've missed a couple of detours
24 along the way, but that hits the high points.

25 Q Okay. And in July of '99 when you were asked to

1 go to Taum Sauk, you were the Superintendent at Taum Sauk?

2 A No, ma'am. I was the Manager at Taum Sauk.

3 Q Okay. Okay. Now, really quickly, would you
4 mind going through your educational background?

5 A I have a Bachelor of Arts from Missouri Baptist
6 University in St. Louis. And I have a Master's in
7 Business Administration from William Woods University. I
8 have also attended University of Missouri at Rolla,
9 concentrating on Metallurgical Engineering.

10 I have also taken additional classes from
11 University of Missouri at Rolla, including Reactor
12 Operations Program. I've had continuing education at the
13 University of Texas at College Station at Texas A&M.

14 Q Okay. And did any of these classes focus on
15 hydro-electric plants, or what -- what type of focus did
16 some of these have in that area?

17 A None of my formal education focused on
18 hydro-electric plant operation.

19 Q okay now, you've said a couple of things, and I
20 think it's easiest to work backwards. On June 1st of
21 2007, you were requested to return to -- as Manager of
22 Taum Sauk?

23 A That's correct.

24 Q Who requested that?

25 A Mr. Birk.

1 Q And was there a reason why?

2 A At -- at that particular time -- we have a lot
3 of activity associated with the Taum Sauk plant in that we
4 are concurrently involved with a relicensing process of
5 the plant.

6 As you're aware, we are in settlement
7 discussions with the State of Missouri relative to the
8 event that occurred in December of 2005. And we are also
9 attempting to gain permission from Federal Energy
10 Regulatory Commission to commence a rebuild of the upper
11 reservoir.

12 In addition to that, from the event, the
13 mechanical physical plant that is located at the bottom of
14 Profit Mountain, associated with the lower reservoir, the
15 actual generating equipment, sustained damage from the
16 flood event that occurred. And we have a significant
17 amount of restoration and clean-up associated with that.

18 So there was significant levels of activity, a
19 lot of coordination that was necessary, and it was felt
20 that with the background that I had at the manager level
21 and my familiarity with the Taum Sauk plant and the local
22 area that I would be a good candidate to be placed in
23 charge of the plant.

24 Q Okay. In October of '04, I believe it -- you
25 stated that it was also requested of you that you return

1 to Taum Sauk --

2 A No, ma'am. Let me -- let me elaborate on that.

3 Q Please do.

4 A October of 2004, I was requested to return to
5 the Callaway Nuclear Plant.

6 Q Okay. And there it was you were -- your
7 position was in planning and scheduling of outages?

8 A Yes, ma'am. It was planning, scheduling and
9 outages. That included the daily work scheduling and
10 planning, and, also, responding to unplanned outages and,
11 also, normal refueling outages.

12 Q Okay. And this was just for Callaway?

13 A That's correct.

14 Q And whenever you were scheduling or planning
15 outages and working out the -- the specifics of outages,
16 who in Ameren did you go through? Was it generation?
17 Trading? What was the department you would work with?

18 A We would work with our scheduling group that was
19 in Energy Supply Operations. We also had a group in our
20 power operations, Ameren Services Group, that would do the
21 overall fleet planning and scheduling of our unit normal
22 outages, that would coordinate those to ensure that we had
23 adequate power supplies to meet the needs of our
24 customers.

25 The Callaway Nuclear Plant outage scheduling was

1 primarily driven by the nuclear fuel cycle, which, for
2 Callaway plant, was on an 18-month refueling cycle. And
3 there wasn't a lot of leeway associated with that.

4 If we operated as we wished to at -- as a
5 base-loaded plant, that means at 100 percent power, 24
6 hours a day, seven days a week, we would exhaust the
7 nuclear fuel supply within an 18-month period and be
8 required to shut the plant down, remove the nuclear fuel
9 and replace it with additional new assemblies. About
10 one-third of the nuclear fuel was replaced on an 18-month
11 cycle.

12 Q Okay. So it sounds like the majority of outages
13 were very -- were scheduled very far in advance?

14 A That's correct.

15 Q Were there ever emergency outages or --

16 A Yes, ma'am.

17 Q And how would you work out those details?

18 A If it was a discretionary issue, we would
19 coordinate and cooperate with Power Supply Operations in
20 determining what our power supply overall conditions were
21 in meeting the needs of our customers.

22 If it was a non-discretionary item, such as it
23 was impacting the safety of the plant or our workers, we
24 would just call up and say, We need to take the unit off
25 and commence a shut-down.

1 And our licensed operators that were in the
2 control room of the Callaway Nuclear Plant had that
3 authority to do such.

4 Q Okay. And who -- either the licensed operator
5 or yourself, who would be called if you needed to go ahead
6 and schedule this outage?

7 A For the Callaway Nuclear Plant, we would
8 coordinate with Energy Supply Operations, and they would
9 work with our trading group.

10 But for a large plant like Callaway, in addition
11 to myself, the Plant Manager, site VP, we would often have
12 additional management people throughout the company that
13 would be involved in discretionary items.

14 Q Okay.

15 A But if it was a safety item, we would -- we had
16 the authority to shut the plant down. And we did such.

17 Q Okay. Now, in February of '03 when you were
18 managing Osage -- or Bagnell Dam --

19 A Yes, ma'am.

20 Q -- were you only managing Bagnell Dam's
21 hydro-electric plant?

22 A That's correct. Our organization at that time,
23 we had three hydro-electric plants. We had a manager at
24 the Kiakuck plant, a manager at the Osage plant, a Plant
25 Production Superintendent at Taum Sauk, and then we had a

1 General Manager of Hydro Operations that we reported to.

2 Q Okay. Would you say again what you just said
3 the title was for the person at Taum Sauk?

4 A He was essentially the Plant Superintendent.

5 Q And what's the difference between a Plant
6 Superintendent and a Manager at one of the hydro-electric
7 plants?

8 A In the Ameren system, a manager is generally a
9 member of our Ameren leadership team and would be expected
10 and required to have additional duties beyond just the
11 focus on his power plant.

12 A Superintendent normally had a more narrow
13 focus and level of responsibility. As Manager, I'm
14 expected to be part of our Executive Staff and a leader of
15 our organization and corporation.

16 Q Does this mean you -- you need to take on
17 initiative to have more communication with Ameren or
18 AmerenUE, the actual -- or your corporate affiliates and
19 just initiate more actions? Is that part of your duties?

20 A It could be that we would become involved in
21 overall programs of the -- of Ameren if we were starting
22 corporation-wide initiatives, leadership initiatives,
23 accountability initiatives.

24 It could be raising funds for United Way. But
25 we would become involved often beyond our direct power

1 plant responsibilities.

2 Q Okay. And we'll get back into this in a minute.

3 But from July of '99 through possibly -- possibly
4 September of '04, but more likely January of '03, were you
5 involved with and at least somewhat aware of everything
6 going on at Taum Sauk?

7 A Could you please repeat the dates?

8 Q Well, and let me break it down. In July of '99
9 to August of '02, you said you were the manager at Taum
10 Sauk?

11 A Yes, ma'am.

12 Q So you were running the Taum Sauk plant?

13 A That's correct.

14 Q But you weren't labeled the Superintendent?

15 A No, ma'am. I was the Manager of the plant.

16 Q Okay. And then August 2002 to January of '03,
17 you were the Strategic Outage Manager?

18 A Manager.

19 Q So I'm assuming that you were still in contact
20 with or -- or aware of Taum Sauk?

21 A My -- I was aware of Taum Sauk, but I wasn't in
22 direct contact with them. My responsibilities as a Fleet
23 Strategic Outage Manager was to look for efficiencies and
24 improvements in outage performance and execution and to
25 determine what new initiatives we should take on.

1 It was a strategic position in that I was to
2 help develop the vision for the corporation and identify
3 new objectives and initiatives to improve outage
4 performance.

5 Q Okay. So meaning you were trying to help
6 everybody run more efficiency -- efficiently and sell
7 power at the same time when you're having to deal with
8 these outages?

9 A It was primarily concerned with strategic and
10 not tactical daily operations.

11 Q Explain to me the difference.

12 A In -- well, let me explain a little bit perhaps
13 of what I did, and maybe that will help. In that in my
14 role, I was responsible for a number of consulting
15 engineers and also some Ameren staff.

16 We examined our -- our fossil fleet and
17 determined what causes of forced outages were and what the
18 drivers for the duration of outages were associated with
19 the plants. We benchmarked against other utilities and
20 other power plants that were similar to ours to identify
21 what the best practices were.

22 Then we costed that as to what it would take for
23 us to implement those practices if they would improve our
24 performance. And we developed strategic objectives that
25 we would have to obtain budgetary money to implement.

1 Or in some cases, they were just to make a
2 decision to do work differently. And we -- we attempted
3 then to get that into our strategic plans and get
4 agreement with the Plant Managers that we would take this
5 on to improve the overall operation of our fleet of
6 plants.

7 And the end result was it would improve our
8 efficiency and execution of outages, reduce our overall
9 operating costs and allow us to continue to be both a cost
10 provider of electricity and meet our customers' needs.

11 Q Okay. That's really interesting. So then when
12 you were looking at -- at all of this information to go
13 ahead and -- and you were studying forced outages and the
14 causes of those things, did the information that resulted
15 apply to Taum Sauk specifically?

16 A No, ma'am, it did not. We were primarily
17 focused on our plants that we would consider to be
18 base-load fossil or coal plants.

19 Q Okay. Thank you.

20 A You're welcome.

21 Q Okay. So then your main focus and your main
22 interaction with Taum Sauk was from July of '99 to August
23 2002?

24 A That's correct.

25 Q And then just because Bagnell Dam helps operate

1 when Taum Sauk isn't staffed, you would have had some
2 attention on Taum Sauk from February '03 to September of
3 '04?

4 A That's correct.

5 Q Okay. Was that just a general knowledge of
6 what's going on at Taum Sauk during that '03 time frame,
7 '04?

8 A That would be a good characterization of it. In
9 addition, I was also able to -- to provide information to
10 our operators at Bagnell Dam about an interpretation of
11 specifics due to my familiarity with the plant project
12 there.

13 Q Okay. Who asked you to go to Taum Sauk in July
14 of '99?

15 A Chuck Naslund, who at that time was Vice
16 President of Power Operations for AmerenUE.

17 Q The job that Mark Birk holds right now?

18 A That's correct.

19 Q And did he specify why he would like you to be
20 at Taum Sauk?

21 A At that particular time, we had -- were drawn to
22 a conclusion of upgrading the plant turbines, or in hydro
23 language, the runners. This would have improved the plant
24 efficiency and, also, marginally increased the overall
25 power rating for the plant.

1 It would become a time at which we would need to
2 do some start-up testing to develop the operating
3 parameters associated with the new equipment. I had a
4 background of experience relative to the Callaway Nuclear
5 Plant of conducting start-up testing. I was also very
6 familiar with overall power plant operations.

7 And it's my belief that Mr. Naslund had
8 confidence in my ability to go to the Taum Sauk plant,
9 commission the plant and put it into production.

10 Q Okay. Now, was there a Superintendent at Taum
11 Sauk during the same period that you were Manager?

12 A No, ma'am.

13 Q So you took on the role of -- of that, also?

14 A That's correct.

15 Q Now, since we've kind of discussed the
16 difference between Manager and Superintendent, what other
17 additional duties that you may have just gone into did you
18 have when you were at Taum Sauk as the Manager that a
19 Superintendent wouldn't have?

20 A Well, I already mentioned that I was involved
21 with our United Way campaign. In addition to that, I
22 worked with Ameren Development Corporation in evaluating
23 the potential for an additional power plant to be sited in
24 close proximity to the Taum Sauk plant. That was referred
25 to as the Church Mountain project.

1 I also served on the Power Operations Industrial
2 Safety Team. I also served on the Labor Relations Team
3 that we had. And at -- at various times would be assigned
4 special projects that would be looking at all of the power
5 plants associated with Ameren Union Electric that were
6 non-nuclear.

7 Q And what were those projects -- projects looking
8 for?

9 A We were looking at various times at improving
10 industrial safety, improving power plant performance,
11 improving efficiency at the power plants would be a
12 general characterization of the type of projects that we
13 might take on.

14 Q Now, when you were brought in in 1999 and you
15 specifically mentioned upgrading the runners, between 1999
16 to August 2002, did you actually improve the production or
17 generation of power, the efficiency of Taum Sauk?

18 A The efficiency of Taum Sauk was inherent to the
19 design of the new turbine runners. And it did improve
20 greatly the efficiency of the plant. And the efficiency
21 was a measurement of the ratio of the power that was
22 required to restore the upper reservoir compared to the
23 power that was generated by the plant. And there was a
24 significant increase in the efficiency of the plant
25 operations. So I -- that was just a function of the

1 design.

2 On the megawatt production with the increased
3 efficiency that we had and the operating characteristics
4 of the plant, with the changes that had been made to
5 improve its operation, it was utilized more than it had
6 been in the past.

7 Q Do you know how much more it was utilized than
8 it had been in the past?

9 A I do not have exact numbers and do not recall
10 those.

11 Q During that time frame when you first started
12 there, was the plant being run two times a day?

13 A Could you please repeat your question?

14 Q Well, I'm -- and it wasn't a clear question, so
15 let me rephrase it. While you were there in 1999, was
16 Taum Sauk -- was the lower reservoir being pumped up --
17 the water being pumped up to the upper reservoir and then
18 the generators -- the water going back down generated,
19 let's say, twice a day?

20 A It would depend upon what our system load
21 requirements were and the availability of power to be used
22 to pump back the plant and the time of the year. So -- so
23 it sounds like I'm all over with the response.

24 And so the response would be at times, it was,
25 but it was not a daily occurrence. It would depend on a

1 multitude of factors as to the number of times that we
2 would go through a cycle. The most common cycle would be
3 for a generation in late afternoon into the early evening
4 hours during the summer months and then it pumps back
5 overnight to restore the upper reservoir elevation.

6 Q And was this generally only in the summer?

7 A Yes, ma'am.

8 Q Okay. Was it run in -- in winter?

9 A It was run in the winter. And in the winter,
10 our system has different load characteristics where it has
11 a distinctive morning and evening peak. And those were
12 the times when we were more likely to generate more than
13 once in a day to meet the peak load demands of our
14 customers.

15 Q Now, was this the same for the spring and the
16 fall? And you can take them separately if they're also
17 distinct in their seasons.

18 A They would -- the spring and fall would have
19 similar characteristics. And it's a function of the
20 ambient temperature and the gradient or change of that
21 temperature over the that 48-hour period and the heating
22 and cooling loads that we would have.

23 Q Okay. So depending on if it was more like
24 winter or more like summer, it could be run in the same
25 way that it was -- that you described for those other

1 seasons?

2 A It really depended upon what our system load
3 was, ma'am. And it was not my choice to determine the
4 times at which the plant was operated.

5 Q Okay. And whose decision was that?

6 A That would be our Power Supervisors and the
7 people that worked in our Energy Supply Operations group.

8 Q And how would that communication occur for how
9 the plant was going to be run?

10 A I would have a frequent conversation with this
11 group and have a general understanding of what to expect.
12 Actual loading, which would be the stopping and starting,
13 whether in generate or pump would be communicated directly
14 from the St. Louis Central Station to the Osage operators.
15 And they would control the units remotely.

16 Q So while you were at Taum Sauk and the Osage
17 operators are controlling Taum Sauk remotely, are you kept
18 in communications as to the schedule of running Taum Sauk?

19 A No, ma'am.

20 Q Okay. So then the primary position at -- as
21 Manager at Taum Sauk was just to make sure the facility
22 and its equipment was kept in working order?

23 A We had responsibility for ensuring that the
24 equipment was maintained, that it was available for
25 dispatch and that it was operated in a safe manner. I

1 ultimately had control of the plant. Per the Union
2 Electric operating manual, I was the jurisdictional
3 authority on the plant and had the ability to remove it
4 from service at any time if I felt it was necessary.

5 Q Okay. Now, were you interviewed by the Missouri
6 Highway Patrol?

7 A Yes, ma'am, I was.

8 Q And were you interviewed on December 19th of
9 2005?

10 A Yes, ma'am.

11 Q Was that the only interview that you had with
12 the Missouri Highway Patrol?

13 A That's correct.

14 MS. BRUEGGEMANN: Okay. Are you marking the
15 exhibits?

16 THE COURT REPORTER: Uh-huh.

17 MS. BRUEGGEMANN: Could I have that one marked?
18 I think we're up to 23.

19 (Exhibit No. 23 was marked for identification.)

20 MS. BRUEGGEMANN: Thank you. And if it's all
21 right with you, I'm going to give him a copy so that I can
22 redact the --

23 MR. BYRNE: Sure.

24 Q (By Ms. Brueggemann) Now, Mr. Fitzgerald, have
25 you actually read your interview from the Missouri Highway

1 Patrol report?

2 A Yes, ma'am, I have.

3 Q Okay. And when did you read that?

4 A Part -- would you like me to read it now?

5 Q No. When did you read it?

6 A I read it just a couple of days ago in preparing
7 for this testimony.

8 Q Okay. Now, I'm going to go through this with
9 you as I believe they've been going through with other
10 witnesses. And I believe the practice has been to go
11 ahead and redact telephone numbers, birth dates, things
12 like that if they're actually in the document.

13 So knowing that, though, what I'd like you for
14 you to do is look at the first paragraph, review that and
15 see if you see any statements that you feel need to be
16 corrected.

17 A The fifth line in the first paragraph is
18 incorrect in that in September of 2002, I was transferred
19 to our General Office Building and not to the Callaway
20 plant.

21 Q Okay. So that should read -- instead of to the
22 Callaway plant, should read to the General Office Building
23 or --

24 A In St. Louis, Missouri.

25 Q To the St. Louis, Missouri General Office

1 Building?

2 A That's correct.

3 Q Okay. Okay. And then is the rest of that
4 paragraph accurate?

5 A It is accurate in that it is a summary and not
6 my exact statements that I provided to the Highway Patrol.

7 Q Good. Will you do the same with Paragraph No.
8 2? Please read it over and see if there's information in
9 there that you feel needs to be corrected.

10 A Yes, ma'am. Paragraph 2, the first sentence
11 says, Mr. Fitzgerald said he was called. And that is not
12 correct. I volunteered to go to the Taum Sauk reservoir.
13 The second sentence --

14 Q Okay. So just to make sure as we're going,
15 then, that should say, Mr. Fitzgerald said he volunteered
16 to go to the Taum Sauk reservoir?

17 A That's correct.

18 Q Okay. Please continue. I'm sorry.

19 A Second sentence, where it says, He said he had
20 seen seven overflowed areas on the reservoir where the
21 water was pumped too long and ran over the sides, that is
22 referring to the day of the occurrence, December the 14th,
23 that it appeared to me that on that event that, in
24 addition to the breach, that there were other areas that
25 had been overcomped at the same time that had not failed.

1 So this is not seven separate occurrences, but
2 it's one occurrence seven places on the reservoir parapet
3 walls.

4 Q So how would you like to correct that sentence?

5 A You could add prior to the period, on the day of
6 the event, December 14th, 2005, to make it specific to
7 just one day, one occurrence.

8 Q So it needs to say on December 14th, 2005, or on
9 the day of the event?

10 A On the day of the event.

11 MR. BYRNE: Excuse me. If I could just --
12 should it say on the day of the event, December 14th,
13 2005, just --

14 A Correct. That's correct.

15 MR. BYRNE: Okay. Okay.

16 Q (By Ms. Brueggemann) And that's my
17 understanding. That's what I wrote down, also. Okay.
18 Moving on, do you see any more corrections that need to be
19 made?

20 A The next -- the next sentence, He said there are
21 -- or "is" should be "are." And the logic boards and
22 pressure sensors. And instead of in the pressure sensors,
23 that was associated with the pressure sentence -- sensors.

24 Q So I'm sorry. He said there are logic boards
25 that are --

1 A That are associated with the pressure sentence
2 -- sensors. I was attempting to explain programmable
3 logic cards or PLC computer controls. And I -- I
4 understand that the Highway Patrol interviewers were not
5 technical and this is how they interpreted what I was
6 saying. So it's not an exact indication of what I had
7 talked about.

8 Q And that's exactly another reason we're going
9 through this piece by piece to make sure that all of the
10 implications that you don't feel are correct can be
11 corrected.

12 A Yeah. Okay. Same paragraph, fourth line from
13 the bottom where it says the supervisor, that should be
14 the Superintendent.

15 Q I'm sorry. I'm not -- you're in paragraph 2?

16 A I'm in paragraph 2, fourth sentence from the end
17 of that paragraph.

18 Q I see. Change supervisor to Superintendent.

19 A Superintendent. And then continuing on, on that
20 line, He said in order to start the system, you have to
21 know the password. And what I was referring to there was
22 an order to change the programming associated with the PLC
23 and the level control system, you needed to know the
24 password.

25 So I don't want the system to be confused with

1 the plant, starting the plant. This was specific to my
2 understanding of the programmable logic cards associated
3 with the new level control system.

4 Q Okay. So this -- there's a few ways you can
5 correct that. How would you prefer to correct that?

6 A He said in order to change the programming
7 associated with the level control system would be one
8 suggestion.

9 Q It reads, He said in order to change the
10 programming associated with the system?

11 A Level control system. That would be the upper
12 reservoir level control system.

13 Q So the upper reservoir level control system?

14 A Yes, ma'am.

15 Q You have to know the password in the computer?

16 A That's correct.

17 Q Okay.

18 A Third paragraph,

19 Q Well, so, did you see any other corrections that
20 need to be made --

21 A No, ma'am.

22 Q -- in Paragraph No. 2?

23 A No, ma'am.

24 Q Thank you.

25 A Third paragraph, first sentence, Mr. Fitzgerald

1 said he heard, not that he knows. And that was reflecting
2 third-hand information, not knowledge of what had
3 occurred, not firsthand knowledge.

4 Q And who had you heard that information from?

5 A From the plant workers while I had been
6 responding to the event immediately following.

7 Q So you heard the information on December 14th?

8 A Not -- not on December 14th because I didn't
9 talk to any of the plant workers on that day.

10 Q Okay.

11 A This would be subsequent to that.

12 Q So sometime between December 15th and December
13 19th?

14 A I was at the Taum Sauk plant for approximately
15 one month. And so at this -- and the interview was
16 conducted on the 19th. So sometime, you are correct,
17 between the 14th and the 19th, I would have heard that
18 third-hand.

19 Q And you just said on the day of the breach that
20 you didn't actually talk to anybody -- any plant
21 technicians?

22 A That's correct.

23 Q So it would have -- it would have had to have
24 been from between the 15th to the 19th?

25 A That's correct.

1 Q Okay. Do you know --

2 A I do not recall who I talked to about that.

3 Q Okay. Any further corrections in paragraph 3?

4 A No, ma'am.

5 Q How about paragraph 4?

6 A On paragraph 4, I was asked to speculate about

7 potential failure mechanisms without having any knowledge

8 of what went on. So I would like to clarify that, that

9 that speculation was not from what I knew.

10 And you will notice that on the next page,

11 second sentence, He said the sensors might. So this was

12 pure speculation and not any fact-based on that part.

13 Q And -- so which part was spec -- which number of

14 sentences were speculation?

15 A Starting with the second sentence, He said one

16 problem to consider is that someone new the password or

17 hacked into the computer and caused the computer problems

18 where the reading the operator was getting was false.

19 I had been asked, as I recall, to speculate

20 about how this could have happened. So this was just a

21 wild guess on my part.

22 Q Okay. So do you want to make a correction to

23 that sentence?

24 A No. I'm just elaborating for you.

25 Q Okay.

1 A I have nothing else.

2 Q Okay. And then after that second full sentence,
3 do you have any more corrections to make?

4 A No, ma'am.

5 Q Okay. So with all of the corrections that we
6 just discussed and scratched out and made note of, would
7 you say that this document is, to the best of your
8 knowledge, a true and accurate -- is true and accurate?

9 A I would say it's a true and accurate summary of
10 my discussion with the Highway Patrol.

11 MS. BRUEGGEMANN: Okay. And I would ask to go
12 ahead and have Exhibit No. 23, which will be the redacted
13 version without his telephone number in paragraph 1 and
14 will make all the changes admitted into evidence.

15 JUDGE DALE: Okay. I'm -- I'm confused. What
16 is Exhibit 22?

17 MS. BRUEGGEMANN: That was the staff report from
18 April.

19 JUDGE DALE: Oh, that's right.

20 MS. BRUEGGEMANN: And it hasn't been officially
21 received into evidence. So, if, Judge Dale, you wanted to
22 rule on that. And I don't know if there were official
23 objections to it. Beck

24 MS. HOUSE: There are -- there are no objections
25 to Exhibit No. 22, your Honor.

1 JUDGE DALE: Okay.

2 MS. BRUEGGEMANN: And is it still back here?

3 JUDGE DALE: Exhibit 22 is admitted into
4 evidence.

5 (Exhibit No. 22 was offered and admitted into
6 evidence.)

7 JUDGE DALE: On Exhibit 23 --

8 MR. BYRNE: Yeah. We have our continuing
9 objection that Ms. House more articulately explained
10 yesterday than I can. But it's -- it's hearsay. It's a
11 summary. It doesn't -- it's not all-inclusive. And I
12 think you had said that could be a continuing objection.

13 JUDGE DALE: Yes. So subject to that continuing
14 objection, it's admitted into evidence.

15 (Exhibit No. 23 was offered and admitted into
16 evidence.)

17 Q (By Ms. Brueggemann) When did you first hear
18 about the breach on December 14th?

19 A I heard about it at approximately 7 a.m. on
20 December the 14th. My wife contacted me. My mother, who
21 lived in the area of Taum Sauk, had heard a news report,
22 had contacted my wife, who contacted me at the Callaway
23 Nuclear Plant.

24 Q Okay. So how quickly did you arrive at the Taum
25 Sauk plant?

1 A I arrived at the Taum Sauk plant at
2 approximately mid-day, somewhere around noon.

3 Q Did you have to make any calls to get permission
4 to go ahead and leave Callaway?

5 A I went to my site Vice President, told him that
6 I didn't know what was occurring at the Taum Sauk plant,
7 but that we had had, apparently, a catastrophic event and
8 I felt that it was my obligation to -- to go there as
9 quickly as possible to do what I could to help.

10 Q Okay. And were you able to -- to help some that
11 day?

12 A Yes, ma'am.

13 Q What did you do?

14 A When I arrived at the Taum Sauk plant, there
15 were a number of officials and reporters that were
16 congregated at the plant site.

17 And following receiving a brief from Ameren
18 management as to what we thought had occurred, I went and
19 interacted with the State officials and the news reporters
20 that were at the plant.

21 I took -- talked to Governor Blunt's
22 representatives, and we took and escorted some of the
23 people that were there to the breach site.
24 It was very difficult to see it due to the atmospheric
25 conditions at the time.

1 And following that, I went to the Emergency
2 Operations Center that was located at Westerville and
3 became the Ameren representative at the Emergency
4 Operations Center. That was at the Fire Department.

5 Q Okay. Okay. Going back to your position from
6 1999, July of '99 to August 2002 as Manager of Taum Sauk,
7 can you tell us what the normal operating level was for
8 the Taum Sauk upper reservoir that you had?

9 A We had many different levels. Could you please
10 be specific as to what you would like to know?

11 Q How about in the summer?

12 A The summer top of -- or full reservoir level was
13 if 1596 feet mean sea level.

14 Q And in the winter?

15 A In the winter, that was reduced to approximately
16 1586 to 88. I don't remember the exact number.

17 Q Okay.

18 A We reduced it by approximately 10 feet.

19 Q Now, in spring and fall, what would you say the
20 normal operating level highest would be?

21 A Normally, it would be 1596. The winter
22 operations was entered in when we were expecting extended
23 extreme cold temperatures. And we reduced the level
24 during winter to lower it below the parapet wall.

25 Q Okay. So this was because of --

1 A It was due primarily due to expansion joint
2 leakage that we experienced on the parapet walls that
3 would go across the access road around the top of the
4 reservoir and create icing conditions.

5 So due to our concern for our personnel's
6 safety, we would operate at a lower level to ensure or
7 reduce the potential for icing conditions on the road.
8 This road was regularly accessed by plant personnel on
9 their routine inspections when they would go and look at
10 the level control system and do visual inspections of the
11 reservoir.

12 Q Okay. Do you know if that situation changed
13 with the installation of the liner in 2004?

14 A No, ma'am, I do not know.

15 Q Okay.

16 MS. BRUEGGEMANN: I guess mark this as Exhibit
17 24.

18 (Exhibit No. 24 was marked for identification.)

19 Q (By Ms. Brueggemann) The court reporter has
20 just handed you, Mr. Fitzgerald, just an e-mail from
21 Monday, December 23rd, 2002, where you were copied. It
22 seems to be from Mr. Richard Cooper. Do you recognize
23 this e-mail? Please take your time to review it.

24 A I did not recall this e-mail prior to this. But
25 I recognize it. I was copied on it.

1 Q And is it just informational as to what the
2 operating levels for summer and winter are apparently in
3 December of 2002?

4 A That's correct.

5 Q And do those match the same levels that you just
6 spoke about when you were also Manager of Taum Sauk?

7 A I do not recall on the -- the winter level set
8 points as to what I had when I was there.

9 Q But the other information is what you
10 actually --

11 A The other information is what I recall. And the
12 winter operation, I honestly cannot remember what the
13 level set points were that I had established. But this
14 would look to be in the same range.

15 MS. BRUEGGEMANN: Okay. And with that, I would
16 ask that this e-mail be -- No. 24 be accepted into
17 evidence.

18 JUDGE DALE: Objections?

19 MR. BYRNE: No, your Honor.

20 JUDGE DALE: Okay. Then Exhibit 24 will be
21 admitted into evidence.

22 (Exhibit No. 24 was offered and admitted into
23 evidence.)

24 Q (By Ms. Brueggemann) Now, how much -- how many
25 -- let me rephrase that. How many feet of free board on

1 the parapet wall did Taum Sauk operate with when you were
2 Manager?

3 A During the summer operations, we would normally
4 operate with 2 foot of free board following full
5 restoration of the level. This did not occur at all
6 times, but we would have a -- a nominal 2 foot of free
7 board.

8 Q Okay. And do you know where the 2 foot of free
9 board standard came from?

10 A That was in the original design specifications
11 for the plant as to what the top operating level was.

12 Q So the original design specifications stated or
13 required that there needs to be 2 feet of free board at
14 the top -- between the top of the parapet wall and the
15 water level?

16 A I do not know what the basis of the 2 foot was
17 in the original design. But it was my understanding that
18 that provided an adequate margin to prevent wave
19 overtopping from winds and that it also gave a operating
20 margin if the normal level control system did not shut the
21 units off to allow the back-up emergency system adequate
22 time to secure the pumps prior to overtopping.

23 Q Okay. Did you -- I'm sorry to interrupt you.
24 Now, in 1999, do you know what the height and -- and the
25 -- the tallest height is or was of Taum Sauk as to sea

1 level and the actual upper reservoir wall itself, the dam
2 wall?

3 A Over the life of the Taum Sauk plant, the
4 reservoir itself and parapet walls that were attached to
5 the upper portion of the reservoir had undergone an amount
6 of sinking. And this was verified by survey information
7 that had been taken. This was required by the Federal
8 Energy Regulatory Commission for these surveys to be
9 conducted.

10 At the time that I was at Taum Sauk, this was a
11 requirement in our five-year safety report that -- that we
12 put together. And it was conducted. And the reservoir
13 had settled approximately 1 foot.

14 Q And when did -- when was this discovered?

15 A It was discovered early in the plant history.
16 It was an expected condition due to the design of the
17 reservoir walls being a -- a rock-dumped construction,
18 that this settling would occur from the weight of the
19 water that would be exerted downward upon reservoir walls.

20 And so as -- as part of the normal engineering
21 review, safety review, surveys were conducted. And this
22 was tracked. And we submitted it to FERC on an annual
23 basis, as I recall, originally.

24 And then that was -- once it had stabilized at
25 approximately 1 foot of settling, we went to the five-year

1 intervals.

2 Q So what was the actual level for the settled
3 foot difference?

4 A If my memory would be correct on understanding
5 where the top of the parapet wall, this would place --
6 would have placed the top of the wall at approximately
7 1598. It was not the same level completely around. There
8 were some variances that was measured in inches as the
9 parapet walls had settled in different amounts.

10 Q Now, how did you know that information?

11 A From reviewing the safety report and survey
12 documentation.

13 Q And if the survey was done every five years, was
14 there a survey done in the three years that you were there
15 as Manager?

16 A I do not recall if that survey had been done
17 while I was there or if it was information that I had
18 recognized in review of the five-year safety reports.

19 Q And did you review these safety reports just in
20 the normal course of knowing what reports Taum Sauk is
21 filing with the FERC?

22 A I reviewed the safety reports to gain
23 familiarity with the plant design and to see what I had as
24 the Manager of the plant to be responsible for.

25 Q Now, in '99 to August of 2002, what safety

1 mechanisms were in place to guard against overtopping by
2 mechanics, human error or wave action from winds?

3 A By wave action, it would be the point at which
4 we would have our normal level control system secure the
5 pumps, allowing the free board of approximately 2 foot
6 during the summer spring and fall.

7 During winter operation, we had further reduced
8 that, as is noted in Rick Cooper's e-mail, to secure --
9 ensure that normally they would be secured at
10 approximately 1589.

11 This would -- there was a different level
12 control system installed from the one that -- that was
13 employed at the time that I was the plant Manager.

14 And then we had an emergency back-up system to
15 the normal level control system that we had that would
16 provide you additional back-up capability if the normal
17 level control system had sustained some sort of failure.

18 And this was a float system when I was there.
19 I'm not completely familiar with the later system that was
20 installed. But the system that was in operation when I
21 was plant manager is similar to what would be in a toilet
22 bowl in that it had mechanical floats.

23 And as the water level raised, these floats
24 would raise to the point that they would make electrical
25 contact with the switch and send a -- a stop signal to the

1 pumps.

2 Q And were there problems with the float system
3 always working?

4 A We did not experience problems with the float
5 system. And we verified that they were operable by
6 testing them. We had a -- a repeating job that we would
7 do and verify that the float system would actuate.

8 Q Okay. Did the float system -- and please tell
9 me no if it's no. I need to know. But did the float
10 system ever have problems when there was severe cold in
11 the winter or -- and icing?

12 A No, ma'am.

13 Q Okay. So then why would someone change from the
14 float system to a different safety mech -- or to a
15 different measuring system?

16 A I did not know what the bases were on the review
17 of the float system and the design of the new system.

18 Q Okay.

19 A I did understand that during the removal of the
20 float system that one of the floats was dropped. And it's
21 -- they were constructed out of a glass ball, and this was
22 broke. And I do not believe there was a replacement
23 available for it.

24 And that could have factored into the decision
25 to go with a new float system. Or a new system.

1 Q While you were at Taum Sauk, were you aware of
2 any overtopping events?

3 A No, ma'am. Never.

4 Q Did you or your staff personnel watch for
5 indications of any -- any type of overtopping that may
6 have occurred?

7 A Yes, we did. As part of our normal inspection
8 regime, we had daily inspections of the reservoir.

9 On a weekly basis, I myself ensured that I made
10 at least one tour of the reservoir and inspected the
11 condition of the reservoir and also validated the amount
12 of leakage that was occurring.

13 And then I performed leakage calculations
14 associated with each measuring system that we had, and, on
15 an annual basis, submitted this to the Federal Energy
16 Regulatory Commission.

17 And at their inspection times, they also
18 reviewed the technical data that we gathered associated
19 with both the lower reservoir and upper reservoir. And I
20 would discuss it with the FERC inspectors.

21 Q Okay. How much leakage was occurring at that
22 time?

23 A It varied during my tenure at the plant from
24 approximately 20 cubic feet per second to a high of
25 approximately 100 cubic feet per second. As I would, on

1 an almost daily basis, do a reservoir inspection and as I
2 would note increased leakage amounts, I would bring in a
3 commercial diver, and we would do leak repairs.

4 Q And how would those occur with St. Louis and
5 Bagnell Dam operating the generation and pumping?

6 A It would depend on the location in the reservoir
7 that we were diving. And we would coordinate the leak
8 repairs with the levels to increase the dive time.

9 So we would predominately do this in the
10 evening, concurrent with reducing the level -- reservoir
11 level. There were times when we would need to dive in the
12 vicinity of the vertical shaft.

13 And at that time, I would request an out of
14 service -- or that plant -- this was not emergency
15 repairs, and I would work with Energy Supply Operations to
16 coordinate when the best time to do the repairs were.

17 Q And how quickly would -- would they set up an
18 outage for it?

19 A It depends upon the criticality and the amount
20 of leakage that we had. A number of factors. I always
21 had the authority to take the units out of service. And
22 if I felt it was necessary, I would do such.

23 Q Right. But -- but on average -- let's say it
24 was a severe leak. How quickly would they schedule an
25 outage for you?

1 A Usually, within 24 hours.

2 Q And just so I know how the process works, you
3 would request an outage, and then they would tell the St.
4 Louis office or power dispatch?

5 A Let me -- let me explain something on requesting
6 an outage. That's really a misnomer for doing the type of
7 diving that we were doing. What we would need to do is
8 remove the units.

9 And there's two at the Taum Sauk plant, two
10 generators, one -- one turbine for each one. But we would
11 take them out of service and not make them available for
12 starting.

13 And what we would do, there were certain areas
14 of the reservoir that, due to the currents that would
15 develop when the units were running and the reservoir
16 elevation, that it was unsafe to put the diver into that
17 area.

18 And that would be in the -- that included the
19 area where the normal level instrumentation was that the
20 units were available. So it would become necessary to not
21 allow those units to be started.

22 At the same time, if there was an emergency
23 situation, we could remove the diver from the water and
24 release the units to be started within normally an hour's
25 time.

1 So we would coordinate with the Load Dispatch
2 Energy Supply Operations office and remain in close
3 communications with them when we had a diver in the water.
4 And, if necessary, we would remove the diver from the
5 water and make the units available.

6 And these would be in emergency-type situations,
7 if we have lost a large plant and needed power to supply
8 our customers. It was not a threat to safety at the
9 plant, the amount of leakage that we would have.

10 And we could remove the diver and start the
11 unit. Does that help?

12 Q That does help. So then for the -- but for the
13 non-emergency situations, essentially, the process works
14 the same way?

15 A For the -- for the -- instead of calling this
16 emergency situations associated with the leakage, we -- we
17 could say it was a variance of amounts of leakages.

18 And as the leakage increases, as an efficiency matter
19 associated with operation of the plant and also associated
20 with potential wash-outs of access roads from the leakage,
21 we would want to repair the leaks.

22 And so it would become increasingly more
23 important, but not a plant safety issue for us to repair
24 these.

25 Q And so in those instances, that's when you go

1 ahead and you have time to schedule down time for the
2 plant with Load Dispatch Energy Supply?

3 A That's correct.

4 Q And --

5 A This was -- would be a dialogue when we would
6 review with them our -- our system operating needs,
7 availability, other plans to meet our needs. And we would
8 work together.

9 If it was an emergency situation, I did not need
10 permission from them to remove the plant from service. I
11 had that authority.

12 Q And when you're speaking of availability of
13 other plants to -- are you speaking of supporting Taum
14 Sauk, or are you speaking of supplying energy that -- that
15 Taum Sauk may have supplied?

16 A I'm not clear on -- on your question. When --
17 when I'm talking about availability of plants, I'm talking
18 about within the Ameren system how many plants that we had
19 available for dispatch. Were there any other plants that
20 were shut down? What was our -- our margin that we had
21 available to supply customer needs?

22 Q That answers it.

23 A Thank you.

24 Q Okay. Jumping back for just one second, when
25 you stated your understanding was the original design

1 established the 2 feet of free board, where did you come
2 up with that understanding?

3 A That would be located within our technical
4 documents, and, also, in the operating license that we had
5 with the Federal Energy Regulatory Commission. That
6 stated what the normal volumes were in the upper and lower
7 reservoir.

8 Q Okay. Were there any other improvements besides
9 the upgrading of the turbine runners in '99 that helped
10 you improve the efficiency of the plant?

11 A Yes, there were. There were improvements that
12 we made to make it more reliable. That included changing
13 the turbine control system to a programmable logic card
14 system.

15 It also included changing the generator an
16 excitation (ph.) system to a more current computer-based
17 system. It also included upgrading and replacing
18 equipment that was in the switch yard for the plant.

19 Q Okay. And then are you also aware of how much
20 increased generation capacity -- or switch that -- how
21 much generation capacity increased for the plant after any
22 of these improvements?

23 A I -- I believe we -- we -- I was asked that
24 earlier. The response was that I don't know the exact
25 figures. I don't remember those. It did increase

1 significantly over previous years.

2 Q I apologize for repeating the question. Okay.

3 One last e-mail, and then that's all the exhibits I have
4 for you.

5 MS. BRUEGGEMANN: Mark that as 25.

6 (Exhibit No. 25 was marked for identification.).

7 Q (By Ms. Brueggemann) Okay. I believe the court
8 reporter has handed you what's been marked as Exhibit
9 No. 25. And do you -- do you recognize that e-mail?

10 A Yes, ma'am, I do.

11 Q Okay. And how do you recognize it?

12 A I -- I recognize it from having heard it read on
13 KMOX radio recently. And, also, I have reviewed it in
14 preparation of this testimony.

15 Q Okay. And are you the author of this e-mail?

16 A Yes, ma'am.

17 Q And was it written May 20th, 2000, 2:04 p.m.?

18 A That's correct.

19 Q I apologize. The original e-mail that you wrote
20 was actually written 1:59 p.m. And then Phillip
21 Thompson's response was 2:04 p.m.

22 A I don't have Phillip Thompson's response. I've
23 got the -- the e-mail at the top that I forwarded --

24 Q Oh, that's right.

25 A -- to -- to Phil.

1 Q Okay. So these are both -- and I apologize.

2 Both of these are your e-mails at 2:04 and 1:59?

3 A That's correct.

4 Q Okay. And who is Phillip Thompson?

5 A Phillip Thompson is the Superintendent at the
6 Osage plant. At this time, the point at which I had sent
7 this e-mail in 2000, Phillip was an engineer at the Osage
8 plant.

9 Q Okay. Now, originally for the May 20, 2000, 1:59
10 e-mail that you sent to the what looks like Charles Kempf
11 and associates, what was the purpose of sending out this
12 e-mail?

13 A The purpose was to provide a reminder of the
14 operating parameters, the, particularly, level set points
15 that the Taum Sauk plant was to be operated to.

16 There was some lack of understanding at -- at
17 the time that I wrote this e-mail with Energy Supply
18 Operations and Ameren Energy Trading as to what
19 constraints we needed to operate the plant within.

20 So as the operating authority for the Taum Sauk
21 plant, I sent this e-mail to the Operations Superintendent
22 at the Osage plant, Charles Kempf, the Superintendent at
23 the Kiakuck plant, Larry Weiman, a supervisor in Energy
24 Supply Operations, Jerry Beckerle, and some various
25 engineers, Line Manager Chris Iselin, Manager at the

1 Kiakuck plant, Charles Blank, and Manager at the Osage
2 plant, Mr. Jarvis.

3 And I sent it to remind them of the requirements
4 that we had for operation, to provide some background
5 information to people that were in the Energy Supply
6 Operations group and to reaffirm what parameters the Taum
7 Sauk plant was to be operated under.

8 Q What were the operating parameters that you were
9 trying to operate Taum Sauk within?

10 A Specific to this e-mail was the requirement that
11 we did not generate over the top of the lower reservoir
12 dam. There was some confusion about that and our ability
13 to do such.

14 And I sent this to clarify and to reaffirm the
15 people that were associated with operating and also copied
16 people that were in the hydro organization, Mr. Blank,
17 Jarvis and Iselin.

18 The -- the attachments that are included with
19 this exhibit are not by my authorship. You will note on
20 the page 2 that Mr. Cooper is listed there at the
21 residence of the Taum Sauk plant. So this attachment
22 would have occurred after my leaving the Taum Sauk plant.

23 And the last attachment is actually one from the
24 Osage plant that would have preceded my arrival at the
25 Taum Sauk plant as it still listed Mr. Blank and Mr.

1 Wallen as the contacts at the plant. So I'd like to offer
2 that -- that clarification, that I am the author -- author
3 of the first page only.

4 Q And what was the attachment that you attached to
5 the bottom of this e-mail that stated operating limits
6 document?

7 A It would have been very similar to the second
8 page of this document. It appears to me that it was
9 updated by Mr. Cooper, perhaps, and placed in the Osage
10 operating manual and us having the more up-to-date
11 information.

12 Q Okay. Now, the second paragraph, first sentence
13 states -- or would you actually -- would you mind reading
14 that sentence?

15 A Is that where it starts, Since the upgrade?

16 Q Yes.

17 A Since the upgrade of the unit, there is
18 increased motivation to capitalize on the investment
19 Ameren made by utilizing the unit as much as possible.

20 Q Okay. Could you explain a little further that
21 statement?

22 A Certainly. We had made a capital investment in
23 the plant in providing equipment replacements and
24 upgrades. And we did that to assure continued efficient
25 operation of the plant and providing our customers a -- an

1 effective efficient supply of electricity.

2 With that capital investment, we want to reap
3 the benefits of that. We want to make wise capital
4 investments for our customers. And so we want to utilize
5 the Taum Sauk plant as much as possible and -- and get the
6 value from that capital investment that was made.

7 Q Now, did this also include just St. Louis power
8 dispatch or Bagnell Dam going ahead and operating the unit
9 at Taum Sauk more than they had been operated before?

10 A We operated significantly more. I don't recall
11 the exact figures on megawatts, which are the standardized
12 units of measurement for power production in our power
13 plant, megawatt hours.

14 Q Now, the next sentence -- would you mind reading
15 that second sentence in that second paragraph?

16 A Everyone feels the pressure to maximize
17 generation revenue.

18 Q And then the third sentence, also?

19 A Caution must be exercised to operate in
20 accordance with sound operating judgment within the
21 constraints of the FERC license, Taum Sauk operating
22 manual and any additional operating orders.

23 Q Now, why did you make those two statements?

24 A I made the first statement to recognize, knowing
25 that this would be back to the operators, that --

1 recognize the possible pressure that they were feeling, to
2 ensure efficient operations and then to remind them of --
3 with the designer to maximize generation comes -- we do
4 not eliminate the restraints and the requirements that we
5 have associated with operating the plant.

6 Q Why do you feel you had to remind the operators
7 of those two basic concepts?

8 A There was some lack of knowledge and
9 understanding on the Taum Sauk plant and Ameren Energy
10 Trading organization and also with Energy Supply
11 Operations, and they were included in this distribution of
12 the e-mail.

13 So I was stating what to some would be obvious
14 and reminding people that we had requirements and
15 constraints that we operate our power plants within and
16 that we could not go without the -- go outside of those
17 constraints and limits.

18 Q What was the lack of knowledge that you felt was
19 present?

20 A In our Ameren Energy Trading organization at
21 this time, that was our -- a relatively new organization.
22 And we had staffed that organization -- it was my belief
23 and understanding at the time with people that had more of
24 a commodities trading background rather than a power plant
25 background.

1 So there was a -- a lack of knowledge from the
2 technical aspects of the power plant. And that was our
3 desired position for the -- the best total operations of
4 the power plants that -- we needed their expertise. They
5 needed my expertise. And -- and together, then, we could
6 operate efficiently and effectively.

7 So it was my responsibility to clarify what the
8 constraints on the power plant was, what the requirements
9 to operate were within our Federal Energy Regulatory
10 Commission license, any changes of operating orders that I
11 might issue as the operating authority that would reflect
12 a particular equipment degradation or unusual
13 circumstances that I might issue. So -- so this was a
14 background to that.

15 Q Okay. So when -- you just said that you could
16 issue changes and did issue changes of operating orders?

17 A Yes.

18 Q Would that be basically stopping the orders that
19 were coming from Ameren Energy organization?

20 A I had that authority at all times. And as the
21 Manager of the plant, if I felt the plant was at risk,
22 then they could supersede their instructions to operate
23 the plant and remove the plant from service.

24 Q Were you stopping or changing a lot of operating
25 orders?

1 A No, ma'am.

2 Q How many do you think you were stopping or
3 changing?

4 A At the time that I had issued this e-mail, we
5 had had two or three instances of requests to operate
6 outside of what I knew were our requirements. And at each
7 time, the Osage operators contacted me, and I interceded
8 and did not allow operating outside of what our
9 commitments were.

10 Q What do you mean by that, they -- the requests
11 were asking you to operate outside of your commitments?

12 A Well, I explained it somewhat in the -- in the
13 first paragraph, the third sentence. In the case of
14 generating over the top of the dam, doing such could
15 result in severe action by FERC due to a license condition
16 violation.

17 There was a lack of understanding on our
18 trader's part and our computer programming and mimicking
19 modeling that we had provided them. They could see what
20 the level in the upper reservoir was.

21 What they didn't understand was that there was a
22 corresponding level in the lower reservoir. And while the
23 capacity of the upper reservoir exceeded the lower
24 reservoir capacity, therefore, it was possible -- you
25 still had water to generate, but you didn't have capacity

1 in the lower reservoir to receive that water without going
2 over the top of the reservoir dam.

3 So in these instances, they thought that they
4 still had power available and that they had megawatts
5 stored that they could utilize in meeting our system needs
6 when, in reality, that was not the case. Because if we'd
7 have used that water, we would have overtopped the lower
8 reservoir dam, which was not an unsafe condition to the
9 reservoir dam, but it would have been an unusual
10 circumstance on the river -- on the east fork of the Black
11 River itself.

12 And it would have, in my interpretation of our
13 operating license, exceeded the requirements of it.

14 Q Okay.

15 JUDGE DALE: How much more do you have?

16 MS. BRUEGGEMANN: Not much.

17 Q (By Ms. Brueggemann) Okay. On the first two
18 sentences, would you mind reading those fairly quickly? I
19 think you may have started in the middle. I'm not sure.

20 A I have been contacted? Starting there?

21 Q Yes, please.

22 A I have been contacted several times recently
23 with requests to operate Taum Sauk outside of what I
24 consider to be prudent operational limits. This has
25 included generating over the top of the reservoir dam and

1 pumping back with two pumps below the previous guidance
2 provided for levels to secure pumps.

3 Q Okay. When you say this has included, does that
4 mean that there were other issues also presented to you
5 that were --

6 A I don't recall any other issues. I -- I have
7 stated the two that I recall. One was to generate over
8 the top of the dam. The other was continue pumping with
9 two pumps below the point where one pump should have been
10 secured.

11 Q Okay. Once you sent out this e-mail, it looks
12 like there are initials and dates besides it. Who are
13 those -- who do those initials and dates belong to in
14 general?

15 A The copy that I have is pretty illegible. But
16 it's my understanding that Charles Kempf, who was the
17 Superintendent of Operations at the Osage plant, required
18 the hydro operators at the plant, when a new operating
19 order was issued, for them to initial and date, signifying
20 that they had read and they understand the contents.

21 Q Because they were the ones that would turn on
22 the generators, turn on the pumps, turn them off?

23 A That's correct.

24 Q Okay. Did anything else happen as a response or
25 reaction to this e-mail? Did you have any meetings or

1 talk to anybody else?

2 A Yes, I did. I had started dialoging with our
3 Ameren Energy Trading people. I visited them, explained
4 the operation of the plant. I set up tours of the plant
5 for them and had them come down so they can visually see
6 what equipment that we had and when they were requiring us
7 -- or asking us to do different things that they
8 understood what that really meant, to physically see it.

9 Q Okay. And then did you -- did you keep
10 management -- your upper management apprised of what you
11 were doing in that regard?

12 A I don't recall.

13 Q Okay.

14 A I do recall that my boss at the time, General
15 Manager of Hydro Operations, Chris Iselin, that on more
16 than one occasion that he was with me when we visited
17 Ameren Energy Trading. So he would have been apprised of
18 my overall efforts to increase our -- our cooperation and
19 understanding of each other's portion of the business.

20 Q Okay. After May of 2000 and then the subsequent
21 tours and education that you were giving, did requests to
22 operate Taum Sauk outside of the prudent operational
23 limits continue?

24 A No, ma'am.

25 Q Did you have to issue any more change of

1 operation orders?

2 A I don't recall any specific, but I would say
3 that more than likely -- this was a fairly frequent
4 practice of mine to issue operating orders that would
5 provide general plant status of the equipment to the Osage
6 operators.

7 Since there would only be one or two operators
8 on at any given time, others would be on the days off
9 other on back shifts, I felt that it was a good operating
10 practice to provide them written documentation that they
11 could put in their operating manual for the people that
12 weren't available at the particular time that I would
13 generate such to have that available to them so that they
14 would not have to rely upon word of mouth.

15 Q Okay. When you were at Callaway -- and I don't
16 want you to get into any sort of federally protected
17 information, by any means. But did requests come in the
18 same way for trying to push Callaway to meet the maximum
19 operating limits that it could meet over the years you
20 were there?

21 A No, ma'am.

22 MS. BRUEGGEMANN: At this time, I would ask to
23 have Exhibit 25 admitted into evidence.

24 JUDGE DALE: Are there any objections?

25 MR. BYRNE: Well, I guess Mr. Fitzgerald said

1 that the two -- two pages in back of the e-mail are not
2 part of the e-mail and were not authored by him. And I
3 guess -- so I would ask that those two pages be separated
4 from this e-mail so that it doesn't appear that they're
5 part of the same e-mail.

6 MS. BRUEGGEMANN: And I have no problem with
7 that.

8 MR. SCHAEFER: I -- actually, I have an issue
9 with that, actually. I think the record is clear. He
10 said those were not part of his. But on the third page
11 attached, he did say that while that's not what he
12 authored, it would be very similar to what he authored.

13 And so I think the record is clear, then, what
14 -- what that may or may not mean. But I think to
15 completely take it off after he made that statement would
16 also not be correct.

17 JUDGE DALE: Here's -- here's what I'm going to
18 do. I'm going to mark the first page as Exhibit 25, admit
19 it into evidence.

20 (Exhibit No. 25 was offered and admitted into
21 evidence.)

22 JUDGE DALE: The second and third pages will be
23 collectively referred to as Exhibit 26. And, Ms.
24 Brueggemann, you may offer those separately.

25 MS. BRUEGGEMANN: And how about I go ahead and

1 -- and offer Exhibit 26? As identified the first page,
2 that was the updated version of what he recognized, and
3 the -- the Taum Sauk facts third page as something before
4 that was prepared -- what I believe was stated was Bagnell
5 Dam, prepared Taum Sauk facts or at least referencing
6 Blank and Wallen.

7 A It's -- it's my belief that this was prepared by
8 the Osage Operations Group and utilized in their operating
9 manual and also for training purposes for operators at
10 Osage.

11 MS. BRUEGGEMANN: With that, I would ask that
12 that be admitted into evidence.

13 JUDGE DALE: Are there any objections?

14 MR. BYRNE: No objection.

15 JUDGE DALE: Then Exhibit 26 is admitted into
16 evidence.

17 (Exhibit No. 26 was offered and admitted into
18 evidence.)

19 MS. BRUEGGEMANN: I have no further questions.
20 Thank you.

21 JUDGE DALE: This is a perfect time, then, for a
22 break. Let's reconvene at 11:00.

23 (Break in proceedings.)

24 JUDGE DALE: And we're ready for you, Ms.
25 Baker.

1 CROSS-EXAMINATION

2 BY MS. BAKER:

3 Q Okay. And I do apologize for having to leave
4 out for a little while, so if some of the questions that I
5 ask have been answered, I -- I have no problem with that
6 objection.

7 All right. From -- from your -- your history
8 with -- with Ameren, I see that much of your jobs have
9 revolved around the economics surrounding outages; is that
10 correct?

11 A That's correct.

12 Q Okay. Can you explain in -- in just rough terms
13 how those outages affect the economics there at Ameren?

14 A I will attempt to do such. We have a certain
15 amount of available generation to supply the needs of our
16 customers and to make out of system sales.

17 If we remove that generation from being
18 available, it could cause us to place higher cost
19 generation into service.

20 So it -- it's our desire as -- as stewards and
21 managers of our system to maintain availability of our
22 plants, to conduct out -- outages or -- or services on
23 plants when they're needed and to do it in an efficient
24 and effective manner to reduce the amount of out of
25 service time that makes the plants -- increases their

1 availability and allows us to manage our portfolio of
2 different generation types to make it the most low cost
3 power that we can for our own customers and increase the
4 potential for sales that will also help us maintain our
5 rates low.

6 Q In -- in the -- in the outages that -- that are
7 at each plant, I assume that that is a regular course of
8 -- of business. It happens at -- at each of the plants?

9 A Yes. We have two kinds of outages. I want to
10 draw some distinction between the two.

11 Q Sure.

12 A One is our normal scheduled outages. That would
13 be equated to an overhaul. And the other would be a
14 unplanned forced outage that could be compared to your car
15 breaks down and you need a mechanic to fix it right then.

16 Q Are there operational goals at each of the
17 plants for, say, percentage of time that -- that the plant
18 is online as compared to outage time, whether it's written
19 or unwritten goals?

20 A We maintain track of our plant availability.
21 And that is a key performance indicator on how well we
22 manage and operate our power plants, so we do track that.

23 Q As a key performance indicator, does that
24 indicator get passed down into performance appraisals or
25 -- or auditing of -- of the plant?

1 A Yes. It could. It does not necessarily mean
2 that for every manager since we have many different types
3 of managers. But for managers of power plants, the
4 availability of the power plants that are under his
5 control would be a key performance measure that is likely
6 to be included upon his performance appraisal of -- that
7 would be directly related to his effectiveness and
8 successes as the manager of that power plant.

9 Q So plant managers would have a very strong need
10 to keep the plant online and not have an outage?

11 A There is a desire to have your plant available
12 for generation. But that is not above the desire to
13 operate safely. And operating safely would be our -- our
14 top performance indicator for a power plant manager.

15 Q You -- you stated an efficiency calculation or
16 determination of Taum Sauk that was based on the power
17 required to restore the upper reservoir and the power
18 generated. Did I -- did I understand that correctly?

19 A Yes, ma'am.

20 Q Can -- can you explain that efficiency
21 determination a little bit more?

22 A The -- the power that's required to raise the
23 water approximately 800 foot is less than the power that
24 we get from it when we release the water through the
25 turbines that generate the electricity.

1 So the -- the ratio that is an efficiency factor
2 for the Taum Sauk plant, it is -- approximately takes 1.4
3 times as much power to pump the water up as you get from
4 generation. So we say that it's approximately 70 percent
5 efficient.

6 We increased the efficiency of the plant when we
7 replaced the rotating elements that comes in contact with
8 the water, which is called the turbines or, in hydro
9 language, the runner for each unit.

10 And we went to a more modern design that was
11 designed using computer capabilities. And it allowed us
12 to do a component change-out and -- and greatly effect the
13 efficiency of that power plant.

14 So the -- the power that was used to -- to pump
15 the water up wasn't as much as it was prior to the
16 upgrade.

17 The interesting aspect of Taum Sauk is that it
18 allowed us to store excess energy that we had available
19 from our steam plants during periods of lower load or
20 lower requirements for power so we could store it and then
21 utilize it during more peak conditions and overall help us
22 manage our portfolio of plants that would allow us to not
23 operate combustion turbines, for instance, as -- as to the
24 extent that if Taum Sauk wasn't available and a combustion
25 turbines operating cost were more expensive than the Taum

1 Sauk.

2 Q All right. So let me -- let me make sure I
3 understand the efficiency portion of that. The cost to
4 pump the water back up into the upper reservoir costs more
5 than the energy generated?

6 A No, ma'am. That's not correct.

7 Q Okay.

8 A It -- it takes more power, but that power that
9 we use would be in reduced need times. And we would
10 utilize power that would be from our -- our more
11 lower-cost plants, such as the Callaway Nuclear Plant or
12 the Labadie steam plant and utilize the low cost power.

13 And if we had to purchase power on the open
14 market during peak times, the total power that was
15 required to pump the Taum Sauk plant would be available at
16 that off peak time at a much reduced cost than the cost
17 that it would take us to purchase the power during peak
18 times.

19 So from a cost perspective, it was efficient and
20 lower cost to utilize the Taum Sauk plant than it would
21 have been to generate that peak generation during these
22 high usage times or to purchase it from other generating
23 sources. So we were more effective and efficient
24 operating Taum Sauk.

25 Q So would it be a benefit to keep the upper

1 reservoir at a -- at a working or generation level as long
2 as you possibly could so that you could time the pumping
3 back up to the off peak power or cheaper power times?

4 A Yes, it would.

5 Q So it's true that there is a desire to keep the
6 upper reservoir as high -- the water level in the upper
7 reservoir as high as possible to allow generation and take
8 into account the need for pumping at a later or more cheap
9 time?

10 A I -- I would agree overall with one exception.
11 As high as possible, I would -- I would disagree with that
12 because we had operating limits that we maintained to
13 ensure the safety of -- of the reservoir.

14 And, likewise, there were times when we would
15 start and stop generation. And so we would have a reduced
16 level in the general -- in the reservoir. And so we might
17 dispatch Taum Sauk or connect it to the electrical grid
18 many different times during the day to meet peak loads.

19 So it could decrease over an operating period,
20 and that was just the normal design. But it was desirous
21 to have it at its full normal operating level at the start
22 of the generating cycle for that day.

23 Q And, basically, the higher that it stayed, the
24 less pumping back up was required?

25 A That is correct. But at the same time, it was

1 -- norm at operating condition to lower the reservoir.
2 That's, of course, the way that we generated power with
3 it.

4 So we could always keep it high and never
5 generate, and it would always be available, or we could
6 use it and lower the level throughout the generating
7 cycle. So it was a -- just a economic consideration as to
8 how you operated the plant and met your customer needs.

9 Q My understanding of -- of the generation side of
10 it, the higher the reservoir sits, the longer generation
11 can occur before the level gets too low?

12 A You're correct in that understanding. At the
13 higher levels, it had more stored potential energy.

14 Q Does -- does Ameren have efficiency goals or
15 goals as far as -- as the power times or costs of pumping
16 back up into the res -- the upper reservoir?

17 A We do not have efficiency goals, if you are
18 referring to key performance indicators. We do track the
19 efficiency for the Taum Sauk plant. And -- and that helps
20 tell the engineering staff and managers a condition of the
21 equipment.

22 If it started decreasing the efficiency, we
23 would know that we would need to conduct inspections and
24 look at our equipment to determine what type of
25 degradation had occurred. So we use it as a tracking

1 mechanism to tell us the condition of the equipment.

2 But we do not set out and say we have a
3 particular goal. The parameters that we normally looked
4 at was availability factor on the Taum Sauk plant and,
5 also, its reliability. And that would be its response to
6 a valid start or stop signal that it performed as required
7 by the operators.

8 Q But, certainly, wouldn't you agree that for
9 those who operated the plant, efficiency was maybe an
10 unwritten goal?

11 A Efficiency was something that I normally
12 monitored. And on my monthly operating reports that I
13 would receive, that would indicate the number of gross
14 megawatts generated and the number of megawatts used to
15 pump back.

16 I would always calculate the efficiency and
17 track that as a -- a part of my management
18 responsibilities. Our engineering staff, also, would
19 monitor that and track that.

20 Q And if the efficiencies got too low, would they
21 look at operations as well as the physical equipment?

22 A As the -- if the efficiency were to be really
23 low -- and I'm speculating --

24 Q Uh-huh. Yes.

25 A -- at this point. But if the efficiency reached

1 a certain point, it would become uneconomical to operate
2 the plant. And that was the condition prior to the
3 upgrade.

4 It wasn't always economical to operate on a
5 daily basis. It was used as a reserve peaking plant
6 emergency use only, our summer use on high load days. It
7 wasn't regularly operated.

8 Q All right. Moving on to the -- the PLC
9 programming there at -- at Taum Sauk, is it your
10 understanding that the PLC programming could be accessed
11 by the plant employees, including Mr. Cooper?

12 A It's my understanding that it required a
13 password to access the -- the programmable logic cards or
14 the computer of the level control system. That is a
15 different level control system than when I was there, and
16 I'm not completely familiar with it.

17 Q Would the plant manager or plant supervisor have
18 been one of those people who were given that password?

19 A It's my understanding that is correct. And
20 that's from third-hand information.

21 Q All right. Is it your understanding that this
22 access included the ability to disable the warrick probes
23 that were there at Taum Sauk?

24 A No, ma'am. I do not understand that -- that
25 that was part of it. But I do not understand all of the

1 system design that they installed. So I really don't know
2 that part of it.

3 Q All right. So you do not know if -- if the
4 supervisor there at the plant had that access?

5 A I do not know if he had that ability through the
6 computer system to disable the warrick probes.

7 Q Would the ability to control Taum Sauk be given,
8 basically, to the supervisor? Is that a normal operation?

9 A And what -- could you clarify what you mean by
10 control?

11 Q I -- I guess the -- the computer controls,
12 the --

13 A Yes. That would -- to be able to change set
14 points or the programming on the computer system would be
15 something that the plant management would normally have.

16 Q Who else within the plant do you know may have
17 had that access?

18 A I do not know personally who had that access.

19 MS. BAKER: Okay. That's all the questions I
20 have. Thank you.

21 MR. FITZGERALD: You're welcome.

22 JUDGE DALE: Thank you. DNR?

23 MR. SCHAEFER: Thank you, Judge.

24 CROSS-EXAMINATION

25 BY MR. SCHAEFER:

1 Q Mr. Fitzgerald, I want to keep asking you some
2 questions about kind of the -- the interaction between the
3 operation of the Taum Sauk facility and -- and the overall
4 kind of power generating team that that electricity went
5 into. And I'm going to ask you specifically about your
6 time there, I believe, from 1999 till 2002. I think I've
7 got those years correct.

8 And I believe you just said that -- that the
9 plant initially was -- was -- was a peaking plant,
10 correct?

11 A That's correct.

12 Q And by peaking -- what do you mean by peaking
13 plant?

14 A A peaking plant would be one that is operated
15 under high load conditions or in situations where there
16 was a gap, an instantaneous or near instantaneous gap
17 between the power being produced and the power being
18 consumed by the Ameren customers.

19 Q Let me stop you there. Specifically by Ameren
20 customers?

21 A I -- my second part of that on the elaboration
22 was or by the system because we did have our
23 responsibilities to -- through North American Electrical
24 Liability Counsel that we had availability to help
25 maintain grid voltage and frequency.

1 Q Okay. Now, at some point after you came there
2 in 1999, I believe you testified, the plant was actually
3 put into service more frequently than it had been in the
4 few years before that, correct?

5 A That's correct.

6 Q Okay. Why is that? What changed to make that
7 plant be put into operation more after you came there? --

8 MR. BYRNE: I'm going to object on the grounds
9 that the question has been asked and answered previously.

10 MR. SCHAEFER: He hasn't answered that.

11 JUDGE DALE: I'm sorry. Repeat the -- the
12 question was why?

13 MR. SCHAEFER: Right. What -- what changed?
14 And I can elaborate on my question, your Honor, which I
15 don't think he's been asked this specific question.

16 MR. BYRNE: The -- the -- well, I can tell you
17 what he testified before, the turbines changed, and that's
18 -- you know, that's --

19 MR. SCHAEFER: That's not -- that's not what I'm
20 asking.

21 JUDGE DALE: Then what are you asking?

22 Q (By Mr. Schaefer) Let me ask you this, okay?
23 Before you came there, the plant was used less frequently
24 than after you came there, correct?

25 A That's correct.

1 Q And it's a peaking plant, correct?

2 A That's correct.

3 Q Is there something about the year 1999 or right
4 there before or after that changed what the difference --
5 the difference in what peak the demand was?

6 A There were several dynamics coming into play at
7 -- at this time. And not being a member of the Power
8 Supply Operations or Energy Supply Operations group and
9 our Ameren energy, I don't know all of those dynamics.

10 I -- I do know that we had enlarged our system
11 by acquisitions and by acquiring territory in Illinois
12 that we had a Joint Dispatch Agreement that we had entered
13 into to where we would supply our dispatch lowest cost
14 power plants.

15 And the other dynamic that I was aware of is --
16 was occurring in the eastern United States primarily, and
17 that was the deregulation of power and opening of markets.
18 And so we had a -- a larger market that was available for
19 us to sell energy into.

20 So we had -- had those dynamics in addition to
21 the one that I previously stated on the investment that we
22 made on the turbines that increased the efficiency of that
23 power plant that made its power production costs lower
24 than it previously had been.

25 Q Wasn't the capital supply put into that facility

1 to improve the efficiency so more power could be sold off
2 onto the market?

3 A I do not know that.

4 Q Okay. What is MISO? Do you know what that
5 acronym stands for?

6 A We normally refer to that internally as MISO.

7 Q MISO, MISO. You say MISO, I say MISO.

8 A Midwest Independent System Operator.

9 Q And what is the Midwest Independent System
10 Operator?

11 A They are the operating authority for the
12 electrical grid in a certain geographical area that is
13 recognized by FERC as being the body that ensures that we
14 have the low cost power going to the markets and that we
15 have open transmission and that we have grid reliability.

16 Q Okay. The -- I'm sorry. Were you finished?

17 A Yes.

18 Q Okay. So let me ask you this: Is -- is MISO
19 involved in any way in dictating or determining at what
20 time various Ameren plants come on and off generation?

21 A I really don't know that.

22 Q Okay. Can you tell me, from 1999 till 2002,
23 what were the factors that determined when the Taum Sauk
24 plant was going to generate electricity?

25 A The primary factors were the low characteristics

1 of the Ameren system as to when we had our highest load.
2 And we would take the generating capacity of the Taum Sauk
3 plant and match it to lower effectively the peaks, to take
4 the -- the point -- the tips off of the peaks. And we
5 also, of course, as I stated before, operated the plant in
6 emergency situations or near emergencies when other units
7 had to perform emergency shutdowns. Those would be the
8 primary times, so -- that we did -- or were able to
9 operate the plant.

10 Q Okay. Do you know how MISO interacts with
11 Ameren in determining how Ameren meets its base load
12 needs?

13 A I do not know specifics about that. That is not
14 part of my responsibilities. I know, at a very high
15 level, due to being qualified by Federal Energy Regulatory
16 Commission about the interactions that we have -- and I'm
17 prohibited as a generator from understanding all the
18 workings of MISO since they're controlled in transmission.

19 Q Okay.

20 A So I'm what is called a walled employee.

21 Q Okay. Well, on your testimony earlier, you made
22 numerous comments about the power from the Taum Sauk plant
23 going to Ameren customers; isn't that correct?

24 A That's correct.

25 Q Do you know what percentage of the power

1 generated from the Taum Sauk plant went to Ameren
2 customers as opposed to being sold on the open market?

3 A That percentage would be, in my estimate,
4 unavailable since we looked at our overall grid. And --
5 and then we would have our native load, and we would have
6 energy that we sold outside of our own system.

7 And -- where once it got into the electrical
8 distribution system, it was impossible to differentiate
9 the Taum Sauk megawatts from power that was produced at
10 any other power plant.

11 Q And is that because Ameren would make a
12 determination of what the load was and then make a further
13 determination of what plants to use to supply that base
14 load, correct?

15 A That is my understanding.

16 Q But then on top of that, any available
17 electricity could be sold off -- regardless of what plant
18 it came from, it could be sold off to the open market,
19 correct?

20 A That is also my understanding.

21 Q You're not saying that Ameren didn't keep track
22 of how much power from Taum Sauk went to the open market,
23 are you?

24 A I -- I am saying that I don't know that they
25 were able to differentiate that.

1 Q Okay. But that's not your area, correct?

2 A That's correct.

3 Q Okay. Are you familiar with how Ameren's rates
4 are set by the Public Service Commission?

5 A Only in a very high level general manner.

6 Q Okay. And what's your understanding of that?

7 A That we look at our cost of service. So,
8 essentially, what our fuel costs are for operating
9 maintenance costs are for -- for the plants, we look at
10 the availability of plants. We -- we look at our whole
11 portfolio and how we meet our customer needs, what's our
12 cost of service basis. And then we establish a -- a rate
13 that is providing a margin of return above what the cost
14 of service is.

15 Q Okay. And for those things, then, the company
16 gets to charge the ratepayers so that the company gets
17 paid an amount that is sufficient to cover those things,
18 correct?

19 A That is my understanding, that we have rates
20 established that provides a profit margin above what the
21 cost of service is.

22 Q Okay. So on excess -- excess profits, for
23 example, power that's sold on the open market, does that
24 money get returned to the customers, or does that go to
25 shareholders, if you know?

1 A It's my understanding that that would be both,
2 that that goes in to establishing -- or essentially
3 reducing our cost of service and, at the same time,
4 contributes to profits that we return to -- as dividends,
5 but also as profits that we use in investing capital into
6 our power plants and transmission system and -- and the --
7 the infrastructure of our electrical systems.

8 Q Okay. And do you know, as you sit here today,
9 how much -- how much credit the ratepayers get for
10 electricity sold on the open market as opposed to how much
11 goes to the shareholder?

12 A I have no idea.

13 Q Okay. Now, I want to ask you, when you were
14 there from '99 till 2000, you were the Plant Manager at
15 Taum Sauk, correct?

16 A That's correct.

17 Q Was there a Plant Superintendent while you were
18 there?

19 MR. BYRNE: I'm going to object. The question's
20 been asked and answered.

21 JUDGE DALE: Yes, it has.

22 MR. SCHAEFER: I don't believe it has been
23 clarified.

24 JUDGE DALE: It has been answered. And staff
25 already asked that question. If I can answer the

1 question, then it's been asked and answered because I have
2 no knowledge of any of this. And he's already testified
3 that there was no supervisor. He was the manager.

4 MR. SCHAEFER: I didn't say supervisor, your
5 Honor. I said superintendent.

6 JUDGE DALE: Superintendent. He said there was
7 none.

8 MR. SCHAEFER: Then I'll ask him a different
9 question.

10 JUDGE DALE: Thank you.

11 Q (By Mr. Schaefer) In the structure of the
12 people who actually were employed there at the plant, were
13 you the highest level Ameren employee at that plant?

14 A Yes, I was.

15 Q Okay. And can you give me -- going down from
16 you, what was the hierarchy, what was the management
17 structure? What was the position or positions immediately
18 below you?

19 A I had an engineer and a supervisor.

20 Q Okay. The engineer, was that just an engineer,
21 or was there a title on that engineer?

22 A Plant engineer.

23 Q And who was the plant engineer while you were
24 there?

25 A Richard Cooper.

1 Q Okay.

2 A And then I had a -- a Power Production
3 Supervisor. And so he was the first line supervisor that
4 supervised our craft personnel.

5 Q Okay. And who was that?

6 A Initially, that was Harry Wallen. He was there
7 for the majority of the time that I was at the Taum Sauk
8 plant, and -- and, in fact, all of the time that I was
9 there. He separated from the company. After I was
10 transferred, he retired.

11 Q Okay. And I'm sorry. What was his name?

12 A Harry Wallen.

13 Q Okay. And those two would be directly below
14 you?

15 A That's correct.

16 Q Okay. And was there -- was there anyone else in
17 that -- next to or directly below you?

18 A No, sir.

19 Q Okay. And what about the next tier down below
20 them?

21 A The next tier below that were the hydro plant
22 technicians. And while I was there, we had approximately
23 nine. And they varied over the -- the time that I was the
24 Plant Manager due to retirements.

25 Q Okay. What was the number -- well, including

1 you, what was the number of your staff between -- people
2 actually employed at the plant between '99 and 2002?

3 A If my addition is correct, counting myself,
4 there would be three management people, approximately nine
5 hourly workers that were plant technicians, plus one
6 part-time clerical support person.

7 Q Okay.

8 A So that would be a total of 13.

9 Q Thank you.

10 A Or 12 and a half.

11 Q Now, during your time there -- and you've
12 already made this clear -- there was a different control
13 system to control the water in the upper reservoir than
14 after the -- when the liner was put in in 2004, correct?

15 A That's correct.

16 Q During your time there, was there someone at the
17 plant whose responsibility it was to ensure the safe
18 operation of those controls?

19 A Absolutely. It was my responsibility.

20 Q Right. And I understand that, ultimately, as
21 the top guy at the plant, it was. But was there someone
22 below you who, on a day-to-day basis, was responsible for
23 the adjustment or overseeing those controls?

24 A We had our hydro plant technicians that had a --
25 a regularly scheduled, repeating work request where they

1 would inspect and calibrate our level control system and,
2 also, test the emergency shutdown flows.

3 They also, as part of their weekly routine,
4 would go to the location of the level control system at
5 the upper reservoir and inspect the area for general
6 cleanliness and, also, to ensure that it appeared to be in
7 correct operating order and was properly lubricated.

8 Q How often did they to that?

9 A They did that as part of their weekly routine.
10 And that would have occurred generally every Friday. On
11 the repeating work request, that was either on a quarterly
12 or semi-annual basis.

13 Q Okay. The weekly work routine, is that -- is
14 that a schedule that you, as the -- as the plant manager,
15 set?

16 A That was established prior to my arrival at the
17 plant. And I continued that practice.

18 Q Because you -- did you find that was a
19 reasonable practice?

20 A Yes, I did.

21 Q Is part of that routine -- was it the
22 responsibility of -- of the -- of the person carrying out
23 that routine to actually ground truth the water in the
24 reservoir with what the floats or gauges were telling you
25 the water level was?

1 A Could you explain what you mean by ground truth?

2 Q Yes. If I understand you correctly, and you've
3 used the example of a toilet bowl, there's an actual name
4 for that type of flow. I can't remember what it is, but
5 the concept being that at some point the water reaches a
6 certain level, which causes an attached arm to float up to
7 a certain level and trigger -- trigger something that
8 shows you what the water level is, corrects?

9 A That would be part of the emergency shutdown
10 system on the floats that we had at that time.

11 Q Okay. And maybe I'm mistaken. So the floats
12 were the emergency shutdown system?

13 A We had a -- we had the floats that were similar
14 to toilet bowl floats that was the emergency shutdown. We
15 had a neutral buoyancy float that was commonly referred to
16 as a skate system.

17 It was a cylindrical tube that was essentially
18 the same density as water, slightly wider, just very
19 slightly wider, that was allowed to traverse inside a
20 aluminum tube on wheels that gave the appearance of pizza
21 cutters. And you could also refer to it as roller skates.

22 so we had this tube that went up and -- neutral
23 buoyancy float that went up and down a -- an aluminum tube
24 that we referred to as the skate. It was connected to a
25 stainless steel small diameter cable that went to a

1 take-up reel.

2 And the take-up reel measured the amount of
3 cable that was either taken up or allowed to be released
4 and would give the elevation of the upper reservoir and
5 also activate switches that would control starting and
6 stopping the generating and pumping cycles.

7 Q Okay. So the take-up wheel, how was that
8 actually attached to something that gave you a reading?
9 Was it attached to a gauge or to a computer?

10 A We did not have a computer system at that time.
11 And it was attached through arms that would come around
12 and activate electrical mechanical relays. Kind of like a
13 player piano type of concept or a music box.

14 Q Okay. And -- and through that cylindrical tube
15 on skates, the buoyancy float, that told you what water
16 level you had in the reservoir, correct?

17 A That's correct. And -- and -- and as part of
18 the normal routine, the hydro plant technicians would
19 compare the reading that they had on that system to
20 mechanical staff gauges that were located in the
21 reservoir.

22 And so they would do a comparison. And if it
23 was out of adjustment by more than a few inches, they
24 would evaluate it at that time.

25 Q That's something they did every week?

1 A That's correct. And they also did it on an
2 as-needed basis if there were malfunctions with the
3 system.

4 Q Was it important to do that every week?

5 A It was important to maintain the -- that portion
6 of the system as it was needed for normal operations.

7 Q Okay. Because you needed to know how much water
8 was in the reservoir, correct?

9 A Absolutely.

10 Q And you needed to know that your gauges that
11 told you how much water was in the reservoir were working
12 correctly; is that correct?

13 A That's correct.

14 Q Because if you didn't know how much at water was
15 in the reservoir, what could happen when you're engaged in
16 pump-back?

17 A In pump-back, you would have the potential then
18 of overtopping the reservoir.

19 Q And I believe you testified earlier that you
20 looked at the operation specification manuals for the
21 facility, correct?

22 A That's correct.

23 Q And are those documents that were actually
24 composed by the engineers that built the facility?

25 A That's correct.

1 Q Okay. And you've reviewed -- you -- you looked
2 through those because that was part of your responsibility
3 as the plant manager, correct?

4 A Yes, sir.

5 Q Was that facility ever designed, according to
6 those spec. manuals, to overfill or overtop?

7 A No. It was not designed to overfill.

8 Q Okay. And were there any decisions made in that
9 manual between overfilling from pump-back or overfilling
10 from waves pushing water over the side?

11 A I do not recall any discussion or reference to
12 overtopping by waves. The -- in fact, it didn't specify
13 overtopping. It was -- that was like inherent to the
14 understanding that you had an upper level set point and
15 emergency back-ups to prevent from overtopping.

16 Q And during your time as the plant manager from
17 '99 till 2002, are you aware of the plant ever
18 overtopping?

19 A It never overtopped during my tenure.

20 Q Okay. And I want to clarify. When I say
21 overtopping, I don't just mean from pump-back. When I say
22 overtopping, I mean water coming over the top of the
23 parapet wall. Are you aware of water ever coming over the
24 top of the parapet wall while you were the plant manager?

25 A I am not aware of water overtopping the parapet

1 wall other than perhaps a fine spray that would be the
2 result of waves hitting the side of the parapet wall. So
3 waves never overtopped the parapet wall to my knowledge
4 during my tenure.

5 Q And you talked about the maintenance schedule.
6 But how often did you personally go up to the -- to the
7 top of the dam, which would be the base of the parapet
8 wall?

9 A At a minimum, once a week.

10 Q You did that --

11 A If not more often.

12 Q Because it was important to you to go up there
13 and see what was going on; isn't that correct?

14 A That's correct.

15 Q Because this was your plant, correct?

16 A That's correct.

17 Q And there's a road, a service road, that runs
18 not only around the base of the reservoir, but there is
19 also a service road that runs around the top of the
20 reservoir at the base of the parapet wall; isn't that
21 correct?

22 A That is correct.

23 Q During your time there as plant manager, could
24 you drive a vehicle all the way around the top of that
25 facility?

1 A Yes, you could.

2 Q And when you left in 2002, could you still drive
3 a vehicle all the way around the top of that facility?

4 A Yes, you could.

5 Q Is that something that you did?

6 A Yes.

7 Q Okay. Now, as the plant manager, were you aware
8 -- I believe you said you were -- of the settling of the
9 parapet wall in various areas?

10 A As I've stated before, I was aware of that.

11 Q Okay. And what was your understanding of the
12 lowest point on the parapet wall while you were the plant
13 manager?

14 A It was my understanding that the lowest point --
15 we had two general areas that were relatively the same,
16 and they had settled more than 1 foot.

17 Q And what two areas -- if you could identify them
18 by panel number, what two areas were those?

19 A I do not have a panel number map in front of me,
20 so I -- I cannot give you the specific panel numbers.

21 Q Can you give me a geographical direction? North
22 south? Northwest?

23 A Yes, I did. One area was in the area that we
24 subsequently breached. And another area was essentially
25 180 degrees out from that, which would have been on the

1 compass east side of the reservoir, which would place it
2 in the vicinity of the Taum Sauk creek side.

3 Q Okay. So that would be -- okay. On the east
4 side. The opposite side from the inside of the kidney
5 bean on the -- on the shape of the reservoir, correct?

6 A That's correct.

7 Q Okay. Were you aware of a low spot on the
8 inside of the kidney bean?

9 A Well, that's the -- the area that I mentioned
10 before that we breached.

11 Q Okay. Now -- shoot, I don't have a diagram.
12 The breached area is actually in the northwest corner from
13 Panels 88 to 99; is that correct?

14 A That's correct.

15 Q And now after the fact -- let me ask you this:
16 Were you involved in working with Ameren to investigate or
17 evaluate the breach after the fact?

18 A Only in a very general manner. That's -- as I
19 stated before, I was there following the breach for
20 approximately one month.

21 And during that time, I was not directly
22 involved in the investigation and the causes of the
23 breach. I was involved more with coordinating a response
24 to help the local residents and a more general response
25 that we were having as a result of the event and not the

1 investigation. So I was not involved in the
2 investigation.

3 Q Okay. But as you sit here today, you know where
4 the breach occurred in the northeast corner of the
5 facility?

6 A Yes, I do.

7 Q Okay. Is that the same area where you were
8 aware there was a low spot?

9 A I was aware that there was a low spot there,
10 and, also, that they were very close to some other
11 locations that were very similar in -- in total height.

12 Q So, in other words, you know -- you now know
13 where Panel 72 is, correct?

14 A No, I do not, without seeing a map.

15 Q Okay. Well, let me ask you this: You said that
16 you knew of an area very nearby the breach area that was a
17 similar low elevation, correct?

18 A That's correct.

19 Q Okay. If you are standing inside the reservoir,
20 okay, inside the reservoir looking out of the breach
21 area --

22 A Uh-huh.

23 Q -- would that low area be just a couple of
24 panels to your left?

25 A I don't know if a couple of panels would be a

1 correct characterization, but it would be to the left.

2 Q Okay. About how many feet, do you think?

3 A I'd be speculating. But I'd say within one to
4 200 feet that would encompass the area.

5 Q Okay. And I believe you also said there was a
6 low panel spot on the east side of the facility, too,
7 correct?

8 A That's correct.

9 Q Okay. Did you know -- let me ask you -- as you
10 sit here today, do you know what those elevations were
11 from '99 till 2000 while you were the plant manager on
12 those low spots?

13 A They were approximately 1597.8. And I said
14 approximately. I do not remember exactly, but I -- I'm
15 correlating that knowing what the original design was at
16 the top of the parapet wall being a 1599 and that we have
17 had at the -- at the maximum amount of settling
18 approximately 1.3 feet of settle.

19 So calculate that in my head. That would place
20 it at approximately 1597.7, .8, Somewhere in there.

21 Q Based on the calculation that the highest point
22 on the wall is 1599?

23 A That was the original design. And we settled
24 approximately 1.3 foot was the maximum amount of settling.

25 Q While you were there between '99 and 2002, what

1 was the highest elevation on the wall?

2 A It would have been approximately -- are you
3 talking about actual mean sea.

4 Q Yeah. The top of the wall?

5 A At the top of the wall.

6 Q Top of the parapet wall. Yes.

7 A Okay. As I've stated, approximately 1597.8.

8 Q Oh, and I'm sorry. I thought the 1597.8 was the
9 lowest point on the parapet wall.

10 A Oh, excuse me. I misunderstood what you were
11 asking me. The -- the highest point of the wall would
12 only have been approximately 4 to 6 inches above that.

13 Q Okay. So do you actually know from any surveys
14 during your time there what the highest point on the wall
15 was?

16 A Surveys were conducted. And I don't remember
17 the -- the highest points. That wasn't as critical to me
18 as knowing the lowest points.

19 Q But do you know what the high point was?

20 A No, I really don't.

21 MR. BYRNE: Object. Asked and answered.

22 Q (By Mr. Schaefer) Okay. Do you know where on
23 the wall the highest point was?

24 A No, I do not.

25 Q Okay. Now, you did talk in earlier testimony

1 about the fact that it's part of the FERC licensing
2 procedure that the facility had to conduct a survey every
3 five years, I believe it was?

4 A That's correct.

5 Q But that's not a survey of every panel, is it?

6 A I do not remember.

7 Q Okay. Isn't that, in fact, a survey of -- of
8 random various panels?

9 MR. BYRNE: I'm going to object. That's --

10 JUDGE DALE: He just said he doesn't remember.

11 MR. SCHAEFER: Well, he testified earlier that
12 he knew about the survey, and I want to make the record
13 perfectly clear about what he does and does not know about
14 the survey.

15 JUDGE DALE: Don't ask any more questions about
16 the panels.

17 MR. SCHAEFER: Okay, your Honor.

18 JUDGE DALE: Thank you.

19 Q (By Mr. Schaefer) Let's talk about --

20 MR. SCHAEFER: Since I'm being limited -- and I
21 would like to make it clear on the record that I am being
22 limited on what I'm being allowed to ask this witness.
23 Judge, what is the basis of that ruling?

24 JUDGE DALE: That he has asked and answered the
25 questions about the height of the panels.

1 MR. SCHAEFER: Okay.

2 JUDGE DALE: He does not know.

3 MR. SCHAEFER: Thank you, your Honor.

4 JUDGE DALE: Moreover, let me point out, once
5 again, that it is not -- this is not a contested case.
6 There are no rights of any parties that may be affected by
7 the outcome of this case. It is merely an investigation.

8 The order establishing this investigation
9 requires that anyone who wants to use any evidence adduced
10 at this proceeding must present it in another proceeding
11 and have it admitted in that proceeding in order to be
12 probative.

13 MR. SCHAEFER: Thank you, your Honor. I think
14 in the efficiency of justice that it does make it
15 important that we clarify what the witness does and does
16 not know for that purpose.

17 JUDGE DALE: As long as we only clarify it once.

18 MR. SCHAEFER: Fair enough, your Honor.

19 Q (By Mr. Schaefer) What was your daily
20 interaction with Mr. Cooper while you were at the plant
21 from '99 until 2002?

22 A I was Mr. Cooper's boss. So we had a -- that
23 type of relationship in a small working group, you develop
24 very close relationships.

25 Now, he was not there when I first arrived. We

1 subsequently posted a position for a plant engineer, and I
2 do not recall specifically the year or date that we
3 conducted interviews and subsequently selected Mr. Cooper
4 for that position.

5 But he was directed by me on a daily basis. I
6 supervised his work. I provided job assignments to him of
7 a specific nature and, also, ensured that he was
8 conducting his responsibilities in an efficient and
9 effective manner.

10 Q Okay. Did you ever discuss with him the fact
11 that the top of the -- of the parapet wall was not level?

12 A I do not recall specifically discussing that
13 with him.

14 Q Okay. Now, you -- you mentioned the -- the --
15 the buoyant float system to show you how much water was in
16 the reservoir.

17 At any point, if that system was not working
18 correctly, and let's say, did not give you, in your mind,
19 an accurate reading of how much water you had in the
20 facility, would you continue to operate the facility?

21 A We could continue to operate the facility if we
22 took mitigating actions. And what that would -- would
23 entail, the Osage operators had the understanding of that
24 that if they were generating or pumping and they would
25 track the level in almost a continuous basis, but they

1 would record the level when we were operating every 30
2 minutes. And so they had an expected rate of increase or
3 decrease.

4 If they observed that level being stable, which
5 could reflect a malfunction of the neutral buoyancy
6 system, they would immediately go through their call-out
7 procedure to call someone at the plant during normal
8 working hours.

9 Or if it was outside of normal working hours,
10 they would initiate a contact of the on-duty management
11 personnel. And if they did not immediately contact them,
12 they would follow that with initiating call-out of our
13 hourly workers to immediately respond to the plant.

14 If it was a condition that they felt was
15 jeopardizing plant operations, they had the ability to
16 secure the plant and -- and stop the pump or generate.

17 Q And that's the operator at Osage?

18 A That's correct.

19 Q Okay.

20 A What we would do, in circumstances upon
21 responding -- and I responded to these events on an
22 infrequent basis. But we would go to the top of the
23 reservoir and look at the equipment and at the same time
24 do a visual verification of what the level was. We'd do a
25 comparison.

1 Sometimes on the skate system, it would hang up,
2 and -- and it would need to be released. It would get
3 hung up on a joint in the pipe. And we would get that
4 over that joint and allow it to continue operating.

5 In certain periods of prolonged difficulty, I
6 required continual visual observation. And we would
7 station an operator at the upper reservoir and sometimes,
8 also, at the lower reservoir at the plant and allow
9 operations under an increased manning visual observation
10 basis to ensure that we maintained the safety of the
11 plant.

12 Q So in other words, you had somebody up there --
13 you would have somebody up there ground truthing or
14 actually looking at the water level if you weren't sure
15 what the gauges were telling you?

16 A That's correct.

17 Q Because that would be a prudent thing to do,
18 correct?

19 A I believe it was a prudent thing to do.

20 Q In fact, you actually did do that under some
21 circumstances?

22 A Yes, I did.

23 Q Let me ask you about the floats because floats
24 were set at a certain level to trigger when -- when the
25 water would reach them, correct?

1 A That's correct.

2 Q Did you ever set those floats above a level
3 where you knew the water wouldn't touch them?

4 A Absolutely not.

5 Q Why wouldn't you do that?

6 A That could set up the condition that we
7 experienced during the event. It could have led to a
8 failure of the reservoir. So you would not never -- you
9 would never do that intentionally.

10 Q Right. Because that would not be a prudent
11 thing to do, correct?

12 A Well, that's correct.

13 Q You mentioned in response to some questions
14 about your Highway -- your statement to the Highway Patrol
15 that you clarified that -- where you mentioned in your
16 interview with the Patrol that there were seven spots
17 where you saw water that, actually, you clarified and said
18 that was the day of the event, December 14, 2002 -- or
19 2004, correct?

20 A That is correct.

21 Q Okay. Where -- where were those seven spots?

22 A There were -- it appeared to me, if you want to
23 refer to this as a kidney bean shaped, that at the
24 constriction or apex of the kidney bean, the indentation
25 that there had been overtopping there.

1 There had been overtopping in addition to that
2 on the east side as -- as you continued around at -- at
3 various locations. And without being specific, as I
4 traversed around, the lower reservoir, on this perimeter
5 road, as, as I recall, from a statement I made at the
6 time, I -- I -- it appeared to me that there were
7 approximately seven locations that indicated a washing.

8 Q Okay. On the east side of the facility where
9 you say you saw water, where did you see that water? Was
10 it -- was it down at the toe? Was it actually wet on the
11 side or --

12 A What I -- what I observed was that there had
13 been visible washing of the fill material, accumulation of
14 -- of rock and fill material at the toe or base and -- and
15 water -- indications of water going across the access
16 road.

17 So there -- it was -- gave a streaked appearance
18 different in coloration from what the -- the normal
19 appearance that I recalled the exterior of the upper
20 reservoir dam being.

21 Q Okay. Was there -- was there actually debris on
22 the access road?

23 A Yes. In certain locations, there were. There
24 were boulders and rock that had went across the access
25 road.

1 Q Okay. Let me ask you this because there's two
2 access roads. There's an access road at the top of the
3 facility and one bottom.

4 A I'm discussing the one that's at the toe or
5 base.

6 Q Okay. I just wanted to make sure of that. Do
7 you know, did somebody actually remove that debris from
8 the road?

9 A That's correct. Plant personnel, a hydro plant
10 technician took a piece of heavy equipment and -- and
11 removed the debris on the access road to allow passage
12 around with the breach that had occurred the -- the normal
13 way to access the -- the top of the upper reservoir to get
14 in the location of the gauge house had been washed way.

15 There was an additional access road that had
16 previously been used as a visitor observation point. And
17 to reach that with a vehicle, debris had to be removed
18 from the road that allowed them to go around the east
19 side, come around the northeast and then go up the
20 inclined road to reach the upper reservoir parapet area.

21 Q Okay. Did you actually witness Ameren personnel
22 removing debris?

23 A No, I did not.

24 Q Okay. So how do you know that somebody removed
25 the debris?

1 A The debris was -- was gone. And so it -- my
2 conclusion was that -- that someone had to remove it.
3 And, subsequently, in discussions with the core plant
4 employees, it is my understanding from being told by them
5 that they had removed the debris.

6 Q Okay. And who told you that?

7 A Mr. Ron Robbs, Hydro Plant Technician.

8 Q Let me ask you this: During your time as the
9 plant manager, was there any program of inspection or
10 maintenance that dealt with collecting material as it came
11 off of the slope of the dam?

12 A No, there was not. There were repairs that were
13 made to the upper roadway that were degraded from freeze
14 and thaw and rainfall to where we had to perform
15 maintenance on the incline portion of the non-paved
16 roadway.

17 But as far as collecting debris, there was not a
18 program for collecting debris. There was a program for
19 inspecting the amount of leakage around the toe of the
20 reservoir and actually measuring it.

21 And -- and it was a subjective measurement. I
22 tracked it on a weekly basis. There were weirs that were
23 in place. And I observed the amount of wickage and
24 reported it in my notebook.

25 Q And that collection system, that's like a moat

1 that runs around the toe of the facility; is that correct?

2 A That's correct.

3 Q And it -- it ultimately directs all water into a
4 ponding area where it is -- I believe two -- there are two
5 pumps?

6 A There's actually three pumps that are utilized
7 to pump the water back to the reservoir.

8 Q Okay. And you actually kept records of how
9 often those pumps were triggered?

10 A We -- we also did that. We -- we did run times
11 on those and required -- recorded the hours of operation.

12 Q Okay. And -- and that moat and collection
13 system, it essentially would collect water that would come
14 down the -- the slope of the dam, correct?

15 A It would also collect that. But what it was
16 designed for was through leakage.

17 Q Okay.

18 A Since this was a coarse, rock-filled
19 construction, leakage through the inner concrete walls
20 would proceed into the rock fill, and subsequently collect
21 in the moat.

22 Q Okay. But is it -- it's true that any water
23 that came down the slope of the dam that didn't sink into
24 the ground would run down into that collection system as
25 well, correct?

1 A That would be my belief that that would occur.
2 So if you had a severe rainfall event, it would also have
3 collected.

4 Q Okay. Or if you had significant overtopping,
5 that water might be collected in there as well, correct?

6 A It would have went there, also. I'm sure that
7 on the day of the event that water would have went into
8 this area.

9 Q Okay. And you probably don't know this. But if
10 you do, do you recall how often those pumps ran to pump
11 water back up into the facility during that time frame
12 that you were there from '99 to 2002?

13 A There was a -- a variance on it that depended
14 upon the total amount of leakage. The leakage would
15 decrease as you removed head pressure or reduced the level
16 in the reservoir.

17 So over the daily cycle, as -- from full pool to
18 the lower set points where we secured generation, you
19 would have a decreasing amount of leakage. It was normal
20 during my tenure for two pumps to be nearly continuously
21 running. And during the end of the generation cycle, it
22 would often go back to one pump.

23 Q Now, you've already testified you're familiar
24 with the liner that was put in in 2004, correct?

25 A Yes. I'm familiar with it. I had -- but

1 familiar only because I was not there at the time of
2 installation.

3 Q Do you know when the planning actually began to
4 put in that liner?

5 A Yes, I do. We started looking at the liner
6 project during my tenure and had designed the liner and
7 level instrumentation.

8 We had a level instrumentation system that we
9 had designed working with consultants and had submitted
10 that to FERC.

11 Q And one purpose in putting in the liner or at
12 least planning to put in the liner was to cut back on the
13 amount of leakage from the facility, correct?

14 A That's correct.

15 Q As you sit here today, do you know how much it
16 actually cut back on the leakage once the liner was
17 installed?

18 A No, I do not.

19 Q Now, I believe you just said you were actually
20 involved in designing the control system?

21 A I was -- I had input into -- I was able to
22 review the design of the liner, interacted with the
23 engineering staff on the liner design and, also, with the
24 design that we were going to initiate on the level control
25 system. It's my understanding that that design was not

1 installed.

2 Q When you say the level control system, are you
3 talking about the piezometers that were used to measure
4 the water level?

5 A The -- I don't normally refer to those as
6 piezometers. I usually would refer to those as
7 transducers. Is that the same?

8 Q Yes, it is. Fair enough. Transducers .

9 A The system that had been designed during my
10 tenure utilized transducers to determine the level that
11 would be in the upper reservoir. It was a -- a -- an
12 elimination of the neutral buoyancy skate system, which
13 was proving to be worn and difficult to maintain.

14 And we were looking at something that would be
15 more reliable and reduced maintenance.

16 Q Okay.

17 A More state-of-the-art.

18 Q Okay. And those -- and that's the transducers,
19 correct?

20 A That's correct.

21 Q Did that also include the warrick probes that
22 were used as the safety shut-offs?

23 A We did not have warrick probes in the plant when
24 I was there on the upper reservoir. We had the float
25 system. And the warrick probes were something that we

1 went to following breakage of the floats that were there.
2 And I'm not familiar with the warrick probe emergency
3 shutdown system.

4 Q Okay. And that was going to be my next
5 question. Because you were involved in the design of the
6 new control system, correct?

7 A Design from a point of reviewing it, not coming
8 up with specifications.

9 Q Okay.

10 A But I was reviewing it primarily from the
11 position of being responsible for the safe operation of
12 the plant to ensure that we had adequate redundancy and
13 also from an operations and maintenance perspective. I
14 was not involved in specifying the equipment or the
15 equipment specifications. Our engineering staff did that.

16 Q Okay. But did your review include reviewing --
17 the -- how the warrick probes were to be used in the
18 placement of the facility?

19 A It was my understanding that on the decision
20 that had been developed while I was there that the high
21 level emergency shutdown system would be of the same
22 purpose and the same set points as the system that had
23 previously been installed. I never was able to see it
24 actually installed.

25 Q Okay. And do you recall what those set points

1 were supposed to be?

2 A The set points, as I recall -- my -- my
3 recollection is that the emergency shutdown levels were to
4 be at 1597.

5 Q Did you understand that -- that on the warrick
6 probes there were two of them the upper level, a high and
7 a high-high?

8 A No, I do not recall that.

9 Q Okay. Do you recall the -- whatever was
10 supposed to be set at 1597, was that supposed to be an
11 alarm, or was that supposed to be a shut-off?

12 A It was my understanding that was to be a
13 shutoff.

14 Q And you just mentioned that the -- the glass
15 balls broke at some point?

16 A Yes.

17 Q When did they break?

18 A I don't remember. It was during the liner
19 project.

20 Q Okay.

21 A During the removal.

22 Q Was that during part of the wire installation or
23 patches that were done in 2002?

24 A I don't remember.

25 Q Okay. At the point that those glass balls

1 broke, though, were you already engaged in designing a new
2 control system?

3 A Yes, we were.

4 Q So you weren't going to use those glass balls
5 anyway, were you?

6 A It's my understanding that we were not going to
7 use them.

8 Q Okay.

9 THE COURT REPORTER: Excuse me. I need to
10 change paper.

11 JUDGE DALE: Okay. Mr. Schaefer, if you could
12 wait just a second for the court reporter.

13 (Break in proceedings.)

14 JUDGE DALE: Mr. Schaefer, please proceed.

15 MR. SCHAEFER: Thank you.

16 Q (By Mr. Schaefer) Mr. Fitzgerald, did you ever
17 work with a gentleman by the name of Tony Zamberlan?

18 A No, sir. I never recall working with
19 Mr. Zamberlan.

20 Q Okay. Now, you -- you talked about some of the
21 projects that you did were for the efficiency of the
22 plant, correct?

23 A That's correct.

24 Q And weren't those projects also to increase the
25 profitability of the plant?

1 A Most certainly.

2 Q Okay. Was your bonus of the compensation that
3 you received as the plant manager, was that in any way
4 tied to the profitability of the Taum Sauk plant?

5 A Only indirectly.

6 Q Okay. Can you explain that, please?

7 A Well, my -- my bonuses were tied first to
8 safety. And we looked at things such as recordable or
9 lost time accidents. I had elements and -- and the
10 specific elements varied.

11 But there was an income factor that we had to
12 achieve certain profitability levels with the company to
13 enable bonus systems. So when I say indirectly, we had to
14 make a certain amount of profit within the company or
15 earnings per share to trigger our incentive compensation
16 program.

17 Now, beyond that, I was judged on overall plant
18 performance. And that included safety, as I named before.
19 That included the starting reliability. That included
20 availability among the factors that I recall.

21 And then I had a certain amount of bonus tied to
22 individual performance. And It could be related to
23 leadership or development of employees, providing training
24 to the employees. But it would generally be specific
25 pinpointed focused projects or -- or objects that we were

1 going to initiate within the year.

2 Q Okay. So were any of those objects that were
3 initiated during the year, for example, how much power
4 would be generated by the Taum Sauk facility in a given
5 year?

6 A I never recall having total megawatts as a
7 specific target that was related to my bonuses.

8 Q Okay. How about the number of -- of dollars
9 that Ameren made from that facility?

10 A No. I never had that set. It was not tracked,
11 how many dollars that project made. As I stated earlier,
12 it was just megawatts that went onto the grid and our
13 Ameren trading organization was actually doing the out of
14 systems sales. And the -- the profits that booked came
15 into that organization and not my part of the company.

16 Q Okay. How about limited number of downtime days
17 for the facility?

18 A That would be inherent to the calculation on
19 plant availability. And that would be a performance
20 measure that -- that I would be responsible for. And we
21 had targets that we would establish, as we mentioned -- I
22 mentioned earlier.

23 We had planned outages, and that would factor
24 into our performance goals on planned outage time. And so
25 what we were looking at was to increase the reliability of

1 the plant by performing the proper maintenance and being
2 attentive to the plant to ensure that it was available for
3 dispatch.

4 Q So your bonus was related to availability of --
5 to targets of availability of the plant, correct?

6 MR. BYRNE: I'm going to object the question as
7 it's been asked and answered.

8 MR. SCHAEFER: It hasn't been.

9 JUDGE DALE: I'm sorry. You'll have to ask the
10 question again.

11 Q (By Mr. Schaefer) Okay. So if I understand
12 what you're saying, because that was a very long response
13 to my question, your bonus was related to meeting targets
14 for availability of power in the Taum Sauk plant?

15 A Yes. That is correct.

16 Q Okay. Mr. Fitzgerald, if you'll look at Exhibit
17 25, that's your e-mail to Phillip Thompson. Do you see
18 that?

19 A Yes. I have it in front of me.

20 Q Okay. And the first sentence -- and in the
21 second e-mail, which is going down from the top of the
22 page -- it's the actual e-mail from you to Charles Kempf
23 and Larry Weiman and Gerald Beckerle. Do you see that?

24 A Yes, I do.

25 Q On May 20th, 2000, it look like, approximately

1 1:59 p.m. And it -- down in the very first sentence of
2 the first paragraph, it says, I've been contacted several
3 times recently with requests to operate Taum Sauk outside
4 of what I consider to be prudent operational limits. Did
5 I read that correctly?

6 A Yes.

7 Q And my question to you is -- you talked about
8 those request. But how did you receive those requests?
9 Were those e-mails? Were those phone calls?

10 A I was contacted by the Osage operators.

11 Q But by telephone or by e-mail? Or how were --

12 A No. That would be either by telephone or by
13 paging me and requesting that I immediately call them.
14 And so we would communicate by telephone.

15 And the -- the instances that I had previously
16 talked about that is related to this were specifically
17 requests to continue generation to the point that we would
18 go over the top of the dam of the lower reservoir.

19 Now, the lower reservoir was designed for
20 overtopping.

21 Q Okay. That -- you don't need to continue
22 because that's not my question. My question to you was --
23 would be, first of all, how did you get those. And I
24 think you answered that.

25 Did you keep any notes or any phone logs or

1 records of when you would receive these calls?

2 A No.

3 Q Okay. At the time that you were the plant
4 manager from 2009 (sic) to 2002, if -- if someone who
5 worked for you or you yourself were going to adjust that
6 buoyancy float or calibrate it to the staff gauge on the
7 side, was there -- were there any protocols for how they
8 were to do that?

9 A We had some general instructions that were
10 included in the ongoing maintenance that was written on
11 three by five cards. We had a maintenance program that
12 was not computerized. It was hard copy. And we utilized
13 those cards to give specific instructions.

14 And depending upon what sort of adjustment was
15 necessary, it is very possible that the technicians would
16 not have needed a card to do the adjustment on their
17 weekly routine.

18 On the emergency level floats, there were
19 specific instructions on how to activate those and the
20 alarms and the plant switches and relays that should
21 receive the signal. And so they would follow that
22 specific guidance on the emergency shutdowns.

23 Q Okay. So -- and I'm a little confused. The
24 directions that they followed were on three by five cards,
25 or they wrote down what they did on three by five cards?

1 A The directions that they followed for the
2 emergency switches were on three by five cards.

3 Q Okay. Do you know where those cards are today?

4 A No, I do not.

5 Q Okay. Do you know if they still exist?

6 A No, I do not.

7 Q And then in -- was a requirement in adjusting
8 those emergency floats, as stated three by five cards,
9 that whoever made the adjustments document that somehow,
10 write down what they moved?

11 A On our program that we had, they would record
12 the date and place their initials beside it on the pack of
13 the instructions. So if you had a line card, three by
14 five card, and if you would flip it over on the blank side
15 of it, they would list the date and their initials.

16 Q In addition to the date and the initials, did
17 they record the actual movement that they made?

18 A No, they would not.

19 Q Okay.

20 A And -- and there would not be any movement
21 normally on these emergency switches. It would be
22 verification that they activated on the raising of the
23 float.

24 So -- so those would not have been something
25 that we would have expected to calibrate or adjust. The

1 calibration and adjustment would have occurred on the
2 neutral buoyancy float, which was part of the normal level
3 control system.

4 Q Okay. And you're aware that at some point prior
5 to the breach -- or are you aware that some point prior to
6 the breach that the -- the gauge piping for the new
7 controls that were put in after the liner was installed in
8 2004, that that gauge piping came loose and was floating
9 around in the reservoir?

10 A I've heard that third-hand. And as I've -- I've
11 read the account in the newspaper that that had come
12 loose.

13 Q Do you have any opinion on that?

14 A No, I do not.

15 Q Okay. And are you aware that at some point
16 prior to the breach the high and the high-high warrick
17 probes were placed at a level where they would never come
18 in contact with the water before the water would over top
19 the reservoir? Are you aware of that?

20 A I am aware of that, also.

21 Q Do you have an opinion on that?

22 A I think that's a terrible tragedy.

23 Q Okay. Now, I believe you -- I think you said
24 earlier, your mother-in-law is -- is it your mother --

25 A My mother.

1 Q Your mother lives in Lesterville?

2 A No. She lives -- actually, at that time, in
3 Farmington.

4 Q In Farmington. So you're actually from that
5 area?

6 A Yes, I am.

7 Q And so you're actually kind of back home now
8 down at the plant down there?

9 A Yes, I am.

10 Q And are you currently involved with -- with FERC
11 -- in -- in getting the permission in FERC to rebuild the
12 facility?

13 A Yes, I am.

14 Q Okay. And is -- currently, today, or as of
15 today, has FERC given Ameren permission to rebuild that
16 facility?

17 A No, they have not.

18 Q And do you know, are there any specific hold-ups
19 on that?

20 A There's a number of hold-ups. On the
21 environmental assessment that FERC had published, there
22 were a number of issues that needed resolution and working
23 out with State agencies and resubmittal to FERC.

24 Q And you can't rebuild the facility until FERC
25 tells you it's okay, right?

1 A That's correct.

2 Q Okay. Just a couple more quick questions.

3 Mr. Fitzgerald, were you involved in any way in helping
4 Ameren determine what employees of Ameren may be
5 disciplined or not receive bonuses as a result of the
6 reservoir failure?

7 A No, sir, I was not.

8 MR. SCHAEFER: Okay. I don't have any further
9 questions, your Honor.

10 JUDGE DALE: Excellent timing. It's 12:30. We
11 will take a break for lunch and come back for Commissioner
12 questions at 1:45.

13 (Lunch recess.)

14 JUDGE DALE: Okay. Let's go back on the record.
15 And we are ready to begin with Commissioner questions of
16 Mr. Fitzgerald. We're going to start with Commissioner
17 Gaw.

18 CROSS-EXAMINATION

19 BY COMMISSIONER GAW:

20 Q Good afternoon, Mr. Fitzgerald.

21 A Good afternoon, Commissioner.

22 Q I -- I suspect that I'm going to ask you
23 questions that you've already been asked and you've
24 already answered because there was -- when we had agenda,
25 I was not here to hear those things. So bear with me if

1 I'm repetitive. I -- I really did not want to be doing
2 that, but I could easily without realizing it.

3 I want you to give me a -- a little bit of an
4 idea -- let's see. You differentiated earlier between a
5 manager and a superintendent of a plant, I think.

6 A Yes, sir, I did.

7 Q Can you remind of me of what that
8 differentiation is?

9 A It is primarily related to the focus and in the
10 positions where the Superintendent of the plant or
11 Superintendent of the department is -- is more focused on
12 what they are responsible for and where their efforts are
13 -- are applied where a manager has a broader range of
14 responsibilities --

15 Q Uh-huh.

16 A -- and would normally go beyond just the
17 particular area that he has reporting line for where he
18 operates on a -- a more company-wide level for potential
19 projects that he might become involved with.

20 Q Does every generation plant of Ameren have both
21 a manager and a superintendent?

22 A No, sir, they do not.

23 Q Do some -- what's the distinction?

24 A I do not know the basis for the distinction, but
25 the Kiakuck plant and the Osage plant at this time does

1 not have a manager and a superintendent.

2 Q Which do they have?

3 A They only have a Power Production Superintendent
4 or Plant Superintendent.

5 Q Okay.

6 A They do not have a manager.

7 Q And when you were at Taum Sauk, who was the
8 superintendent?

9 A I did not have a superintendent at the time.

10 Q Okay.

11 A I was just the manager without a superintendent.

12 Q And then when you left, was there a manager put
13 in your place?

14 A No, sir. There was a superintendent.

15 Q Okay. What difference did that make as far as
16 just general matters were concerned on decision-making?

17 A In general, that allowed the top person
18 responsible for the plant to be totally focused on the
19 plant.

20 Q Okay.

21 A They were not required to participate in some
22 meetings that -- that we might attend as managers.

23 Q All right.

24 A So that would be the primary distinction on --
25 on responsibilities.

1 Q Well, you know what that -- what that
2 responsibility is of manager fairly well. What -- what is
3 it that -- what is it that you -- you might say is a -- is
4 a -- are the strengths of having a superintendent and no
5 manager, and what are the weaknesses?

6 A This would be just an opinion.

7 Q That's all I'm asking for.

8 A And in that a -- a potential strength of having
9 a -- a superintendent would be that he would be more
10 totally dedicated to that particular plant and -- and be
11 allowed to focus more on the daily operations and
12 maintenance of the plant.

13 Q Okay.

14 A The manager position, a potential advantage to
15 that was having the understanding that was more broad in
16 perspective of how that plant's mission was fulfilled and
17 how it fit into the total corporation.

18 Q Okay. Now, when you were the manager at Taum
19 Sauk, your involvement on the -- on the routine that was
20 exclusive of the duties that you would attribute to the
21 superintendent, did that provide you with an opportunity
22 for direct communication or more direct or more frequent
23 communication with other individuals within the Ameren
24 system than a superintendent?

25 A Yes, it would have.

1 Q Okay. Describe that for me if -- if you would.

2 A Okay. As a -- as a manager, I am a member of
3 Ameren leadership team. While I was at Taum Sauk -- and
4 this has changed with the reorganization of the company
5 into the separate companies that we currently have. But
6 at that time --

7 Q Okay.

8 A -- we would have normally quarterly Ameren
9 leadership team meetings, and I would attend those. We
10 would also have within the regulated generation,
11 non-nuclear part of the company monthly manager meetings.
12 And I would attend those.

13 And we would also have division wide initiatives
14 that I would participate in as a manager such as our
15 personnel safety initiative and safety leadership team
16 that we had. I participated in that as a manager.

17 And in some instances, I understand after I
18 left, the person that replaced me, Mr. Cooper, in his role
19 as a superintendent, he participated on some of the
20 division-wide teams to ensure that the plant personnel
21 that -- that he was responsible for that they were getting
22 a full benefit of the initiatives that were underway.

23 Q Okay. But do you believe he was attending and
24 participating in -- in that part of your duties as manager
25 to the same extent that you had been before you left?

1 A I -- I believe that I participated in a greater
2 number of -- of corporate-type initiatives and had a -- a
3 broader range of interaction than he subsequently did.

4 Q Okay. And part of that you would attribute to
5 the distinction of superintendent from manager?

6 A Yes, I would.

7 Q Okay. Is there anything else to attribute it
8 to?

9 A Not that I'm aware of.

10 Q All right. Now, is -- that communication that
11 you would have with others within Ameren that you've been
12 describing, is that a two-way communication? In other
13 words, do you -- do you -- do you have an opportunity to
14 say, Here are some things going on at the plant, and they
15 have an opportunity to tell you some things or communicate
16 and talk with you about some things going on throughout
17 Ameren itself?

18 A That would have been provided as a means of just
19 general social interaction and, also --

20 Q Okay.

21 A -- in the reports that we would review at our
22 monthly meetings.

23 Q Okay. Now, your -- your current position is,
24 again, what?

25 A It's the Manager of the Taum Sauk plant.

1 Q That's your current position?

2 A Yes, sir.

3 Q And how long have you done that?

4 A I have --

5 Q Since -- in the last time.

6 A Just -- just since the 1st of June.

7 Q Okay. What are your duties in that regard at
8 this point?

9 A My responsibilities, as they've been provided to
10 me by -- by my direct boss is I'm responsible for ensuring
11 that we recover the power plant. It had a large degree of
12 mud and silt accumulation in the piping. I'm to ensure
13 that we restore the plant to an operable condition.

14 I'm to ensure that we develop operating
15 procedures and a training program for all of our
16 employees. I'm to ensure that we properly staff the plant
17 for needs going forward.

18 I'm to participate in continued development of
19 our FERC license application, and, also, participate in
20 obtaining permission from FERC to rebuild the plant.

21 I'm also to be a leader in the local area and
22 ensure that the needs of our local population and
23 citizenry are recognized by the company and that we
24 maintain good will and good relationship with the people
25 in Iron and Reynolds County.

1 Q Okay. So are you currently living down in that
2 area?

3 A Yes, sir. I am.

4 Q Okay. And up until that point in time and after
5 you left the manager's position at Taum Sauk, from your
6 previous role there, you were at Callaway?

7 A When I left Taum Sauk, I was at our General
8 Office Building in St. Louis, had a responsibility for
9 establishing strategic objectives and direction for
10 development and execution of planned scheduled outages at
11 our coal-fired plants.

12 Subsequent to that, I was the Manager at our
13 Osage plant at Lake of the Ozarks, Bagnell Dam.

14 Q Okay.

15 A And then in October of 2004, I was requested to
16 go back to the Callaway Nuclear Plant as the Manager of
17 Planning, Scheduling and Outages for both -- both daily,
18 forced and scheduled outages.

19 Q Okay.

20 A And my latest position, most recent to going to
21 Taum Sauk, I was the Manager of Regulatory Affairs for the
22 Callaway Nuclear Plant.

23 Q Okay.

24 A And that was a very broad-based position. I was
25 responsible for probability, risk assessment engineering,

1 safety, analysis engineering, our relationship with our
2 regulators, whether they were State or Federal.

3 I was also responsible for emergency
4 preparedness, security, industrial safety. And the last
5 item that I recall off the top of my head that I was
6 responsible for was performance improvement initiatives.

7 Q Okay. Now, in all of those different roles that
8 you've described, did that move you around under different
9 supervisors? Or did you maintain the same ones?

10 A I had different immediate supervision in those
11 different positions.

12 Q Okay. Have you already described who they were
13 earlier?

14 A No, I haven't completely described. While I was
15 at Taum Sauk, initially, I reported to the General Manager
16 of Hydro Operations.

17 Q Okay.

18 A And that was Christopher Iselin.

19 Q Yes.

20 A When I went to the General Office Building, I
21 reported to the Vice President of Power Operations,
22 Non-nuclear Regulated Generation. And at that time, it
23 was Charles "Chuck" Naslund.

24 When I went back to Bagnell Dam or the Osage
25 plant, I went back to reporting to Chris Iselin. And then

1 when I went to the Callaway Nuclear Plant, initially, I
2 reported to Chuck Naslund. And, subsequently, when we
3 identified Vice Presidents that were reporting to him,
4 initially, I reported to the Site Operations Vice
5 President, Adam Heflin.

6 And when I was in my role as Regulatory Affairs
7 Manager, I reported to the Vice President of Nuclear
8 Engineering, Timothy E. Herman.

9 Q Okay. Thank you. That was very -- very helpful
10 and succinct. If you wouldn't mind, you mentioned the
11 reorganization having changed some things, and I want -- I
12 want you to tell me what it was you were referring to and
13 -- and what you meant by that statement, if you recall.

14 A Well, as -- I know that you're aware of -- in
15 developing the different companies where we have four
16 Chief Executive Officers now that report to Mr. Rainwater.
17 That was the reorganization that I was referring to.

18 Q When did that occur, approximately?

19 A I can't remember the exact date. It seems like
20 it's been within the last year. This spring.

21 Q That's close enough.

22 A Okay.

23 Q And then was there -- did that have any impact
24 on you directly?

25 A Not directly, other than we -- my top boss that

1 I had, Chuck Naslund, he started reporting to Tom Voss
2 versus reporting directly to Gary Rainwater. So at my
3 level, there was really nothing changed with that
4 reorganization.

5 Q Prior to that reorganization, the -- the head of
6 AmerenUE was Gary Rainwater, correct?

7 A That's correct.

8 Q And at the time of the Taum Sauk incident, was
9 he also the head of AmerenUE?

10 A That's correct.

11 Q Who was the head of Ameren during that same time
12 frame? Was it also Gary Rainwater?

13 A That was also Gary Rainwater.

14 Q Do you recall when he replaced -- was it Chuck
15 Miller? Mueller?

16 A That's -- Chuck Mueller was his predecessor.
17 And I don't recall the exact time line, so I will not
18 speculate on that. It -- other than to say, it was
19 several years ago.

20 Q Yes. That's fine. Okay. Now, as manager of --
21 of a plant, does everyone who works at the plant report to
22 -- in some way to you, maybe not directly, but at least
23 indirectly?

24 A I have a group of employees that would be in my
25 organization. And then I would have additional people

1 that would help support the plant.

2 Q Okay.

3 A Such as engineering support, financial analysts,
4 budget people. So there was a -- a wider group of people
5 that supported the plant. I was the -- what is termed the
6 jurisdictional authority and operating authority for the
7 Taum Sauk power plant while I was there.

8 Q Okay.

9 A And so I had ultimate responsibility for -- for
10 everything that occurred at the plant. I may not have
11 directly supervised it, but I was still responsible for
12 ensuring safe operations of the plant.

13 Q Yes.

14 A And meeting any requirements that we may have by
15 regulation, whether it was the Occupational Safety and
16 Health Administration or Federal Energy Regulatory
17 Commission, Missouri Department of Natural Resources.

18 Whatever requirements were placed on the plant,
19 I was responsible for ensuring that we were meeting those.
20 And that was often by other people's actions.

21 Q Sure. Okay. And some of those people would not
22 be working directly at the plant every day, right?

23 A That is correct. And they could be in different
24 organizations.

25 Q They might be working for an Ameren affiliate?

1 A They could be working for --

2 Q Or --

3 A -- Ameren Services Group if they were providing

4 engineering or --

5 Q Okay.

6 A -- environmental safety and health services, for

7 instance.

8 Q Okay. And in regard to your relationship as

9 manager to the superintendent, does the superintendent

10 report for the manager?

11 A That would be correct. I did not have a -- a

12 superintendent while I was at Taum Sauk.

13 Q Understood.

14 A But I -- I did at other locations.

15 Q Okay. But if there are both, then that's the

16 hierarchy?

17 A Yes, sir. That is correct.

18 Q All right. Now, if there is no manager, such as

19 the case that existed after you left Taum Sauk, but there

20 is a superintendent, does the -- does the hierarchy in

21 regard to the reporting to an individual all go through

22 the superintendent in the same fashion that it would have

23 gone through you as a manager?

24 A That is correct.

25 Q Okay.

1 A The superintendent would become the -- the
2 functional authority and the operating authority for that
3 plant.

4 Q All right. Who would -- who would then be next
5 in charge as a position underneath the superintendent
6 under those circumstances?

7 A At Taum Sauk, it was a very small working group
8 that was permanently stationed at the plant. The other
9 individual at the plant that would report to the
10 superintendent was the workers' supervisor.

11 And in this case, we had a supervisor/engineer,
12 Jeffrey Scott, after I left. At the time that I was at
13 Taum Sauk, Rick Cooper was the Station Engineer, and Harry
14 Wallen was the Craft Supervisor. And they both reported
15 to me.

16 Q I see. Is Jeff Scott still working under the
17 Taum Sauk --

18 A No, sir, he isn't. He transferred to the
19 Meramac plant.

20 Q Okay. Did that occur after the breach?

21 A Yes, it did.

22 Q Fairly closely to after that or --

23 A I -- I do not know at what time he transferred.
24 All I know is that he was no longer at the plant when I
25 returned in June.

1 Q All right.

2 A It's my understanding it was sometime this past
3 spring, perhaps.

4 Q Okay. Who -- who actually is working under you
5 at this point in time?

6 A At this point --

7 Q If that's a long list, you can just --

8 A Well, at this point, I have Richard Cooper as --
9 as a superintendent. The first line supervisor/engineer
10 position is open. We're in the process of refilling it.

11 Q Okay.

12 A I have approximately nine hydro plant
13 technicians and one part-time clerical assistant. And
14 they are permanent staff.

15 In addition to that permanent staff, we have a
16 number of engineers that are supporting us through a new
17 organization called the Dam Safety Group. And they're
18 headquartered in St. Louis, but they spend a lot of time
19 at all of our hydro facilities.

20 And I also have some Ameren construction
21 supervisors that are relating and overseeing work that is
22 underway on the upper reservoir in preparation of a
23 potential rebuild if we get that permission.

24 And I also have a former plant manager, Dan
25 Jarvis, who is being employed as a consultant and

1 additional help to me and to the plant as we go through
2 the recovery efforts.

3 Q Okay. Now, you mentioned the Dam Safety Group.
4 When did that group get formed?

5 A That was following the Taum Sauk event.

6 Q Right. How -- how much after? Do you know?

7 A No, sir, I do not know.

8 Q And how big is that group, approximately?

9 A Less than ten, more than five.

10 Q Okay. Were these -- were the individuals that
11 are working for that group, are -- that are working for
12 that group a part of the Ameren system prior to going to
13 work for that group? Is that -- is that very --

14 A Not all of the engineers that are currently
15 employed. It's my understanding that we do have some new
16 engineers that we have hired. The -- several of the
17 engineers were -- were employed by Ameren in various
18 capacities prior -- prior to the formation of this group.

19 Q Okay. What is their role, generally speaking,
20 other than the name sort of suggests a role, but --

21 A They are to provide oversight of the hydro
22 facilities for ensuring compliance with regulation.
23 They're like a -- a independent group that validates that
24 we are operating in accordance with the regulation.

25 They provide engineering assistance and

1 interaction with outside agencies such as Federal Energy
2 Regulatory Commission and -- and their Dam Safety Groups
3 for conducting inspections.

4 They ensure that our safety inspections
5 regarding dam safety are conducted and ensure that we have
6 adequate contracts in place to provide independent
7 engineering services.

8 They're also involved in reviewing design
9 modifications and developing any design modifications that
10 may be necessary to ensure that they have proper
11 engineering review and are presented to FERC for approval
12 if necessary if they affect the safe operation or safety
13 systems of the plant.

14 Q Okay. Who performed those functions prior to
15 the existence of this group?

16 A We had engineering support that was provided
17 through the Generation Engineering Services group.

18 Q All right. And what was the -- what was the
19 reason, if you know, why it was felt that this group was
20 -- should be formed as opposed to continuing the system
21 the way it had been done previous to the breach at Taum
22 Sauk?

23 A I wasn't on board when that -- those decisions
24 were made.

25 Q Okay.

1 A And I do not know the --

2 Q You do not --

3 A All of the reasons.

4 Q You were not on board?

5 A No. I was not on board with the hydro group.

6 Q Who would know that answer, do you suspect?

7 A I suspect that Mr. Warren Witt would have an
8 understanding of the formation of that group.

9 Q Okay. Do you -- and do you know -- you've
10 generally described what their duties would be. If -- if
11 we -- if this group would have been in effect and up and
12 running in -- say, by the -- by September 1st of -- by --
13 let's say by September of '04, going forward from that
14 time frame, in regard to the outage that occurred to
15 replace the liner and put -- put the probes in, what would
16 their general role have been?

17 A Their role would have been to assist with the
18 design, to ensure that it had adequate reviews, that
19 safety features were incorporated into the design and that
20 original design specifications, if they were changed, that
21 there was an engineering basis for it and that the design
22 had adequate margins built into it for -- for safety.

23 Q Okay. So --

24 A They would have also had --

25 Q Go ahead.

1 A -- ensured that it was provided to Federal
2 Energy Regulatory Commission for review.

3 Q Okay. So if, for instance -- let's take a few
4 things that occurred in that time frame. And it's -- give
5 me a perspective on how they would have interacted if they
6 -- if at all.

7 For instance, in the design of the conduits that
8 were used to house the piezometers and the warrick probes,
9 would they have played a role in the design there?

10 A Yes. They would have. They would have been
11 involved in the design. Or if the design was done out of
12 house, they would have been involved in the review of the
13 design.

14 Q Okay. Would they -- would they -- it have been
15 required that if there had been a change in those designs
16 that they -- it would have had to have gone before them
17 before it they were reviewed?

18 A No. That's my understanding of how our current
19 dam safety engineering process is -- is constructed and
20 how it works.

21 Q Okay.

22 THE COURT REPORTER: Excuse me. Excuse me. I
23 need to change my disk real quick.

24 COMMISSIONER GAW: Oh, sorry.

25 (Break in proceedings.)

1 THE COURT REPORTER: Okay. Sorry.

2 Q (By Commissioner Gaw) Okay. In -- in regard to
3 the setting of the -- of the height of the warrick probes,
4 the probes in the high and high-high levels, would they
5 have been involved in, first of all, the design of those
6 safety devices?

7 A They should -- should have been if they were in
8 existence at that time.

9 Q Yes. And all of this line -- this line of
10 questions pertains to under that scenario. In regard to
11 the -- the height at which those warrick probes were set,
12 would they have been involved in that?

13 A That would have been a -- relative to part and
14 safety set point, and I almost certainly believe that they
15 would have been to verify that they were properly set.

16 Q Okay. Would they have been involved in the
17 decision about the operating level for the reservoir?

18 A They would have been aware of what the operating
19 levels were. And do you mean on the operating span for
20 normal operations? I'm not -- could you clarify that,
21 please?

22 Q Yeah. In regard to the -- let's -- let's start
23 with the -- would they have been involved in -- in setting
24 the parameters for the maximum height on the -- on the
25 upper reservoir?

1 A They would have been involved in that as that
2 was part of the original licensing conditions.

3 Q Okay. Would they have been involved in the --
4 in -- in considering any settling of the parapet wall and
5 the various heights of different sections of it -- of that
6 wall?

7 A Yes, sir, they would have been.

8 Q Okay. Would they have been involved in any
9 decision to vary the height of the warrick probes?

10 A I believe they would have been.

11 Q Would they have been involved in a decision to
12 change the logic of the warrick probes from a parallel to
13 -- to series logic if -- if you know what I'm saying when
14 I -- when I ask that question?

15 A I -- I understand what my -- my understanding of
16 that is on the -- on the logic scheme of -- of whether it
17 takes all of them versus one of them to -- to activate the
18 -- the protective measure. And -- and if that would have
19 been considered, my understanding of our current program,
20 a change of design relative to safety, yes, they would
21 have been.

22 Q Okay. Now, let's go forward a little bit into
23 the time frame around September of -- the end of September
24 of '05. And if there had been a report of an overtopping
25 of the reservoir, would this group be involved if they

1 were in existence? Or would they have been involved?

2 A Under our -- our current operating practices,
3 yes, they would have been.

4 Q Okay. And in regard to the discovery that the
5 conduit housing the sensors had become dislodged from
6 their -- their security, would that be required to be
7 reported to this group?

8 A Yes, sir, it would have been.

9 Q Okay. Now, you say that there are current
10 operating procedures in regard to this group. Are those
11 -- are those written down?

12 A Some of them are complete and written down, and
13 some of them are still being developed at this time.

14 Q And are there operating procedures that are not
15 written down but which you believe are in effect --

16 A Do you --

17 Q -- in regard to this safety realm around dam
18 issues?

19 A Not to my knowledge.

20 Q Okay. And when -- when did this document begin
21 its -- its right?

22 A We have several documents, Commissioner.

23 Q Several. Okay. That's --

24 A And we have some in various levels of -- of
25 completeness. We have ongoing documents that were

1 maintained at the Osage plant --

2 Q Okay.

3 A -- for the hydro plant technicians to refer to.
4 Sometime it's referred to as their operating manual. And
5 they also have training documents that discussed and
6 informed them as to the set points and operating
7 conditions and -- and normal operations and emergency
8 operations.

9 We are in the process of incorporating a quality
10 assurance program for our power plants. And we have --
11 not all of these items are complete yet, particularly as
12 it regards the existing Taum Sauk plant.

13 Q Okay.

14 A And those are still to be developed. It is our
15 intention that those will be available, developed and
16 approved prior to Taum Sauk ever operating again.

17 Q Okay. Were -- were those procedures and -- and
18 protocols -- were there any procedures or protocols
19 written down in regard to safety issues at the Taum Sauk
20 plant in December of '05?

21 A In December of '05, I was not at the plant.

22 Q How about prior to that?

23 A Prior to that, during my tenure, there was very
24 limited procedures.

25 Q Okay.

1 A And they would be more -- more looked upon as
2 work instructions versus actual procedures.

3 Q Okay.

4 A The particular procedure that we had, I would
5 refer to would be the emergency action plan --

6 Q Yes.

7 A -- and spill prevention counter measures plan
8 and -- and items like this. For operating procedures
9 located at the plant, they were very limited.

10 Q Okay. Do you -- do you know whether there are
11 copies of any of those -- of those documents that would
12 have been in effect at the time you were working there
13 that are still around?

14 A Yes. There -- there are some still around.

15 Q Okay. Is that because they're still in effect
16 or because they're -- they're housed as a matter of
17 history?

18 A They're part of our historical record.

19 Q Okay.

20 A They were -- the ones that I had developed while
21 I was at the plant, we had made electronic copies for ease
22 of -- of reproducing them and, also, making enhancements.

23 Q Okay.

24 A So those are -- are still available.

25 COMMISSIONER GAW: Okay. Has a request been

1 made for those documents through data request or
2 otherwise?

3 MR. BYRNE: Your -- your Honor, I'm pretty sure
4 that part of the -- some of the reports that have been
5 made part of the record -- is that --

6 COMMISSIONER GAW: Have them in them?

7 MS. HOUSE: I believe all of the historical, for
8 example, emergency action plans that were in effect at
9 Taum Sauk have been both in the FERC and to the Commission
10 previously.

11 COMMISSIONER GAW: Yeah. The emergency action
12 plan?

13 MS. HOUSE: Well, the historical --

14 COMMISSIONER GAW: I'm sorry to interrupt. The
15 emergency action plan, I think, was publicly available off
16 the FERC site. That document, though, talks about what to
17 do in the event of a breach after -- and what I'm looking
18 for is -- is something that writes down the -- the
19 policies and procedures that are designed to prevent
20 something from occurring, not how you handle it after it
21 occurs. So that -- that's my question.

22 MS. HOUSE: I understand, Commissioner. And I
23 believe that the historical operating procedures at the
24 plant that were, in fact, the operating manual, for
25 example, that they had at Osage as to how the plant was

1 operated --

2 COMMISSIONER GAW: Yes.

3 MS. HOUSE: -- Has -- has, likewise, previously
4 been produced and was part of the things that went to
5 FERC. And then, likewise, as I understand it, all those
6 materials were subsequently provided to the Commission.

7 COMMISSIONER GAW: Okay. Well, if someone could
8 just work through that to make sure we have them, from
9 Staff's standpoint or OPC or --

10 MR. SCHAEFER: I do have one question regarding
11 the data request and the information that's been produced
12 that was just discussed, has that been produced in
13 relation to this case or to some other case?

14 MS. HOUSE: I believe that there have been
15 specific data requests that were issued with respect to
16 this case. And I don't believe any specific data requests
17 relating to the operating procedures of the plant was made
18 specific to this case. What I am referring to --

19 COMMISSIONER GAW: Yes.

20 MS. HOUSE: -- Is the fact that, as I understand
21 it, all of the information that was requested by FERC, for
22 example, which was fairly exhaustive, was likewise
23 forwarded on to the Commission --

24 COMMISSIONER GAW: Okay.

25 MS. HOUSE: -- during -- during that round of

1 investigation. So I think that there are, obviously,
2 difference sets of data requests that were specific to
3 this matter.

4 COMMISSIONER GAW: Yes.

5 MS. HOUSE: I don't believe any of those data
6 requests encompass that information.

7 COMMISSIONER GAW: Okay.

8 MS. HOUSE: But I believe that the information
9 that was previously provided to FERC and copies of which
10 was sent to the Commission does include -- does include
11 that information.

12 MS. BRUEGGEMANN: On the FERC information
13 statement, I'll have to check on that. We do have what
14 the Highway Patrol provided in its report, but we also
15 have what Ameren provided to the Highway Patrol for
16 historical data.

17 On -- on everything that you supplied, to the
18 FERC, I'm not sure we have a complete record of that. So
19 I'll have to check.

20 COMMISSIONER GAW: If you all could just
21 cross-check that to make sure that we have what there is
22 on -- on that subject, that would be good.

23 So I -- I -- I think that there -- at the time
24 that the -- that the FERC investigation was ongoing, Staff
25 may have been accumulating some data from Ameren at the

1 same time that could be that that's -- that may be what
2 you're referring to. And I'm not clear about what is or
3 is not there. So --

4 MS. HOUSE: And I would have to go back and
5 confirm as well, Commissioner. But that's my
6 understanding is that as information was sent to FERC at
7 various points in time that supplements were also provided
8 to the Commission so that, at least from my perspective, I
9 believe that the intent, in my understanding, is that
10 everything that went to FERC, the Commission has -- has
11 likewise received.

12 But I agree that -- that we need to confirm that
13 that is, in fact, the case.

14 COMMISSIONER GAW: And that would be great.
15 Thank you.

16 MR. SCHAEFER: From the Department's
17 perspective, we haven't seen any data requests. We didn't
18 even know it was possible to make a data request in this
19 proceeding. I just want to make that clear.

20 COMMISSIONER GAW: And data requests are sort of
21 unique to this particular agency. So --

22 MR. SCHAEFER: Yes, Commissioner. I've seen
23 them in other cases. I just -- for this case, I didn't
24 know that anyone had served any or that they were a
25 possibility.

1 COMMISSIONER GAW: Correct. And as I said
2 yesterday, the Commissioners have not seen those data
3 requests, so we don't know what's out there and what
4 responses have been given at this point. At least that's
5 the normal situation. Okay. Where was I.

6 Q (By Commissioner Gaw) In regard to the -- to
7 the -- those safety processes that were in effect when --
8 when you were there the first time, do you know whether or
9 not there was any changes to those written processes and
10 procedures after you left?

11 A No, sir, I do not.

12 Q If they would have been changed, who would have
13 had the authority to change them?

14 A They could have been changed, pardon me, by the
15 plant superintendent or the plant supervisor.

16 Q Okay. Now, I know you were asked some questions
17 on this, but I'd like to get a better perspective than
18 what I had this morning.

19 When you were at Taum Sauk and the plant was
20 running, I believe you said, and just correct me if this
21 isn't -- isn't right, that the actual generation of the
22 plant was started from another location; is that true?

23 A That is the normal means of operating the plant.

24 Q And that -- and is that -- did you say that was
25 done from St. Louis or from Bagnell?

1 A From Bagnell Dam.

2 Q Okay. And the direction on dispatching that
3 unit, where did that originate?

4 A That would originate from St. Louis.

5 Q Okay. And who would have -- who would -- who
6 would be the one responsible for that?

7 A Normally, a group that we referred to as Energy
8 Supply Operations.

9 Q Okay.

10 A And a power supervisor then that would have
11 worked in that would have provided the actual dispatch
12 order to the hydro plant technician that would have been
13 in the control room at the Osage plant.

14 Q Okay. So the -- the signal goes from the -- how
15 could they communicate to Bagnell again?

16 A They communicate by Bagnell by phone.

17 Q So they just call them up and say, Start them
18 up? I know that's not what they say, but something like
19 that?

20 A That's close to it.

21 Q All right. And now, at the time you were there,
22 did these units have a governor on them?

23 A Absolutely.

24 Q So you could -- you could regulate, to some
25 extent -- boy, I hate to use that word, for several

1 reasons. You could regulate the amount that was -- of
2 energy that was being generated at particular times, not
3 just turn them on and turn them off?

4 A That's correct. We could go to a loading rate
5 or increasing load. We could also go to a set point.

6 Q Okay.

7 A We had the potential to go into what we called
8 AGC. And we experimented with that initially at the plant
9 and found that, for the Taum Sauk plant design, that that
10 was not a particularly effective or efficient way to
11 operate the plant. So we would go -- we had two primary
12 modes of operation. One was called efficiency mode.

13 Q Yes.

14 A And the other was load set. And efficiency
15 load, it would back the units down as head pressure
16 decreased or as the level decreased in the upper
17 reservoir. And the objective of that was to produce the
18 maximum amount of megawatt hours.

19 And load set, it would be -- the objective was
20 to target a particular level of megawatts.

21 Q Okay.

22 A And it would adjust the wicket gates, which are
23 controlling mechanisms, to allow water to enter the
24 turbine --

25 Q Yes.

1 A -- to maintain a specific load.

2 Q Okay.

3 A And either one of those was dispatched and

4 originated from St. Louis, and those orders would go to

5 the Osage operator.

6 Q Okay. Well, when it was in efficiency mode,

7 what was the -- what -- was there a range of -- of energy

8 output that you would get?

9 A Yes, there was.

10 Q Do you know what that was?

11 A There was a -- there was a maximum range that

12 was at approximately 234 megawatts.

13 Q Okay.

14 A And there was also a minimum load setting. And

15 -- and our minimum was at approximately 150 megawatts.

16 Q Okay. Now, is this prior to the -- to putting

17 in the -- in new turbines?

18 A No, sir. This was following the -- in

19 installation of the new turbines.

20 Q Okay. And those -- those figures that you're

21 giving me, is that for both turbines or one?

22 A That's for a single turbine.

23 Q Yes.

24 A And there were two.

25 Q That's what I thought. Okay. So -- now -- and

1 in the set mode, what was the range that you'd be dealing
2 with?

3 A Well, we could go from any -- any combination of
4 one or two units. And over the same range, we could
5 select any megawatt setting from a single unit of being
6 that 150 to 234 --

7 Q Okay.

8 A -- and then multiply that by -- by two for both
9 of them.

10 Q Okay.

11 A So that was the -- the overall range, then, from
12 about 300 to about 400. And 68 would be the top output.

13 Q Okay. 400 and -- I missed that last part.

14 A Four hundred sixty-eight would have been the
15 maximum output.

16 Q Okay. Okay. How many hours could you get out
17 of -- out of the plant when it was at -- at maximum on --
18 in -- in both modes, about?

19 A It ranged from five to seven hours.

20 Q Okay.

21 A And this would be both -- both units on
22 generating maximum. We were -- as the head pressure
23 decreased --

24 Q Uh-huh.

25 A -- we would open up the throttles to maintain a

1 megawatt loading up to a point. And then we would start
2 having decreasing load. If we were in the efficiency
3 mode, the computer system automatically reduced the
4 megawatt output to maximize total generation.

5 Q Okay. And in efficiency, you could -- you could
6 get how much -- how many hours out of it?

7 A Approximately seven.

8 Q Okay.

9 A Both units --

10 Q Both units?

11 A -- running together.

12 Q Yes. Okay. So the St. Louis -- St. Louis
13 office made the order. And then Bagnell sent the -- ran
14 the plant, basically?

15 A Yes.

16 Q How about pump-back? Was it done the same?

17 A Yes, sir, it was.

18 Q Okay.

19 A It was remotely dispatched and -- and operated
20 -- started from the Bagnell Dam.

21 Q All right. All right. Was there a --
22 approximately -- well, let me -- let me narrow this down.
23 How far -- how -- how often in a year when you were there
24 would you say the plant would run? How many days out of
25 the year?

1 A When I was there, we ran every day that we were
2 available to run.

3 Q Every day. Okay. Okay.

4 A There was -- and it would be a very infrequent
5 day, very unusual --

6 Q Yes.

7 A -- unseasonably warm, perhaps, and in the winter
8 or unseasonably cool. But -- but in general, we -- we
9 operated every day that we were available for dispatch.

10 Q Okay. Okay. All right. Now, was that -- was
11 that the case prior to the replacement of the turbines?
12 Or do you know?

13 A Absolutely not. It was an infrequent operator
14 and only generated usually in extreme temperature
15 conditions for -- for peak load or in emergency start to
16 replace power that we had lost unexpectedly in the system.

17 Q So it was basically just a back-up system prior
18 to those turbines being replaced?

19 A That would be one way to describe it.

20 Q Was it used more -- more like a pure peaking
21 facility at that point? Would that be -- would that be
22 accurate?

23 A I'm not sure what you mean by pure peaking.

24 Q Well, in regard to dispatch order, at that
25 point, would it dispatch prior to a gas turbine, for

1 instance, or after, if you know?

2 A At -- usually, prior to.

3 Q Okay. All right.

4 A But it may have a limited operation during that
5 time.

6 Q Because?

7 A Because it was difficult to pump back. And it
8 was inefficient. So it may be only used for a one-hour
9 period and would not pump back overnight. And
10 subsequently be used another hour, and then it -- on the
11 weekend, maybe pump back.

12 Q Is that an economic problem in regard to -- to
13 whether or not you would pump back because of the -- of
14 the differential between the -- the cost of pumping back
15 and what you got out of the generation in consideration of
16 the efficiency of the turbines?

17 A Yes, sir.

18 Q So after the turbines were changed out, the
19 efficiency of that unit improved dramatically, correct?

20 A Yes, it did.

21 Q Do you know how much it improved?

22 A Approximately, it went from approximately 42
23 percent to 44 percent efficient up to 69 to 71.

24 Q That's a significant change, correct?

25 A Very significant.

1 Q So -- now, I want you to explain to us, for the
2 record, how that plays into a calculation of whether or
3 not it makes sense to -- to use that plant in particular
4 in regard to the difference in what it costs in off peak
5 as compared to generating during a -- a period that --
6 where the -- the prices for electricity would be higher.

7 A Well, there were -- there were two factors. In
8 -- in addition to the efficiency, which lowered the
9 generated megawatt cost --

10 Q Okay.

11 A -- it also reduced the pump-back time.

12 Q Oh, okay. I didn't realize that.

13 A So -- so we -- we had two -- two things that
14 came into play. So we could pump back in a narrower
15 window.

16 Q So you could pick --

17 A When our load was lowest --

18 Q You could pick -- you could pick your
19 opportunities in a -- in a more efficient way as well in
20 regard to pump-back?

21 A Yes, we could.

22 Q Go ahead.

23 A And so we were able to -- to use the best
24 characteristics of the plant being more efficient. And --
25 and that efficiency gave us, also, the -- the -- better

1 pump back times so that if it was a -- a typical hot
2 summer day such as we're having today, sometime in the
3 early afternoon, we would generally bring on the first
4 unit. And -- and within one to two hours, we'd bring on
5 the second unit.

6 We'd usually generate to approximately 8 p.m.
7 And if we needed to stretch out that, we would be on a
8 reduced loading towards the end of that.

9 And then approximately at 11 p.m. at night, we'd
10 start the first unit to pump back. And within one to two
11 hours of that, we would have the second unit on. We'd
12 take the first unit off at somewhere between 5:30 and 6
13 a.m. and usually have the second unit secured somewhere
14 between 6 and 7 a.m.

15 Q Okay.

16 A If -- now, that was just in general. That was a
17 typical day.

18 Q Okay. First of all, why would -- why would you
19 vary from that, if you did vary?

20 A Well, that was -- a typical day with all our
21 units available. No one expected losses. And we were
22 also looking at our opportunities in the marketplace if --
23 outside of our system, if they had a need, if they had
24 lost a unit, we might have an opportunity to place Taum
25 Sauk on and have our system pick the load up and -- and

1 sell megawatts.

2 Q Uh-huh.

3 A And so we were always looking at the most
4 efficient operation of our total system --

5 Q Sure.

6 A -- and supplying the lowest cost power. And --
7 and if we were doing out of system sales, we would be
8 interested on ensuring that we had margins that would
9 cover our costs and also provide a profit.

10 Q Sure. Now, if -- you also -- just as a nuance,
11 but you said you usually didn't start the second pump
12 until the other one had been running sometimes for a
13 couple hours?

14 A That's correct.

15 Q Explain that for me so I'll -- I'll get that
16 picture.

17 A This -- this was a factor of a couple of things.
18 One is we had a -- a limiting condition on a component in
19 the plant that would undergo heating under the pumping.
20 And -- and so we had to allow it to -- to reduce its
21 temperature.

22 And, secondly, this is a significant megawatt
23 load on our system. So we need to -- we would need to
24 make arrangements to ensure that our system load was being
25 reduced to the point that we could support the Taum Sauk

1 loading.

2 And -- and so we -- our power supply supervisors
3 would be watching that and determine when we needed to
4 place the pumps into service to balance our -- our entire
5 system.

6 Q Okay. When -- when you were there at Taum Sauk,
7 how much information did you have in -- in regard to the
8 decisions that were being made on dispatch -- and I'm not
9 talking about just knowing that the unit was dispatched.
10 I'm talking about the economic financial decisions that
11 were being made in St. Louis about the dispatch. Was that
12 communicated with you directly or in some fashion?

13 A It was indirectly communicated to me through
14 various reports.

15 Q Okay.

16 A I would receive system generation reports. We
17 would tag revenue on megawatt generations. They weren't
18 exact, but it was relative to how we had -- our cost of
19 service associated with the various plants.

20 Q Okay.

21 A We would artificially impose a -- a margin above
22 the cost of service so that, at the plant level, we had
23 some way of having an idea of what our contribution --

24 Q Yes.

25 A -- to the company was. So I would receive that

1 information on a monthly basis. We would discuss it at
2 manager meetings.

3 On a -- another way that I received information
4 at that time is that on a inter-company computer system, I
5 could watch what the loads were on the various power
6 plants. I would also see what our projected range of
7 power costs were if we had to purchase power outside the
8 system.

9 Q Okay.

10 A And that would correspond, then, also, to an
11 idea if we were selling out of system what kind of range
12 we could expect.

13 Q Okay.

14 A And it -- it wasn't really very complex to know
15 if you had 95 degree temperatures, prices were going to be
16 high. People were going to be running combustion
17 turbines.

18 And if gas priors were high, power prices would
19 be high. At this time, also, we didn't have all of the
20 Federal Energy Regulatory Commission restrictions on
21 knowledge of your transmission system and generation.

22 Q Yes.

23 A And so we had more information at that time.
24 And we could speculate as to when high, out of system
25 needs would be there. We would hear indirectly.

1 Q This is -- what -- what time frame are we
2 talking about again here that you're describing?

3 A We're talking from 1999 through September of
4 2002.

5 Q Okay. Now, would you also have similar
6 information in regard to the -- the costs of pumping the
7 water to the Taum Sauk reservoir?

8 A Yes, I would. And -- and we would look at -- it
9 would be, again, not exact. But -- but we --

10 A It would be an estimate on what the -- the
11 plants that were running in our system or what purchase
12 power costs were.

13 At certain times, we were able to take advantage
14 of out of system unloading of power such as the Exalon
15 system nuclear plants that did not want to come off of
16 full load.

17 Q Yes.

18 A They would sometimes dispose of power at very
19 low cost. And it's my understanding we would, again, try
20 to take advantage of that and operate our system as
21 efficiently as possible.

22 Q Because if -- if that power is out there and --
23 and the price is very low, that's very attractive to a
24 plant like Taum Sauk, correct?

25 A Absolutely.

1 Q Because you -- you want to use that -- that very
2 low priced power during your pumping mode so that your --
3 your differential, then, on what you can sell it at in
4 peak periods is greater?

5 A It -- it would increase our margin. That's
6 correct.

7 Q Okay. And -- now -- so you could pretty much
8 see what your net profit -- you could get an estimate of
9 what your net profit was that -- that was being generated
10 for -- in the broad sense of the word?

11 A It -- it -- like I stated, it wasn't exact. It
12 was estimates. It was thumb rules.

13 Q Yes.

14 A So -- so we -- we would go like that. We knew
15 -- knew to fulfill our mission that we needed to be
16 available.

17 Q Yes.

18 A We needed to be safe, and we needed to start
19 when we were up to bat --

20 Q Yes.

21 A -- and -- and be able to either pump or generate
22 on an as-needed basis.

23 Q Okay. Now, was the fact that you were
24 monitoring the -- the -- the profits that -- just
25 estimating the profits, was that something that you --

1 that you were just curious about, or was -- was there some
2 significance to that fact?

3 A There was some significance to that fact. If --
4 you had different types of maintenance that was
5 discretionary, and you would judge the best times to have
6 the units unavailable,

7 Q Yes.

8 A And this would give you a point to discuss that
9 with the generation scheduler and dialogue. So this was
10 part of my responsibility as the plant manager to ensure
11 that discretionary maintenance, repetitive maintenance
12 that we were performing those, again, at a low cost time
13 to the system.

14 Q Okay.

15 A And we wanted the Taum Sauk plant to be
16 available at times that we could fulfill our mission and
17 be available for peak needs.

18 And I -- at the same time, I had the discretion
19 and authority as a plant manager, any time that we had an
20 issue related to safety, it was my decision to remove
21 those from the plants from being available.

22 Q I think you've testified to that several times
23 today already. If it's -- if it's -- it's my
24 understanding that, when you're dealing with this -- this
25 question of the -- of the margins, of profits that are

1 being generated that -- that it was -- it had to do with
2 the -- with maintenance matters, in order to do that, you
3 -- in order to look at -- when outages might be more
4 appropriate, that would be something that you could
5 probably work through with -- by calling St. Louis and --
6 and figuring it out from their -- from their numbers as
7 well, wouldn't you say?

8 A We would coordinate with our -- our Energy
9 Supply Operations Generation Scheduler.

10 Q Okay. And who was that at the time?

11 A At the time, we had a number of individuals.
12 One that I would talk to at various times was Mr.
13 Schoolcraft, Steve Schoolcraft.

14 Q Okay. Is he still in the same position today
15 or --

16 A Yes, he is.

17 Q Yes. Okay. When you were monitoring these --
18 these things that you were describing to get an idea about
19 what kind of a profit margin might be generated at the
20 plant, did you do that daily?

21 A Yes, I did.

22 Q Okay. And is it your testimony that the only
23 reason you were doing that daily was in order to get an
24 understanding of when it might be appropriate to do
25 maintenance on the plant?

1 A No. That's not the only reason.

2 Q What -- what are the other reasons?

3 A We had a collegial group of managers --

4 Q Yes.

5 A -- that operated the power plants. I could
6 obtain information of -- from reviewing the information on
7 -- on the computer system about what their challenges
8 were.

9 I would have an opportunity to communicate with
10 them to know what -- what they were facing. We would
11 often chat about that, what challenges we were facing.

12 Q Yes.

13 A Different potential solutions. What are we
14 going to do about different things? They would
15 reciprocate when they had the chance. So this was
16 information about our company that as -- as managers and
17 leaders that --

18 Q Yes.

19 A -- that we shared and communicated with each
20 other about.

21 Q Okay. This is probably obvious, but what -- did
22 the managers that you worked with, including yourself,
23 have, as an objective, maximizing the profits of the
24 company?

25 A It was certainly one of our objectives.

1 Q Yes.

2 A It was not the objective.

3 Q Not -- that's not what I asked you. In regard
4 to the -- to -- to that question, can you tell me what
5 incentives and disincentives existed as -- as a manager to
6 that goal?

7 A I will attempt to address that.

8 Q Okay.

9 A We were not incentivized directly --

10 Q Okay.

11 A -- on the profits that our plants made.

12 Q All right.

13 A Because we -- we looked at it as a system.

14 Q Yes.

15 A And -- and the system contributed to the
16 earnings of the company. We had thresholds that were
17 established and targets for earnings for the company.

18 And if those thresholds were met, people at the
19 manager and above level had money made available to
20 provide them incentive compensation.

21 Q Okay.

22 A Our salary structure was such that this was an
23 important factor in our overall salary and compensation.

24 Q Okay.

25 A It was a paid for performance.

1 Q Okay.

2 A And the paid for performance included many
3 different aspects. But the financial health of the
4 company was the trigger that allowed this compensation to
5 be distributed according to other factors.

6 Q Okay.

7 A And -- and we had those broken into four primary
8 groups that were linked to the overall corporate
9 objectives.

10 Q Okay.

11 A Such as -- safety was one of them. Generation
12 as far as availability was another.

13 Q Okay.

14 A We -- and we looked at this two ways, overall
15 availability and also equivalent availability. It was
16 important to be available when you were needed the most.

17 Q Yes.

18 A For us to fulfill the Taum Sauk mission, that
19 was extremely important. A day in July of '95 may not be
20 as important to the health of our system as a day in
21 October, for instance.

22 So -- so we had a way of -- of showing the most
23 important days and reflecting that into an equivalent
24 availability. Another thing that we had was development
25 of personnel --

1 Q Uh-huh.

2 A -- was -- was used. And our safety record was
3 used. Budget was an important item that we looked at.
4 And I was accountable for the monies that were expended at
5 the Taum Sauk plant as the manager of that plant.

6 Q Okay.

7 A So those were some of the items that -- that we
8 looked upon. And it was really no different than my
9 understanding of what other leaders in various businesses
10 are rewarded for.

11 Q Yes.

12 A But it was tailored to match the generation
13 business and the electrical utility business.

14 Q Okay. Now, I need to break that down just a
15 little bit. The trigger device that you were referring to
16 earlier --

17 A Earnings per share --

18 Q Earnings per share?

19 A -- was the enabler.

20 Q Okay. And that was a mathematical calculation
21 of some sort?

22 A It would be a target at -- at the conclusion of
23 the year when we made our annual report and we declared a
24 roll-up of our quarterly earnings, we arrived at an
25 earnings per share figure.

1 Q Okay.

2 A And our planning stages when we were setting the
3 annual strategy and objectives included in that -- and
4 this was done by our top leaders in the company. They
5 would establish a target that we wanted to shoot for for
6 earnings per share.

7 Q Was that done annually? Do you know?

8 A Yes, it was.

9 Q Okay.

10 A We would have an annual target for earnings per
11 share.

12 Q Okay.

13 A This was released to the financial security
14 world, also. Of course, they're very interested in what
15 your target earnings per share was. So this was a
16 reflection on our managerial abilities --

17 Q Okay.

18 A -- on how well can we manage the company if the
19 company is meeting its earnings per share targets. So we
20 felt that before we rewarded people that we needed to hit
21 a minimum target for earnings per share. That was a
22 responsibility to our shareholders that we felt very
23 responsible for.

24 Q Okay.

25 A So we weren't going to reward ourselves before

1 they got theirs.

2 Q Okay.

3 A So if -- if that target was hit --

4 Q Yes.

5 A -- if we -- if we made that, that was -- we had
6 a target and a threshold and a maximum payout.

7 Q All right.

8 A And it was graduated as a percentage of -- of
9 the target. We would go in to taking monies, making them
10 available. As a power plant manager, half of mine was
11 related to how the plant performed.

12 Q Okay.

13 A And those were those key performance indicators.
14 And we established targets prior to the year starting for
15 availability, for safety, for budget.

16 Q Yes.

17 A And then the -- the other would be on specific
18 targets or projects that I might be responsible for --

19 Q Okay.

20 A -- that were not related to key performance
21 indicators directly. But they may be something like
22 attending a specialized training course or a special
23 project that I might be involved with that was
24 corporate-wide --

25 Q Okay.

1 A -- and having it -- successful outcomes.

2 Q All right.

3 A And we would normally try to establish somewhere
4 between four and seven objectives that were personal
5 objectives for the individual. And so he was judged by
6 his superior at the end of the year of his achievement of
7 those objectives. And we were then rewarded by the -- the
8 incentive compensation plan.

9 Q Okay. Now, all of this that you've been
10 describing on this -- this incentive plan, was it -- has
11 it changed much since you were working during -- since the
12 time frame when you were working at Taum Sauk the first
13 time going forward? Is it just the basic --

14 A No. The basics has not changed.

15 Q Okay. The targets, the trigger numbers, would
16 adjust annually?

17 A Yes, sir, they do.

18 Q The subcategories, are they -- are they written
19 down somewhere?

20 A Yes, they are.

21 Q Okay. And have they changed significantly in
22 that time frame?

23 A Not significantly. In the area such as employee
24 development, they may change on an annual basis.

25 Q Yes. Okay.

1 A But the -- the generation-type goals have
2 remained -- the categories are very similar from year to
3 year.

4 Q Okay. Now, I wasn't clear on the -- on the
5 question of whether or not that generation availability
6 and the things tied to generation were system-wide or site
7 specific or both.

8 A They were plant specific.

9 Q They were. Okay. Safety -- safety issues.
10 What -- what is the universe that we're talking about when
11 we're talking about safety in regard to the incentive
12 plan?

13 A It was primarily focused on industrial safety.

14 Q Which means?

15 A That would be injuries --

16 Q Yes.

17 A -- to the workers.

18 Q Okay. That's -- that's what I assumed, but I
19 wanted to make sure I was following it.

20 A There were some other triggers that were more
21 broad-based in scope related to safety.

22 Q Okay. If you want to describe those, go ahead.

23 A We had -- we had some initiatives relative to
24 installation of fire protection systems, for instance.

25 Q Okay.

1 A That would be a more broad-based safety aspect
2 of the power plants.

3 Q Okay. To your knowledge, within the safety
4 gamut, was there anything that would be tied to injuries
5 to others who were not Ameren employees?

6 A Not to my knowledge.

7 Q Okay.

8 A This -- this was something that was really
9 uncomprehensible to us.

10 Q Yes.

11 A It was something like a barrier that we would
12 not cross. There was another tie to safety indirectly,
13 and that goes back to the availability factors, also.

14 Q Okay.

15 A And that could be linked to plant safety and
16 operating --

17 Q Yes.

18 A -- safely. In that if you weren't operating
19 safely, you weren't going to be operating.

20 Q Yes.

21 A And so that directly impacted your availability
22 numbers.

23 Q Okay. How did that -- how did that inter-relate
24 on -- on the incentive calculation -- if -- if, for
25 instance, you had taken a plant out because of something

1 that you considered to be unsafe, how would that be taken
2 into account in regard to the -- to the incentive
3 determination?

4 A It could potentially impact your availability
5 factors.

6 Q In what way, though?

7 A Well, it would be negative --

8 Q Yes.

9 A -- and decrease the availability of the plant.

10 Q Yes.

11 A Now, if you made the right decision --

12 Q Yes.

13 A -- and -- and removed that plant from service,
14 it's my belief that that would have also have been taken
15 into account that there was that flexibility in making the
16 award --

17 Q Yes.

18 A -- to the individual. And that would be
19 recognized and -- and appropriate compensation adjusted.
20 And we made adjustments periodically on individuals'
21 incentive bonus when they were making the right
22 decisions --

23 Q Okay.

24 A -- and were negatively affected.

25 Q Was that factor in regard to generation

1 availability in writing?

2 A Could you please repeat that? I'm not sure if I
3 understand the question, Commissioner.

4 Q This -- this factor that you're describing about
5 if after the fact it was determined that a generator was
6 taken out -- appropriately out of availability --
7 availability that that would then come into play in
8 neutralizing the negative effect of the unavailability of
9 that unit in regard to incentive pay just --

10 A I'm unaware of it being in writing.

11 Q Okay.

12 A I am aware of it being a practice.

13 Q All right. How did that -- how did that
14 practice occur? Was it --

15 A We would discuss it at our manager meetings --

16 Q Yes.

17 A -- when we were making decisions relative to the
18 plants. And it also came into play relative to budgets.

19 Q Right.

20 A If you did something unexpected that was related
21 to safety and you needed to spend the money, we always
22 received approval to spend that money.

23 And then our Vice President would go to the
24 financial steering committee and to his bosses and explain
25 what the basis of those decisions were.

1 Q Okay.

2 A And that was looked upon neutral or favorable in
3 regard to your compensation.

4 Q Okay. If I understand what you're telling me
5 correctly, if I'm sitting in a manager's position and I'm
6 making a decision in regard to a safety question taking
7 the generator offline, I'm not going to know at that point
8 whether or not this is going to have a negative impact on
9 my incentive compensation when I make that decision. Is
10 that -- is that accurate? I would not know that at that
11 point in time.

12 A There's nothing in writing. As a manager that's
13 faced that situation before --

14 Q Yes.

15 A -- I know that there is the good likelihood that
16 if I do not make safety my priority that my unit will be
17 unavailable for a longer period of time.

18 Q Yes.

19 A A perfect example now is Taum Sauk.

20 Q Yes.

21 A That unit is unavailable for us to generate
22 with. We obviously made some errors in our decision. And
23 so the -- the repercussion of that is zero availability.
24 So -- so logic and common sense would -- would drive me to
25 tell me I always need to prioritize safety, that, in the

1 end, that produces the highest availability for the plant
2 that I'm responsible for.

3 Q I understand in hindsight that that may be
4 something that can be said here. But what I -- my
5 question related directly to what -- what the incentive
6 that exists at the time that a decision is being made in
7 regard to incentive pay.

8 And in regard to incentive pay, taking a
9 generator offline for safety issues, that plant manager
10 will not know at that point in time whether or not that is
11 -- that is going to neutralize what is already written
12 down as a negative for the incentive pay in regard to
13 availability, correct?

14 A Since -- since the Taum Sauk incident, we've
15 been --

16 Q Can you answer my question in regard to before
17 the Taum Sauk incident?

18 A Prior to that, we had no written direction.

19 Q Okay.

20 A We only had practices.

21 Q Okay. I got you. So the answer would be yes
22 prior to --

23 A Yes. Prior to the Taum Sauk event.

24 Q Now, go ahead and tell me what happened
25 afterwards.

1 A Afterwards, we have become very specific. And
2 our Vice President, Mark Birk, has unequivocally noted in
3 written communication to all of his managers of the
4 prioritization of safety. And -- and it was a
5 reaffirmation of what the conditions previously were that
6 were not documented in writing that they existed.

7 Q Okay. Now, this issue we're talking about in
8 regard to taking a generator offline, has something been
9 placed into the incentive pay factors that would be
10 different in regard to the neutralization of generation
11 availability in the incentive pay?

12 A I'm unaware of such.

13 Q Okay. Was -- was there anything else -- you
14 know, we started this discussion off with was there any --
15 was there anything else in regard to -- to availability of
16 a plant and -- and having generation run, and -- and we
17 went into this incentive pay. But I don't know if you
18 finished the answer to the question about whether there's
19 anything else, if you remember the question at all.

20 A I think we've covered a lot of aspects of the
21 incentive pay.

22 Q Okay. Yeah.

23 A And I -- I believe I repeated several times
24 about the importance of placing safety over production.

25 Q Yes. Yes, you have.

1 A And how that indirectly will ultimately impact
2 your incentive pay. And it is my belief that if you do
3 not place safety at a high priority that you will not
4 receive any incentive pay.

5 Q Okay. Now, how many of the reports have you
6 reviewed about the Taum Sauk incident itself?

7 A I have not reviewed any of the reports in their
8 entirety.

9 Q Tell me what you have reviewed.

10 A I have reviewed the Rizzo report. I have -- I
11 guess I spoke in error. I have reviewed that report in
12 its entirety --

13 Q Okay.

14 A -- and went through it. I have not reviewed in
15 its entirety the FERC Independent Board of Consultants.

16 Q Yes.

17 A I have read pieces of the Highway Patrol report.

18 Q How about the FERC staff report that --

19 A I've read pieces of it, but I've not read it
20 cover to cover.

21 Q And the Sieman's report?

22 A I have not read it.

23 Q Okay. Did you find anything in any of the
24 material that you did read that you've just described that
25 you disagree with, that you recall?

1 A No, I do not recall.

2 Q Okay. You don't recall anything you disagreed
3 with?

4 A I do not recall anything I disagreed with.

5 Q Okay. Did you -- did you agree with the parts
6 that you remember -- and that's almost a meaningless
7 question. But I'm trying to figure out how -- how much
8 I'm getting out of your answer.

9 A Yes. I agreed with it. The one point that I
10 was unsure of and the conclusions that were drawn were the
11 exact failure mechanism on the breach.

12 Q Yes.

13 A And I -- I thought that that was speculative and
14 that we will never know the exact failure mechanism.

15 Q Yes.

16 A And so we had to -- to arrive at what the most
17 logical postulated failure mechanism is. And so I think
18 they did a good job in arriving at that.

19 At the same time, we don't have a camera on it.
20 We don't have tape on it. We don't know.

21 Q Yes. And you're talking about specifically --

22 A The failure of the dam itself.

23 Q Yes.

24 A Not the overtopping. I think we understand very
25 clearly that we had instrumentation that was drifting.

1 And due to its coming loose and that the warrick probes
2 were set above the level that would ever be reached and
3 allowed the continuing of pumping.

4 Q Okay. Now, this -- this area that I'm going to
5 ask you about right now, I have a suspicion that you've
6 already covered significantly. So anyone who wants to
7 stop me, please feel free.

8 I'm -- I want to know in regard to -- to what
9 you -- you've -- if you've read the Rizzo report, you have
10 a pretty good summary of what, at least according to
11 Ameren's hired consultants heard in the events leading up
12 to the breach, correct?

13 A That's correct.

14 Q Now, I want to walk through some of these things
15 we sort of walked through before. And I want you to tell
16 me your perspective on it since you have a history at this
17 plant and you've got some experience generally dealing
18 with management in the plants.

19 First of all, in regard to -- let's start out
20 with the design changes that were done on the conduits on
21 the -- that housed the probes. And that would have been
22 in -- in fall -- late fall of '04.

23 The original design structure for those -- for
24 those probes had attachments that would have gone through
25 the liner. Do you recall that?

1 A I was at the plant on the original design.

2 Q Okay.

3 A And the original design would have had tubes
4 that would have been thoroughly welded to the liner.

5 Q Yes. Did you have anything to do with that
6 design at that point?

7 A I reviewed the design and inputted to the design
8 with the engineers.

9 Q Okay. Did you -- did you have a problem with
10 that design yourself?

11 A No, sir, I did not.

12 Q Okay. Now, it's my -- my understanding is that
13 design was changed because of concerns regarding going
14 through the liner. Is that your understanding?

15 A That's my understanding.

16 Q Did you -- do you agree with that as being a
17 reason to change that design?

18 A I really don't have the technical expertise to
19 disagree with it.

20 Q Okay.

21 A I'll have to rely upon the engineers that
22 reviewed the original. We did change companies in
23 mid-stream from the original liner supplier to a different
24 installer. And it's my understanding they had concerns
25 with that, also.

1 Q Okay. If you -- if you had been in the
2 situation where you were still manager at the time that
3 the outage was being done in '04, what -- what likely
4 would have been your reaction to a change in that design?

5 A I would have wanted to know the basis of it.

6 Q Okay.

7 A And if -- what the robustness of the new design
8 was, what we felt we would gain from it, why -- why it was
9 felt it would be a reason to change.

10 Q Okay.

11 A So the specifics of it if I would have been
12 manager at the time.

13 Q Do you know whether those questions were asked?

14 A No, sir, I don't.

15 Q All right. Now, there was a -- the change in
16 design on that -- on those brackets and attachments that
17 were done, are you --

18 COMMISSIONER GAW: Judge, are we where we need
19 to break?

20 JUDGE DALE: Yes.

21 COMMISSIONER GAW: And I -- I'm not asking for
22 me. But he's been up here a while and --

23 JUDGE DALE: We yes, he has.

24 MR. BYRNE: Yeah. It's a good -- appreciate it.

25 COMMISSIONER GAW: I'm starting to see some

1 expressions of concern on people's faces.

2 JUDGE DALE: It's been over an hour half right
3 now.

4 COMMISSIONER GAW: I can break right here if you
5 want to.

6 JUDGE DALE: Okay. Then let's break and be back
7 at 3:30.

8 (Break in proceedings.)

9 JUDGE DALE: Okay. We're back on the record.

10 MS. PAKE: Your Honor, just a housekeeping
11 matter. The Commissioners had asked about the course of
12 what had been marked Exhibits 4 and 15.

13 JUDGE DALE: All right.

14 MS. PAKE: It's just a sketch. That was
15 originally sketched by Warren Witt.

16 JUDGE DALE: Okay.

17 MS. PAKE: That was after the breach. There are
18 markings on there that he did not make, but the original
19 drawing was done by him.

20 COMMISSIONER GAW: Okay. We don't know who made
21 the additional markings, right?

22 MS. PAKE: We don't.

23 COMMISSIONER GAW: Okay. Are we on the record,
24 Judge?

25 JUDGE DALE: Yes.

1 Q (By Commissioner Gaw) Let's see. Where were
2 we? Okay. Mr. Fitzgerald, it -- I'm going back to the
3 time frame, again, when we were -- let's say in the outage
4 in '04. And I want you to give me a perspective -- your
5 perspective on what occurred, if you can, if you would,
6 based upon your -- your expertise in dealing with that
7 position.

8 A Not -- not having been there at the time --

9 Q I knew this was going to happen when we broke.
10 I knew -- I had a suspicion that this was going to be the
11 answer when I got back. Keep going.

12 A I don't have the technical expertise and was not
13 involved in the situation to be able to speculate on that.

14 Q I'm not going to ask you to speculate. I'm
15 going to ask you to tell me what you would have done if
16 you were there.

17 Now -- and I want you to describe for me in some
18 of these questions what would happen -- what the chain of
19 command should have -- protocol was when you were there so
20 that I can understand how this -- how this communication
21 was supposed to occur.

22 Now, let me ask you this first. When -- I know
23 this direction has been probably pretty significant. So I
24 -- I apologize for putting you in this position.

25 Now, if -- if you look at the change in the

1 design of -- first of all, there was a design that was
2 done in regard to placement of the warrick probes,
3 correct?

4 A That's correct.

5 Q Now, the warrick probes that -- as -- as it's
6 reported in the -- in the Rizzo report, they were
7 initially positioned by Tom Pierie -- is it Pierie?

8 A Commissioner, I do not know who originally
9 positioned the probes.

10 Q That's -- do you know that -- you know the
11 original report says that originally the high-high and the
12 high probes were positioned on the parapet wall, though?
13 You know that?

14 A Yes, sir.

15 Q And you know the Rizzo report indicates there
16 was a particular position that they were placed at,
17 certain -- that they had -- that it was reported that they
18 were placed at a certain height?

19 A Yes, sir.

20 Q Okay. And then the -- then it was reported that
21 at -- at some point in time they were moved up, correct?

22 A That's what the report states.

23 Q Yes. Now, the reason I want to -- wanted to
24 relay that foundation is because I -- I want to know from
25 you, in -- in that situation, when -- if you were the

1 manager of -- of Taum Sauk, who should have been -- what
2 was the protocol on who should have been told about the
3 movement of those warrick probes?

4 A Obviously, the plant superintendent or manager.

5 Q Okay.

6 A And the technicians and FERC.

7 Q And FERC. When would FERC have been informed?

8 A They should have been informed prior to the
9 movement if it was a change of a safety-related set point.

10 Q Okay. How soon after the change or --

11 A They should have been informed prior to.

12 Q Prior to. I missed it. Okay. Is that because
13 of FERC regulations?

14 A Yes, sir.

15 Q All right. They would have had the original
16 designs sent to them on the placement of those probes?

17 A Yes, sir.

18 Q Okay. The reason they get those designs is
19 generally what?

20 A It would allow them to review the design for
21 safety implications.

22 Q Okay. Now, in '04 and, -- in the fall of '04,
23 whose responsibility would it have been to have sent that
24 information to FERC, if you know?

25 A The engineer responsible for the design and in

1 the engineering department.

2 Q Okay. And what would the superintendent's role
3 -- plant superintendent's role have been in that?

4 A He would have been aware of it.

5 Q Okay.

6 A And it's possible that it could have went under
7 a cover letter with his signature. It would not have been
8 necessary.

9 Q Okay. Was there any written protocol that
10 you're aware of at that time in regard to that --

11 A No, sir.

12 Q -- issue?

13 A No, sir.

14 Q Okay. That's fine. Now, anyone else -- would
15 anyone else have been told about that movement under the
16 -- the protocol that was followed at Taum Sauk?

17 A I -- I don't know what protocol was followed in
18 2004.

19 Q What about when you were there or earlier?

20 A The previous practice would have been to have
21 informed the Osage operators and the plant technicians and
22 staff at the -- at the Taum Sauk plant.

23 Q Okay. Whose responsibility would it have been
24 to do that, to make that notification?

25 A That would have been a management person at the

1 Taum Sauk plant.

2 Q Okay. Ultimately, who -- who would hold the
3 responsibility to ensure that it occurred?

4 A Plant manager.

5 Q Okay. Or the superintendent if there was none?

6 A Yes, sir.

7 Q Okay. Now, if -- if you had been there at that
8 -- at that time and there was a report to you that these
9 -- these warrick probes are being moved up, what
10 information would you have requested or demanded regarding
11 the movement of those probes?

12 A Well, not having been there at the time --

13 Q Yes.

14 A -- I'm -- I'm afraid that I can't speculate as
15 to everything I would have asked.

16 Q Tell me some of the things that you would have
17 asked for or you know you would have asked for.

18 A I believe I -- I provided that previously.

19 Q Did you? Earlier today?

20 A To your previous question, Commissioner, on the
21 types of things that I would have inquired about.

22 Q Did you?

23 A And that would have been --

24 Q Yeah. Refresh my memory. Go ahead.

25 A The basis -- the basis for the movement.

1 Q The basis for the movement?

2 A The safety significance, robustness of the
3 design.

4 Q I think that might have been somebody else's
5 question, but keep going.

6 A Okay. Those -- those are the types of things.
7 But, again, it would have been specific to the instance of
8 occurrence. And -- and I don't know the -- the --
9 everything that was going on, the -- the demands that were
10 being placed on the superintendent's time, whether he was
11 available.

12 I don't know the -- the parameters there of
13 everything that was going on, so I really can't say in his
14 place what I would have done.

15 Q Well, I'm looking for two things here from you
16 on -- on this line of questioning. One is -- is what you
17 would have followed at -- if -- if -- if you were told
18 certain pieces of information.

19 And the other is whether or not that -- that's
20 something that -- if -- that you would have been doing
21 pursuant to a protocol within the company or because
22 that's something that you would do because this is you,
23 this is how you manage.

24 A I can do that.

25 Q Go ahead.

1 A We did not have a defined protocol at the
2 time --

3 Q Okay.

4 A -- for addressing these issues.

5 Q Okay.

6 A So what I would have done would have been with
7 my best judgment as a manager --

8 Q All right.

9 A -- and based on my previous experience.

10 Q Yes. Okay. That -- that answers the second
11 half of my question, then.

12 In regard -- in regard to what you would have
13 done and -- and as a -- as a manager with your experience,
14 would you have inquired in regard to the height of those
15 warrick probes as compared to the height of the low point
16 of the parapet wall?

17 A I believe I would have. But having not been
18 there with the way -- I don't know how it was presented --

19 Q I'm not --

20 A -- as to the changes.

21 Q I'm --

22 A So I really can't comment on that.

23 Q And I -- I know that -- that the question
24 invites a conclusion on your part, that I -- that -- that
25 it is an attempt to criticize certain individuals in their

1 decision-making.

2 I am looking for your perspective on what you
3 would have done under -- under those circumstances. And I
4 understand that the facts that were known by those
5 individuals may not have been the same as what I'm asking
6 you to assume that you would have had at the time. So --
7 so because --

8 A One,

9 Q -- because of that, it is not inviting,
10 necessarily, a direct comment on -- on what they did with
11 the information they had. Now, what I'm -- so what I'm
12 asking you is but is --

13 A In general what I would have done.

14 Q Yes.

15 A I would have continued to ask why until I was
16 satisfied --

17 Q Okay.

18 A -- that we had an adequate justification and
19 reason for doing such.

20 Q All right. And going back to this -- this issue
21 that -- that I was asking about the relative position of
22 those warrick probes to the low point of the parapet wall,
23 would that have been an important consideration in your
24 mind in -- in processing the height of where those probes
25 were set?

1 A I'm -- I'm afraid that my feelings on that is
2 clouded by what I know occurred.

3 Q Yes.

4 A So, of course, I would say that would be an
5 important consideration. But that's through the mirror of
6 hindsight. And -- and I would hope that I would have done
7 such as the time, and I do not know that.

8 Q Okay. And you've already testified that there
9 was no protocol that existed to require that evaluation.

10 A That's correct.

11 Q You also testified, I believe, a little earlier
12 this morning that you were aware when you were at the
13 plant when you were previously manager of the plant that
14 there was settling of the parapet walls --

15 A Yes, sir.

16 Q -- and that there was information that was
17 required to be filed with FERC in regard to the -- to the
18 height of those walls.

19 A That's correct. That was included in our safety
20 report that we filed every five years.

21 Q Okay. Now, internally within Ameren, what was
22 done with that information?

23 A That was maintained by our engineering group
24 and, also, was at the plant, filed at the plant, the --
25 the safety report information, the survey information.

1 That was included in that.

2 Q Okay. And was it -- was it filed anywhere in
3 St. Louis?

4 A It would have been with the engineering group in
5 St. Louis.

6 Q Okay. Was it just -- do you know what they did
7 with it?

8 A No, sir, I do not.

9 Q Okay. And those measurements included -- were
10 measurements, if you know, to a certain point above sea
11 level or some other reference point? Do you know?

12 A The -- the information that I recall seeing was
13 both in that --

14 Q Okay.

15 A -- we had specific survey elevations relative to
16 mean sea level. And then we also had settlement from 1599
17 mean sea level. So that was reflected in the amount of
18 settlement.

19 Q Okay.

20 A And --

21 Q Why was 1599 used?

22 A That was the top of the original designed
23 parapet wall.

24 Q Okay. So if the low point of the parapet wall
25 on one of the panels was at 1596.99, we're talking about a

1 -- a little over 3 foot drop in -- in the height of the
2 wall over the course of the time since it was built? Is
3 that -- is that true? Or do you know?

4 A Did you say 1596.99?

5 Q Yes.

6 A That would give us slightly over 2 foot, I
7 believe.

8 Q Oh, okay. Because you said it was 1599?

9 A Yes, sir.

10 Q Yeah. Thank you. You're right. Your addition.
11 My subtraction. Okay. It's about 2 foot and, of course,
12 some of it didn't settle that much?

13 A That's correct. I -- I -- it's my understanding
14 we didn't have any of it that had settled that much.

15 Q All right. When you were there?

16 A Yes, sir. And it had stabilized at -- at that
17 point.

18 Q Okay.

19 A We --

20 Q Do you know what the low point in the wall was
21 when you left in 2002?

22 A I do not remember the exact figures.

23 Q Okay. You may have already said that.

24 A I -- I stated previously what I remember and
25 that we had settled approximately 1.3 foot --

1 Q Okay.

2 A -- was what my memory serves me.

3 Q Did you -- you did know at the time you left
4 what the low point was?

5 A Yes.

6 Q Okay. And -- and how did you know that?

7 A From looking at the survey results and the
8 reports.

9 Q Okay. And -- and why did you want to know that?

10 A Because that was the margin that I had from
11 normal operating level that -- that factored into that.
12 Now -- so that was why I wanted to know.

13 Q Okay. When -- I guess we can -- we can talk
14 about this a little bit right now. I'll get you
15 side-tracked here for a moment.

16 When you were dealing with that operating level
17 when you were there in 2002 and before, what was the
18 operating level?

19 A 1596 was the normal height level.

20 Q Okay. Now, how was that measured?

21 A It was measured by three different means.

22 Q All right.

23 A It was measured by the neutral buoyancy float
24 system that was commonly referred to as a skate.

25 Q Yes.

1 A We had a pressure transducer that was a back-up
2 level indication.

3 Q Okay.

4 A And we also had staff gauges, which would be
5 like measuring sticks that were positioned at repeated
6 intervals on the reservoir wall.

7 Q Oh, okay. So -- but the primary -- the primary
8 one was the skate that you're talking about?

9 A Yes, sir. The primary remote indication.

10 Q Okay. Was that the one that operated with these
11 glass bulbs?

12 A No, sir.

13 Q That that's a different --

14 A The glass bulbs were the emergency back-up
15 system that was subsequently replaced by the warrick
16 probes.

17 Q Okay. Got you. From the -- from the standpoint
18 of those -- of that device, what was its reference point?
19 How did it know 1596 was 1596? Was it a reference to some
20 place on the wall? Or was it a measurement taken
21 determining the sea level? Do you know?

22 A It was not a measurement taken to sea level. It
23 was taken relative to the wall.

24 Q Yes. That is, in fact, pointed out, is it not,
25 in the FERC report?

1 A Yes, sir.

2 Q You don't have a copy of the FERC staff report
3 in front of you, do you?

4 A No, sir, I don't.

5 COMMISSIONER GAW: Does someone have that to
6 provide that to him?

7 JUDGE DALE: Which is it?

8 COMMISSIONER GAW: This is the first staff
9 report investigation team dated April 28, 2006.

10 MS. BRUEGGEMANN: Thank you.

11 MR. FITZGERALD: Thanks.

12 Q (By Commissioner Gaw) And when you have that,
13 if you'd turn to page 7 under the executive summary.
14 Hopefully we're on the same document. Does that look like
15 page 7 has the executive summary on it?

16 A Yes, sir.

17 Q And then down below there, there -- toward the
18 bottom of that page, there's -- there's a No. 1, para -- a
19 paragraph numbered one. It starts out, The project --
20 project had historically -- did you see that?

21 A Yes, sir, I do.

22 Q Would you read that into the record?

23 A "The project had historically operated with a
24 minimum of 2 feet of free board on the lowest section of
25 the parapet wall. Following installation of the geo

1 membrane liner in 2004, AmerenUE operated the project to
2 fill the upper reservoir within 1 foot of the lowest
3 section of the parapet wall.

4 Post-breach evidence shows the reservoir may
5 have been routinely filled to within 0.25 feet of the
6 lowest section of the parapet wall."

7 Q Now, in regard to the portion of what you just
8 read that deals with what historically had occurred, prior
9 to the geo membrane liner, is that consistent with what --
10 what you remember occurring while you were manager at Taum
11 Sauk?

12 A Yes, sir, it is.

13 Q Okay. Now, I want you to turn to page 15 --
14 excuse me -- 14. At the bottom of that page in that -- in
15 that paragraph that is after the -- the numbers that are
16 there that say first pump off, 1595, after that little
17 table, would you read the rest of that page?

18 A "Prior to the installation of the geo membrane
19 liner, upper reservoir levels were verified by staff gauge
20 attached to the parapet wall near the gauge house.

21 Because the staff gauge was affixed to the
22 parapet wall, it settled about 1 foot along with the
23 parapet wall. Due to the settling, AmerenUE believes the
24 upper reservoir was actually operating at 1595 feet
25 instead of 1596 feet.

1 The staff gauge was removed during the geo
2 membrane liner replacement in the fall of 2004. After the
3 installation of the liner, operations typically pumped the
4 upper reservoir to elevation 1596."

5 Q Now, based upon, again, the part of that that
6 you just read that relates to what occurred when you were
7 there in 2002 and before, would you say that's accurate?

8 A Yes, I would.

9 Q Okay. So even though you just testified a
10 little earlier that you were running the plant at 1596
11 when you were there, based upon what's stated here, while
12 you've got a reading of 1596, it probably was running
13 around 1595?

14 A I believe that to be true --

15 Q Okay.

16 A -- that we were reading 1596 by the level
17 instrumentation that we had calibrated relative to the
18 staff gauges.

19 Q All right. So the -- the FERC is, based upon
20 information it received out of this -- out of various
21 sources concluding or stating that they -- that it is
22 believed that the actual operating level post liner was
23 about a foot higher than it had been run previous to that.
24 That's what appears to be their -- their conclusion.
25 Would you agree?

1 A That's what I conclude from reading the report.

2 Q Yes. Do you know of any information that would
3 tend to dispute that from what you've read or heard?

4 A No, sir, I don't.

5 Q Okay. Now, I'll go back off of my segway. It
6 -- based upon what you know the practice to be regarding
7 -- regarding the way communication is -- is -- is supposed
8 to occur within Ameren, on those warrick probes, if there
9 had been a change in regard to the logic of the probes to
10 switch them from parallel to series so that you had to
11 cover both of them with water before they would go off,
12 was there a protocol within Ameren in 2004, or 2005, for
13 that matter, that would have said, these -- this
14 communication needs to be made to these individuals about
15 this change?

16 A Not to my knowledge.

17 Q Okay. Would there have been an individual in --
18 in -- in your experience and practice when you were at the
19 Taum Sauk plant who would have been required to have that
20 information?

21 A Individual at the Taum Sauk plant? Is that the
22 question?

23 Q Or elsewhere within Ameren.

24 A There was no individual, to -- to my knowledge,
25 that would have been required to receive that.

1 Q Okay. While you were at -- at the Taum Sauk
2 plant, would you have had some sort of individual
3 protocols that you would have -- have had in place or in
4 practice to ensure that you would have received that
5 information?

6 A There was no written protocol that would have
7 required that.

8 Q Okay.

9 A If it would have been done, unknownst to me.

10 Q Okay. Would you have had any directions that
11 would have been given out while you were there if such a
12 circumstance were going on that would have helped ensure
13 that you would have received that information?

14 A I had no written direction at the time I was
15 there.

16 Q Okay. And, again, I'm asking you a little bit
17 different question than that. I understand what -- your
18 answer. But would you have had any -- you yourself, as
19 manager, have given any direction to those who worked with
20 you on that plant to en -- to help ensure that you would
21 receive that information?

22 A I would have had an expectation that I be
23 informed of changes that were made to the control systems
24 and the logic prior to them being implemented.

25 Q Okay. And how would you have conveyed that

1 expectations to others?

2 A That would have been a verbal expectation.

3 Q You would have given that in meetings or other
4 things? How would you have done that?

5 A From daily interaction with plant workers and
6 other engineers that may have came to the plant.

7 Q Okay.

8 A And --

9 Q Go ahead.

10 A That's fine. Thanks.

11 Q It's okay if you want to say something that I
12 didn't -- didn't ask you. I don't mind.

13 A I -- I did have a letter, a document that I
14 provided --

15 Q Yes. Yes.

16 A -- to my staff on reporting incidents to me --

17 Q Okay. That's --

18 A -- that I wanted to be informed of.

19 Q That's helpful. Okay.

20 A And I had documented that and provided it to
21 them. And it was not specific to this type of instance.

22 Q All right. Did -- was that done while you were
23 at the plant?

24 A Yes, sir.

25 Q And did you keep a copy of it?

1 A I do not have a copy of that.

2 Q Okay. Do you know if anyone keeps copies of
3 things of that sort in Ameren?

4 A It is my belief that it would have been included
5 in the electronic files that we would have provided FERC.

6 Q Okay. Okay. That's helpful. Let's see if I
7 can find the right report here.

8 COMMISSIONER GAW: Could someone hand him the
9 independent panel of consultants report?

10 JUDGE DALE: Yeah. I don't have a copy of that
11 report. I have a copy of it.

12 Q (By Commissioner Gaw) Do you have that in front
13 of you?

14 A Yes, sir, I do.

15 Q Have you looked at that before?

16 A Yes, sir, I have.

17 Q All right. You might turn to page 23. Now, are
18 you familiar with the -- with the information that is --
19 that is kept in regard to the -- to the water level of the
20 -- of the plant as it is moving up and down?

21 A Yes, I am familiar with that.

22 Q Okay. Now, there is a -- in that next to last
23 paragraph -- and, really, this whole page sort of deals
24 with this. But in the next to the last paragraph, there
25 is some reference to -- of the stability of the water

1 level. And if you could, read that aloud.

2 A "The graphs of the upper reservoir water level
3 for December 1st through December the 13th, 2005, show
4 relatively stable indications during generation with one
5 or both units standstill and pumping with only one unit.

6 However, once a second pump starts, the water
7 level indications are generally more erratic. This tends
8 to confirm that the higher flow from two pumps is
9 providing the force moving the pressure transducers'
10 protective pipe."

11 Q Okay. First of all, can you -- can you tell me,
12 if you know, what it is that they're describing when
13 they're talking about the -- the graphs of the upper
14 reservoir level?

15 A This is referring to the volume control system
16 that we had that provided information relative to total
17 stored volume, and it tracked the lower reservoir and the
18 upper reservoir levels.

19 Q Okay. And was that kept -- was a graph of that
20 kept when you were working at Taum Sauk in its operation?

21 A We had a different system while I was at Taum
22 Sauk.

23 Q Yes.

24 A And we did keep the graphs.

25 Q Of a similar type?

1 A Similar type. Yes.

2 Q Okay. Those -- do you know whether or not, when
3 you were there, that information was being displayed as it
4 -- as the reservoir was filling or emptying, either one?

5 A It -- it was displayed on a monitor --

6 Q Yes.

7 A -- located in the plant. It was not required to
8 be on display.

9 Q Okay.

10 A And, of course, on -- during pump-back,
11 normally, the Taum Sauk plant would be unmanned.

12 Q Yes. But would that have also been displayed
13 elsewhere besides Taum Sauk?

14 A It would have been displayed at our Ameren --
15 would have had the ability to have been displayed.

16 Q Okay.

17 A It was accessible information. One graph that
18 we had at the Osage plant or at the Energy Supply
19 Operations center could have accessed it, too.

20 Q All right. When you were -- when you were at
21 the Taum Sauk plant, did anyone review this information on
22 a regular basis?

23 A I've reviewed the upper reservoir level graph
24 that was a permanent record that was made on graph
25 paper --

1 Q Yes.

2 A -- from the skate system.

3 Q Yes.

4 A And I reviewed it on performing my leakage
5 calculations on a weekly basis.

6 Q Okay. Was -- was that the primary reason why
7 you were reviewing it, or were there other reasons?

8 A I also reviewed it -- it was an indicator to me
9 -- if I was having any sticking, it was a validation of
10 that. My operators that I had at the Osage plant would
11 normally have alerted me to that prior to me ever seeing
12 it on a graph.

13 Q Who -- who would have done that?

14 A The operators at the Osage plant.

15 Q Okay. And why would they have known about it,
16 again?

17 A Because they monitored it. Any time that the
18 units were in operation, the operating protocol for them
19 was to continual monitor the level. They recorded it on a
20 half-hour basis.

21 During times when the units were not being
22 operated, they recorded the level on an hourly basis.

23 Q Okay. To your knowledge, was that monitoring
24 continued after the implementation of the new gauges in
25 the end of '04 after that?

1 A Yes, it was.

2 Q Okay. Do you know how much change there was, if

3 any, with regard to the use of that display in Taum Sauk

4 when you subsequently learned about that?

5 A No, sir, I haven't.

6 Q Okay. But it would have still, to your

7 knowledge, have been available information?

8 A Yes, it would have been.

9 Q All right. Now --

10 A This was --

11 Q Keep going.

12 A Not the graph, the hard paper copy graph that I

13 had -- since I was there, that was removed during the

14 instrumentation system change-out.

15 Q Okay. Would there have been the ability to

16 print out that historical information after the -- the

17 paper graph method was -- was replaced?

18 A Yes. There would have been.

19 Q Okay. Now, if you would have seen what is being

20 described in that paragraph in reviewing the -- the -- the

21 material as -- as you did -- and I realize the systems are

22 different. But would that have caused you to have any

23 further inquiry about -- about why there was -- there was

24 an erratic water level indication?

25 A Having not been there at the time, I really

1 don't know.

2 Q Well, based upon just having this information,
3 if you had seen this information, not known anything else,
4 would that have caused you to make further inquiry?

5 A It would have been cause for suspicion and
6 concern --

7 Q Okay.

8 A -- to desire what was going on.

9 Q Okay. Now, if you would have also had an
10 information that the transducers, the conduits were no
11 longer attached in places, how would that have added or
12 taken away from your concern with this erratic behavior?

13 A It would have increased my concern.

14 Q Okay. Now, let's jump forward a little bit to
15 September -- end of September of '05. And we know
16 historically now from what you have read that -- that
17 there was a -- an -- there was an overtopping of that, I
18 think the 27th of September. Is that -- is that your
19 understanding?

20 A Yes, sir. It's -- would be -- I understand that
21 it was by wind and wave action.

22 Q Well, I know that there -- that that is what is
23 assumed. But let's -- and I -- I understand why you say
24 that. But let's -- let's just -- would you agree with me
25 that there was an overtopping that is -- that's recorded

1 and documented?

2 A Yes. I would agree that water from inside the
3 reservoir was outside at some point.

4 Q Okay. I want to ask you about that one issue
5 for a moment. Is it generally windy on top of that --
6 Profit Mountain?

7 A Yes, sir, it is.

8 Q Okay. More so than it is generally when you're
9 -- when you get off of the mountain?

10 A Yes, sir.

11 Q All right. Is it also the case that -- that
12 when a storm comes through the area that the wind on the
13 top of the mountain is sometimes greater than it is at a
14 lower level?

15 A Yes. That is true.

16 Q And you can say, if you want to, why you think
17 that is.

18 A Well, it's a higher elevation, and the wind
19 characteristics vary at the higher elevations.

20 Q Okay. Is it foreseeable that there will be
21 fairly often a significant likelihood of -- of wind on top
22 of that mountain?

23 A Yes, it is.

24 Q Okay. And have you witnessed the wind action as
25 it relates to the wave action of that reservoir?

1 A Yes, I have.

2 Q Can you describe that for me a little bit in
3 regard to -- to what you've witnessed in the past?

4 A I have witnessed waves that would vary from 1 to
5 2 foot.

6 Q Okay.

7 A And that would have the potential for hitting
8 the parapet wall and spray mist coming over the wall.

9 Q All right. And you say hitting the parapet
10 wall. Is that -- help me understand that. Does that
11 assume that it wasn't hitting the parapet wall when you
12 were there previously except for the wave action? Or am I
13 misunderstanding here?

14 A I think you're misunderstanding me.

15 Q Okay.

16 A We would normally be on the parapet wall during
17 summer operations. And as we've discussed --

18 Q That's what I thought.

19 A -- the 1596 nominal level relative to the
20 settling, that would still give us the approximate 2 foot
21 of free board at the lowest spot.

22 Q Okay. Did you ever witness waves of over 2
23 feet?

24 A No, sir.

25 Q All right. But did you witness waves of up to 2

1 feet?

2 A That's an estimate and not exact.

3 Q But that's a -- is that a fair estimate?

4 A I believe so.

5 Q And was that unusual?

6 A It would be very unusual.

7 Q How -- tell me what that would mean in regard to

8 the course of a year.

9 A One or none occurrences.

10 Q One or none. And can you relate that to any

11 particular wind speed? Or is that possible?

12 A No. I really can't.

13 Q What about the -- the waves that you would

14 consider in the neighborhood of 1 foot? How often -- how

15 frequently -- frequently might that occur?

16 A At an increased frequency, the exact number on a

17 yearly basis, I can't recall.

18 Q Okay. Would you suggest to me that it would be

19 in the neighborhood of less than ten times, generally, or

20 more?

21 A I would suggest more.

22 Q Okay. Twenty?

23 A Perhaps.

24 Q Okay. Now, when -- when you got -- when we look

25 at -- at '05 in September, was there any protocol that you

1 were aware of that was in writing, first of all, about
2 what to do in the event that there was evidence of an
3 overtopping of the parapet wall?

4 A The emergency action plan --

5 Q Yes.

6 A -- would have had a procedure for dealing with
7 -- with that if you interpret it as such.

8 Q Okay. Explain what you mean.

9 A The -- the emergency action plan for the Taum
10 Sauk plant was really two plans. One was failure of the
11 upper reservoir dam. And the other was failure of the
12 lower reservoir dam.

13 Q Yes. Okay.

14 A The -- the results of either would have been
15 discharge of water.

16 Q All right.

17 A So if you would have had a significant
18 overtopping event, you -- it could have been interpreted
19 that that was a failure.

20 Q Would that have been your interpretation?

21 A Not necessarily.

22 Q Okay. But some -- some might interpret it that
23 way under the EAP?

24 A It would have been -- been dependent upon
25 probably the amount of water and damage --

1 Q Okay.

2 A -- the -- the likelihood of any subsequent
3 failure --

4 Q Yes.

5 A -- as to whether you needed to implement the
6 emergency action plan to protect the public life and
7 safety.

8 Q If it was interpreted that way, what would have
9 been the emergency action plan protocol for dealing with
10 it, if you know, in '05?

11 A There were immediate notifications made --

12 Q Okay.

13 A -- to the Johnson Shut-ins Park Superintendent.
14 Also, to the Sheriff's dispatch office who contacted the
15 Lesterville Fire Department. And there would then been
16 evacuations that would have taken place in ensurance of
17 people's safety.

18 Q Okay. And is it your understanding that no one
19 implemented the emergency action plan in September of '05?

20 A That's my understanding.

21 Q Okay. There was some event scheduled down there
22 on the 27th or 28th of the September, is that your
23 understanding, in '05?

24 A I am unfamiliar with that.

25 Q I'm eventually going to find somebody who knows

1 what that was, I think. Even though it probably would be
2 easier just to ask somebody right now, I'll wait.

3 The first week in October or right around the
4 first part of October, there was a discovery, as I -- as
5 we read the reports about a couple of things. First, that
6 the transducers and the conduits were -- were loose or
7 that there was a bend in them. Do you agree with me?

8 A Yes.

9 Q Okay. And, secondly, that the warrick probes
10 were set approximately 4 and 7 inches from the top of the
11 parapet wall at the place where they were located on on
12 the wall.

13 A I'm unfamiliar with that.

14 Q You are?

15 A Yes. I'm unfamiliar with that. That was
16 discovered in October.

17 Q Okay. Would that have been significant to you
18 if it would have been discovered?

19 A That would have been extremely significant.

20 Q And describe what -- why you say that.

21 A Because then they would have been positioned at
22 a point to where they would not have activated emergency
23 shutdown of the -- of the pumps and an overtopping event.

24 Q All right. And -- and that would -- this is all
25 very obvious. But that would have meant what in regard to

1 -- to the -- to the safety of that plant?

2 A It would have jeopardized the safety of the
3 plant.

4 Q Okay. If you would have known that and known
5 that the transducers -- let's say you knew that without
6 the transducer issue. What would have been your reaction
7 in regard to that plant's function if you were manager?

8 A My response would have been to take corrective
9 actions.

10 Q And -- and what would that likely have been?

11 A It would have been to ensure that the warrick
12 probes were properly set and that repairs were made to the
13 level control system or sufficient mitigating actions were
14 taken to ensure with reasonable assurance safe operation
15 of the plant.

16 It could have involved stationing people to
17 visually observe or other actions. I wasn't there at the
18 time. I don't know what kinds of constraints that they
19 had or the interactions that were going on.

20 So, again, I just really do not wish to
21 speculate on what I would have done.

22 Q But that would have been some of the things you
23 would have -- would have looked at and -- and worked
24 toward?

25 A I think that, again, a lot of my thinking in

1 retrospect is clouded by understanding what occurred.

2 That would be potential things that I could have -- could
3 have looked at.

4 Q Yes. But in regard to the -- the question that
5 -- the setting of these warrick probes, clearly, that was
6 a significant issue that you would have recognized?

7 A Yes, it is.

8 Q And the fact that the transducers were --
9 apparently had a bend in them and that they -- that they
10 -- they were obviously not placed where they were designed
11 to be placed, would that have been a concern?

12 A Yes. It would have been.

13 Q Okay. And -- and I this know has already been
14 done, but why would that cause you concern?

15 A Being pressure transducers that convert the
16 pressure to a milli-amber voltage signal to give a
17 relative -- relative corresponding level, they are
18 calibrated to be positioned at a certain depth, at a
19 stationary point.

20 So everything is relative to that position. If
21 they are no longer located in a position, that would
22 provide erroneous information.

23 Q Okay. Now, one of -- well, let me ask you --
24 ask it this way: Once that one becomes aware of the fact
25 that those transducers are not secure and that they --

1 that -- that they were -- that their level is -- is not
2 where they were originally set, is it -- is an appropriate
3 reaction to -- to that to reprogram the level at which
4 those transducers are designed to shut off within the
5 software?

6 A The -- the appropriate response would depend
7 upon what your understanding and belief relative to the
8 transducers were.

9 Q Yes.

10 A And -- and I believe that the actions that were
11 taken were believed to be an appropriate response and
12 provide adequate margin and adjustment to give accurate
13 readings.

14 Q You would have -- in order to make that judgment
15 or assessment, you would have to assume -- let's -- first
16 of all, would you agree with me that there was a -- there
17 was a reprogramming of the software that we know about now
18 that put in --

19 A It's my understanding that --

20 Q -- changed it to a 2 foot difference?

21 A That's correct.

22 Q Now, that assumption would have to, therefore --
23 or that change would have to depend upon an assumption --

24 A That's correct.

25 Q -- that -- that the amount of variation because

1 of the transducers being loose could vary by no more than
2 2 feet, wouldn't it?

3 A Yes.

4 Q Now, what information would -- would you need in
5 order to make that assumption?

6 A You would need to have some reference to the
7 reading of the instrumentation and compared to the actual
8 level.

9 Q Yes. Now, do you know whether that was done?

10 A No, sir, I don't.

11 Q Okay. Now, let me ask you this: When the water
12 is coming in on that reservoir, being pumped in, it's
13 being filled on the upper reservoir, is there turbulence
14 within that reservoir?

15 A Yes, there is.

16 Q All right. Now, if there was an observation
17 made visually, with the pumps shut down and that was
18 compared to the transducer reading, would that necessarily
19 have been the same in regard to checking levels as it
20 would have been while the pumps were running?

21 A No, it would not.

22 Q Tell me why not.

23 A Because of the turbulence that you -- you
24 mentioned.

25 Q All right. And that turbulence, in fact, could

1 -- could have caused an erratic reading in regard to the
2 levels as compared to what it would have been given if
3 there were no -- there was no turbine action?

4 A If the level transducers and tubing were loose,
5 yes, that's possible.

6 Q All right. And is it possible that the -- the
7 level that was being read by the transducers while there
8 was turbulence could appear to be lower than what it would
9 have read when the turbines were not moving?

10 A It's possible.

11 Q Okay. Do you know how that turbulence is in
12 that reservoir when it's being filled? Is there -- is
13 there a full pool or --

14 A When it is being filled, it is not a circular
15 turbulence necessarily. But it's more like taking a
16 garden hose and holding it on its end.

17 Q Yes.

18 A It's more like a fountain.

19 Q Yes.

20 A During generation when the level's being reduced
21 during the lower parts of elevation, you do get a -- a
22 toilet bowl swirl effect.

23 Q Okay.

24 A But on pumping, you do not.

25 Q Okay. So it -- it would be a more complex kind

1 of a turbulence that you would be getting on filling than
2 you would on a -- on it going out. Is that -- is that
3 true?

4 A It would be a different type. I don't know that
5 it would be more complex.

6 Q Let's just say that for now. Okay.

7 THE COURT REPORTER: Excuse me. I need to
8 change paper.

9 JUDGE DALE: Okay.

10 (Break in proceedings.)

11 Q (By Commissioner Gaw) If you would have had the
12 information that we described earlier in regard to the
13 knowing about the transducers being loose and knowing that
14 the warrick probes were set 4 to 7 inches off the top of
15 the parapet wall, would you -- would you have shut the
16 plant down?

17 A If I would have had all of that information,
18 that would have been my action to reattach the tubes and
19 -- and adjust the probes.

20 Q Yes.

21 A Not having been there, I don't know who knew all
22 of this information and had the complete picture of what
23 was going on and had put everything together. It was my
24 very deepest belief that if anybody would have known that,
25 they would have taken immediate action.

1 Q Okay. Now, are you -- are you aware from any
2 sources that -- that there -- there -- there was a call
3 made to Mr. Schoolcraft in regard to trying to get an
4 outage scheduled to do some work on these transducers?

5 A Yes, I am.

6 Q All right. What do you know about that?

7 A Just third and fourth-hand information.

8 Q Can you describe what you've been told?

9 A What -- what I have been told, I found to be
10 irregular based on my experience in that an engineer
11 contacted Mr. Schoolcraft.

12 Q Yes.

13 A That has not been my experience as to what our
14 normal protocol, even though it was unwritten, how it
15 worked.

16 Q All right.

17 A Normally, on requesting out of services and
18 outages, when it was on electrical distribution or on the
19 plant, someone that had the operating authority or
20 jurisdictional authority of the plant would be interacting
21 with Mr. Schoolcraft, not an engineer.

22 Q Okay. So -- so your experience would have been
23 that someone from the plant itself would have called?

24 A Yes. That would have been my experience.

25 Q Okay. If you had called Mr. Schoolcraft

1 yourself as -- as the plant manager requesting an outage
2 for multiple days in a row, what -- and you would not have
3 been given any outage time, what would have been your
4 reaction?

5 A I would have acted upon the first day --

6 Q Yes.

7 A -- and taken the unit out of service --

8 Q Okay.

9 A -- if it was jeopardizing the safety.

10 Q Okay. Were you surprised at the reaction that
11 has -- that you have been told about in regard to
12 Mr. Schoolcraft not scheduling an outage?

13 A Again, having not interacted with him, I don't
14 know the information that he received. In my previous
15 association with him, he was always very responsive to me.

16 Q Yes.

17 A And it's my understanding that any time that we
18 had a safety issue, he was immediately responsive to my
19 request. And -- and I want to clarify something,
20 Commissioner.

21 Q Yes.

22 A On a safety issue, it wasn't a request.

23 Q Yes.

24 A It was informing --

25 Q Yes.

1 A -- that I'm taking action, I'm removing the
2 plant from service, and this is the reason why. And
3 there's a distinction between requesting and out of
4 service based on a discretionary item versus removing a
5 plant from service because of a safety-related item
6 occurring.

7 Q Okay. And what written protocol existed to
8 define what constituted a safety violation in -- in --

9 A That was the plant manager's --

10 Q -- in 2005?

11 A That was the plant manager's judgment.

12 Q And what written protocol existed, the answer I
13 think you just gave, was none?

14 A There was no -- there was no protocol that
15 existed in 2005 as to what constituted a plant safety
16 issue.

17 Q Okay. And what training or discussions were
18 held with the plant managers and superintendents regarding
19 what constituted a safety issue during that time frame or
20 before?

21 A I'm unaware of any training that was conducted
22 specifically related to that. There was training
23 conducted on assessing risk.

24 Q Okay.

25 A And risk could be safety risk.

1 Q Yes.

2 A And -- and we did have training that we attended
3 on that at the manager level.

4 Q All right. Were the superintendents involved in
5 that?

6 A Some of them, but not all.

7 Q How was the decision made about who was and who
8 wasn't?

9 A That varied from plant to plant. Depended upon
10 the role that they played --

11 Q Okay.

12 A -- the complexity of the plant and the
13 likelihood of them being in a position to make a -- a
14 decision relative to safety.

15 Q All right. Do you know whether Mr. Cooper
16 received any of that training?

17 A To my knowledge, did he not receive that
18 training.

19 Q All right. And how often was that training
20 given?

21 A It was given one time, to my knowledge, to all
22 the plant managers. And then it was given periodically to
23 project engineers.

24 Q Okay. Was that training based upon any written
25 documents?

1 A Yes, it was.

2 Q And where are those documents, if you know?

3 A I do not know their location at this time.

4 Q Okay. Who would likely know that?

5 A Our Engineering Manager and Generation Technical
6 Support Services would likely know.

7 Q Who is that?

8 A That would currently be James Witges.

9 Q Okay. Changing direction a little bit on you
10 here, in regard to -- there was a statement that I think
11 you made to the Patrol that involved this -- discussed a
12 little earlier generating over the lower reservoir back
13 when you were in charge of the plant. There was an e-mail
14 about it.

15 A Yes, sir.

16 Q And this is sort of a nuance about it. What --
17 what was it that -- that caused that to be an issue again?

18 A The -- the cause of the issue or what
19 precipitated that was a lack of understanding with our
20 Ameren Energy traders and personnel and Energy Supply
21 Operations or power supervisors on when we were indicating
22 on level instrumentation that they could look at that we
23 still had water informant upper reservoir.

24 Q Yes.

25 A They believed that they could continue

1 generating. Well, there -- the upper reservoir capacity
2 exceeded the lower reservoir capacity, and it was possible
3 to generate more than it could hold, and then you would
4 overtop the lower reservoir.

5 At that point, even though it was designed to do
6 such, doing such, in my interpretation of the licensing
7 document, would have been outside of it.

8 Q Okay.

9 A And -- and we would also have incurred increases
10 in the east fork of the Black River level that would have
11 been unexpected and -- and, therefore, a potentially
12 unsafe condition.

13 So the operators at the Osage plant recognized
14 that we shouldn't do this. They were requested to
15 continue having the Taum Sauk plant in operation past the
16 point where I had provided the upper level for the lower
17 reservoir, the 749 and a half feet.

18 Q Yes.

19 A Prior to reaching that, but while they
20 understood they were going to be asked to continue
21 generating, they contacted me and said, Here's our
22 situation, what do you want to do? And I said, Absolutely
23 not. We will not do this. We are -- we're shutting it
24 off.

25 And at that time, I would call Energy Supply

1 Operation, inform them, and there was more or less a
2 training process to get through where everybody understood
3 when we needed to do to be within our licensing basis.

4 Q Okay.

5 A So for --

6 Q Did -- go ahead. Finish.

7 A Reaffirmation of this, to reaffirm it and to --
8 to give documented instructions, I generated the e-mail
9 and attached the operating levels for both generation and
10 pumping.

11 Q Okay. Did they generate down below your level
12 at some point prior to that e-mail?

13 A No.

14 Q So it never occurred?

15 A It never occurred.

16 Q Okay. Was part of the reason why that became an
17 issue because of fill within the lower reservoir that
18 accumulated over time?

19 A That did contribute to it, yes, sir.

20 Q All right. Was that fill ever removed, to your
21 knowledge, some of that fill?

22 A Not while I was at the Taum Sauk plant.

23 Q Do you know if it happened?

24 A Subsequently after the event, siltation
25 sedimentation, certain portions of that has been removed.

1 Q Subsequent to the breach?

2 A That's correct.

3 Q Okay. Now, at the time that -- that Taum Sauk
4 was being utilized while you were there, was -- was --
5 what was the situation in regard to dispatch of the
6 AmerenUE generation fleet and its -- its uses? Can you --
7 and what I'm asking you about has to do with who -- who
8 received the generation, what load and whose load received
9 that generation generally as a priority order.

10 A The -- the priority was for our own customers.

11 Q For UE's customers?

12 A Or for Union Electric's customers. As to where
13 the megawatts were going, I have no idea.

14 Q No. I'm not asking you that question. That's
15 totally -- that's a physics question. I'm -- we're not --
16 we'll not get into that because that -- that is totally
17 unrelated to the reality of who pays for electricity,
18 right?

19 A That's correct.

20 Q All right. So what I'm -- but what I am asking
21 you about, as far as -- from a financial standpoint and
22 who gets attributed to receiving that -- that generation,
23 who was -- who was receiving it from that standpoint?
24 First, would it be UE customers?

25 A That's my understanding. But, again, I was not

1 involved in the -- in the group that actually accounted
2 for that and reviewed or metering to see. As far as I was
3 concerned, our low dispatch group determined when the unit
4 would be placed in service.

5 Q All right.

6 A They contacted the Osage plant operators, and
7 they put the units in service. It was my responsibility
8 to have them available to be dispatched.

9 Q All right. So you don't know how it was done,
10 really?

11 A No, I really don't.

12 Q Okay. And you're not familiar with the Joint
13 Dispatch Agreement?

14 A I am aware of it, but I'm not familiar with all
15 its nuances.

16 Q All right. Well, how familiar are you with it?

17 A Probably very little.

18 Q It's probably a good answer. I can -- I can ask
19 others about it. Let's see. In regard to the -- your
20 involvement with the dispatch of other units subsequent to
21 your leaving the -- the Taum Sauk plant, have you been
22 involved with the dispatch of other units?

23 A Yes, sir, I have.

24 Q All right.

25 A I was directly involved with the Osage plant and

1 also with the Callaway Nuclear Plant.

2 Q Did any of that involvement cross over the --
3 the opening of the MISO markets?

4 A Yes, sir, it did.

5 Q Can you tell me, to the extent that you know,
6 what, if any, difference that you noticed in regard to
7 that change?

8 A The changes that I noticed were -- we were more
9 aware of return to service times of being exact on our
10 estimates as to whether we were going to synchronize. We
11 had very specific times. We also had very specific
12 loading rights that were provided to us and a loading
13 rates schedule that we were to follow.

14 And this was particularly important with our
15 Callaway plant as -- as it was a lot more megawatts and
16 had the potential to -- to change the grid more than
17 smaller units did.

18 So we were very aware of it. And the need to
19 have more exact communications about our capabilities and
20 our D rates and what the condition of the units were.

21 Q Okay. Does that cover the universe, pretty
22 much?

23 A Yes, sir.

24 Q Did you have any particular training or
25 education that was provided to you in regard to the

1 operation of the MISO markets?

2 A Yes, I did.

3 Q Can you describe that generally?

4 A We had had training about the conduct of
5 operations relative to MISO, about the changes on location
6 marginal pricing, the nodes that would be looked at, about
7 the operation of our transmission system.

8 I had specific training starting in 2004 and
9 repeated on an annual basis about the Federal Energy
10 Regulatory Commission code of conduct and what I was
11 allowed to see for information, what I was not allowed to
12 see, what I could communicate about and with who.

13 Q Okay. Does some of that relate to the -- to the
14 -- to the things that you were talking about earlier about
15 the separation of transmission and generation?

16 A Yes, sir, it does.

17 Q Okay. Anything else besides that that you would
18 particularly note?

19 A No, sir.

20 Q Okay. And you were on the generation side,
21 correct?

22 A That's correct.

23 Q Did you -- after the MISO market opened, did you
24 have access to information in regard to the pricing of --
25 the clearing prices of energy at particular nodes?

1 A Yes, I did.

2 Q Was that a significant bit of information?

3 A No, not really.

4 Q And tell me why not.

5 A I had no control over the pricing on the notes.

6 Q Yes.

7 A Any my -- my responsibility was to provide

8 availability of the units and the generation. And so I --

9 I had no impact on what price was in the markets or -- or

10 what the order of dispatch for units for liability were or

11 anything about that. That was outside of my span of

12 control --

13 Q Okay.

14 A -- and outside of my span of influence.

15 Q Now, in particular, in regard to -- to Taum Sauk

16 itself, based upon what you know about how Taum Sauk runs

17 and -- or -- well, did run, and based upon what you know

18 about the information that is available dealing with

19 prices at nodes off of MISO, is that information important

20 or relevant in regard to the running of Taum Sauk? Do you

21 know?

22 A Not the L&P, it is not.

23 Q Okay. And tell me why not.

24 A Again, that -- that is irrelevant to me. My --

25 my mission was to ensure that it was available to operate.

1 Q Oh, I --

2 A And -- and so it had no influence on me what a
3 -- what a particular note pricing was. Of course, it
4 reflected congestion and -- and things like that. But I
5 was not knowledgeable of why it was congested.
6 Transmission information was unavailable to me.

7 Q I understand that. I guess -- and what you're
8 -- I think what you're telling me -- and you tell me
9 whether this is right or wrong -- is basically that you
10 are -- it's -- it's not information that makes a decision
11 in regard to what you do in -- in operating the plant.
12 Is --

13 A The MISO information has -- has no bearing on
14 what I do at the plant on making it available. It would
15 have potential bearing --

16 Q Yes.

17 A -- on discretionary maintenance activities.

18 Q Okay.

19 A But I would not be using that information. The
20 -- the scheduler within the Power Operations Group are
21 within our -- our Energy Supply Operations would be using
22 that information, not myself.

23 Q Would the information that I've been talking to
24 you about be of value to them?

25 A I believe it would.

1 Q So it's -- you're -- you're describing the
2 importance of it relative your role in managing the plant,
3 correct?

4 A That's correct.

5 Q I just want to make sure I'm clear on the --

6 COMMISSIONER GAW: Just a second, Judge. I may
7 be about done here.

8 Q (By Commissioner gaw) Oh, I want to ask you a
9 little bit about the procurement of a diver in your
10 experience --

11 A Yes, sir.

12 Q -- in doing repair work. How did you handle
13 that when you did need a diver about -- about getting
14 somebody to come in?

15 A I called him on the phone.

16 Q You know he everybody keeps calling somebody a
17 diver, and I don't ever know -- I'm not asking for a name.
18 But what I'm trying to gather is did you all just have one
19 person that you relied on all the time?

20 A I had one primary diving company --

21 Q All right.

22 A -- that -- that serviced most of our AmerenUE
23 plants.

24 Q Oh, okay.

25 A And he had multiple divers that -- that worked

1 for his company. So I had a primary diver that I used at
2 Taum Sauk in the upper reservoir, who happened to be the
3 owner of the company. He wasn't the only one diving at
4 Taum Sauk, was a high risk evolution like diving into any
5 plant. So we would pick the phone up and call and leave a
6 message, and he would return a call as soon as possible.

7 Q Okay. And what kinds of time frames were you
8 used to dealing with when you needed a diver to come in?
9 Did you -- did you have availability issues on time, in
10 your experience?

11 A We occasionally had availability issues
12 depending upon what he was supporting and the rest of the
13 system.

14 Q What would you do if -- if you needed a diver
15 within a -- a short period of time, say, a day or two, and
16 this particular company weren't available? Did you have
17 another option?

18 A I had another option of calling another diver.
19 I did have other divers' names that -- I just never was in
20 that position --

21 Q Okay.

22 A -- where he couldn't meet my needs.

23 Q Okay. But there were others that you had that
24 -- that you -- that you had a list or something?

25 A That's correct.

1 COMMISSIONER GAW: Okay. Judge, at this point,
2 I think that I am through, at least for this -- this time.

3 JUDGE DALE: Okay.

4 COMMISSIONER GAW: Thank you, Mr. Fitzgerald.

5 MR. FITZGERALD: Thank you.

6 JUDGE DALE: Ameren?

7 MR. BYRNE: No questions, your Honor.

8 JUDGE DALE: Thank you. Mr. Fitzgerald, you're
9 dismissed from this proceeding for now. But you still
10 remain under subpoena and may be re-called if we resume
11 these proceedings at a later date.

12 MR. FITZGERALD: Thank you, your Honor.

13 JUDGE DALE: Thank you.

14 MR. BYRNE: Mr. Witt is on his way. Should be
15 here in seconds.

16 JUDGE DALE: Okay.

17 (Break in proceedings.)

18 JUDGE DALE okay. Back on the record. We're
19 ready for you to call --

20 MR. BYRNE: Warren Witt, Judge.

21 MR. WITT: Is this microphone on? Yes.

22 JUDGE DALE: Yes, it is.

23 JUDGE DALE: Mr. Witt, raise your right hand.

24 WARREN WITT,

25 being first duly sworn to testify the truth, the whole

1 truth, and nothing but the truth, testified as follows:

2 DIRECT EXAMINATION

3 BY MR. REED:

4

5 JUDGE DALE: Thank you. You may inquire.

6 Q (By Mr. Reed) Well, we can see the spelling of
7 your name up, there, W-i-t-t, correct?

8 A That's correct.

9 Q Mr. Witt, who do you work for?

10 A I work for AmerenUE.

11 Q How long?

12 A Since May of 1983.

13 Q What about before then? Where did you work?

14 A I was in college.

15 Q All right. What's your position with AmerenUE
16 now?

17 A I'm the Manager of Hydro Operations.

18 Q Okay. We'll get into what that is. But what
19 about before you were the Manager of Hydro Operations?
20 What did you do?

21 A I was the Manager of the Osage plant.

22 Q All right. And before that?

23 A I was the Manager of Callaway Nuclear Plant.

24 Q Okay. And what about before that?

25 A I was the Assistant Manager at Callaway.

1 Q And you've spent your entire career with
2 AmerenUE, correct?

3 A That's correct.

4 Q Okay. When you say that you were the manager of
5 the Callaway Nuclear Plant, does that distinguish from a
6 superintendent of that plant or --

7 A Yes.

8 Q Isn't that correct?

9 A The manager of the nuclear plant is different
10 than the superintendent. So yes.

11 Q Okay. And you indicated that after Callaway,
12 then you went to Osage?

13 A Correct.

14 Q And you were the manager there?

15 A Correct.

16 Q And now you are the manager of Hydro Operations?

17 A That's correct.

18 Q Okay. Tell us about what your position as
19 manager of Hydro Operations entails.

20 A Basically, I'm responsible for Ameren's three
21 hydro power plants, Osage plant --

22 Q Name them.

23 A -- Taum Sauk plant and the Kiakuck plant.

24 Q All right. You're responsible for all three of
25 those?

1 A That's correct.

2 Q Does each of those plants have a superintendent?

3 A Yes, they do.

4 Q And you're above those people, correct?

5 A That's correct.

6 Q So as the manager of each of those plants, what
7 do you do day-to-day? Like when you get to work, what do
8 you -- you know, what do you? What do you work on?

9 A Basically, oversee daily operation and
10 maintenance of all three plants. Mostly, I deal a lot
11 with programmatic issues, program developments, dealing
12 with a lot of the regulatory issues with the Federal
13 Energy Regulatory Commission.

14 Most of all, interface with our General Office
15 Building as far as with senior management directives go
16 through me to the three hydro plants.

17 Q So the -- you will take directives from higher
18 up down to each of the three plants, I take it?

19 A Correct.

20 Q And the information will flow through you back
21 the other way as well, correct?

22 A Correct.

23 Q How often do you go to each of these plants that
24 you manage?

25 A It varies. I try to get to each of the three

1 plants at least once every two weeks. My office is
2 actually located in Osage plant, so I tend to get to -- to
3 that one a little more often than the other two.

4 But I -- really, my time varies between the
5 three plants and our General Office Building in St. Louis.

6 Q I notice that you live in the area of Jefferson
7 City. Is that centrally -- somewhat centrally located
8 between the three plants?

9 A It's centrally located between Kiakuck and Taum
10 Sauk.

11 Q Okay.

12 A That's all -- it's about three hours to Kiakuck,
13 three hours to Taum Sauk. It's about 45 minutes to Osage.

14 Q All right. What date did you take over as
15 manager of Taum Sauk?

16 A November 1st of 2005.

17 Q Did you have any -- were you involved in any way
18 with Taum Sauk before November 1 of 2005?

19 A The Osage plant operates all three hydro plants.
20 So as the Osage plant manager, I was involved with at
21 least knowing what they were doing operationally.

22 Q Okay. Why did you get the Taum Sauk plant also
23 in November of 2005?

24 A The -- my boss, who had all three plants
25 reporting to him, had taken a different job assignment,

1 and the plant manager at Kiakuck plant had taken a
2 different job assignment. So it was decided rather than
3 to fill those two positions to just have those two plants
4 report to me.

5 Q In terms of the -- whenever -- whenever you
6 became involved with Taum Sauk, as I understand the chain
7 of command at that point -- well, before you took over,
8 Mr. Cooper was reporting to Mr. Birk, correct?

9 A Right.

10 Q And Mr. Birk was your boss?

11 A Correct.

12 Q Is he still your boss?

13 A He is still my boss.

14 Q All right. Cooper was reporting directly to
15 Birk. But then when you -- you came in in November 2005,
16 Cooper would report to you, correct?

17 A Correct.

18 Q Who would report to Birk?

19 A Correct.

20 Q Now, back in 2005, who would Birk report to?
21 Who was his supervisor?

22 A I -- I don't recall specifically.

23 Q What about now?

24 A Now he reports to Tom Voss.

25 Q And Tom Voss to Gary Rainwater, correct?

1 A Correct.

2 Q You're an engineer, correct?

3 A I am.

4 Q Mechanical engineer?

5 A Mechanical engineer.

6 Q I have some interviews or some notes of

7 interviews that you had with the Missouri State Highway

8 Patrol. Do you remember those?

9 A Yes.

10 Q I have three, I guess I would call them,

11 interview notes. Have you seen three of them?

12 A I have.

13 Q I'm going to -- have you had a chance to look at

14 those before today?

15 A I have.

16 Q Okay. Have you looked at them closely enough

17 that you could tell me whether there are any inaccuracies

18 in your mind in any of those three reports? Give me a yes

19 or no right now.

20 A Yes.

21 Q There are some. Okay. Let's go through the

22 reports. I've got copies. Do you have copies with them?

23 A I have. I probably ought to verify that the

24 ones I have are the same ones you have.

25 Q Okay. Let's do that. Let's start with the

1 earlier one, March 16, 2006.

2 MR. REED: Can I have an exhibit number, Judge?

3 A March 17th?

4 Q March 17th. I'm sorry.

5 JUDGE DALE: 27.

6 (Exhibit No. 27 was marked for identification.).

7 Q (By Mr. Reed) As you can see on this one dated
8 March 17th, I've blocked out some personal information
9 there. Can you tell me on this particular -- on this
10 particular document, can you identify something in it that
11 you believe is not accurate?

12 A Really, there's only one minor change to this
13 document that I see. And that's about halfway down
14 through paragraph 3.

15 Q Yes.

16 A On the right-hand side, you see this acronym,
17 EPOV.

18 Q Yes.

19 A That should be EMPRV. It's an acronym for a
20 computerized system we have. Other than that, I don't see
21 anything wrong with this. I will say, for all of these, I
22 cannot vouch for the date that this occurred on March
23 17th.

24 And, also, I could not vouch for the specific
25 individuals who were involved. I know I have met Sergeant

1 Breen on at least one of these he conducted, probably
2 multiple. I just don't remember that all of them were
3 him, necessarily. I'll take his word for it.

4 Q All right.

5 A Other than that, I don't see anything wrong with
6 it.

7 Q Okay. I want to move to the next one, and we
8 may get into the particulars of this a little bit later.
9 But for right now, let's move to the March 22nd, 2006.
10 This will be Exhibit No. 28.

11 MS. HOUSE: I'm sorry. Is that Exhibit 27?

12 MR. REED: Eight. 28.

13 (Exhibit No. 28 was marked for identification.)

14 Q (By Mr. Reed) Okay. Mr. Witt, how about this
15 one?

16 A This one, I don't see anything that I can say is
17 necessarily wrong. I will say, about halfway through
18 paragraph 2, it talks about a statement that says I said
19 that Tony Zamberlan moved some probes in October/November
20 2005.

21 I never recall having thought that or having
22 told somebody that. With what I know today, I -- I do not
23 believe that to be an accurate statement. I can't say,
24 though, that I didn't say that to this person back in
25 March of 2006.

1 During that time, I was escorting a whole lot of
2 groups through Taum Sauk doing different investigations.
3 I was not part of the investigation team. And I was
4 simply relaying to different groups things to be looking
5 for that I was hearing from different groups. So
6 everything that's said here that I say is mostly all
7 hearsay that I had. I can't say I didn't say that. All I
8 can say is I do not feel that is accurate today.

9 Q The -- the -- I would -- that was one of the
10 things I was going to ask you about is who told you that
11 Tony Zamberlan moved up the probes?

12 A I have no idea.

13 Q All right.

14 JUDGE DALE: Excuse me. Mr. Reed?

15 MR. REED: Yeah.

16 JUDGE DALE: The -- I have a report date
17 3/10/06, and it says -- it recounts events that happened
18 on March 22nd, '06.

19 MR. REED: I'll have to see what you have. It's
20 this report. The one date up in the right-hand corner, I
21 think is wrong.

22 JUDGE DALE: Oh, I think this date is wrong.

23 MR. REED: I'm using this date here.

24 JUDGE DALE: So we think that this date should
25 be 3/22?

1 MR. REED: I -- I don't know what that date
2 should be. I'm using this date right here, March 22nd
3 interview. That's how I'm referring to it.

4 JUDGE DALE: Okay.

5 MR. REED: Those numbers at the top -- that must
6 be the date the report was typed or -- I don't know
7 exactly.

8 JUDGE DALE: Is he a time traveler?

9 A One of those two dates is wrong.

10 MR. REED: Well, I'm referring to the date in
11 the first paragraph. How about -- how about I be clear
12 that way?

13 JUDGE DALE: Okay.

14 MR. REED: So that's 28.

15 (Exhibit No. 29 was marked for identification.)

16 Q (By Mr. Reed) All right. Exhibit 29 has a date
17 in the first paragraph, April 4th, 2007. And you have
18 one, right?

19 A I do.

20 Q What about Exhibit 29, Mr. Witt? Any changes?

21 A In paragraph numbered -- No. 3, there's a
22 sentence that says, He noted he'd only been in that
23 position prior to the breach since the latter part of
24 September 2005.

25 I took that position on November 1st of 2005,

1 not September of 2005. It was announced in the latter
2 part of September 2005, but I did not take the position
3 until November 1st.

4 Q All right.

5 A On paragraph 6, there's a sentence that reads,
6 He noted he was not yet completely on board as Cooper's
7 supervisor, so it was more of a FYI and that he supervised
8 Osage and Taum Sauk, and it was operated from there.

9 That second "and it" should be deleted because,
10 otherwise, this sentence reads that I supervised Taum Sauk
11 and that was not the case. I believe it should read, So
12 it is -- it was more of a FYI and that he supervised
13 Osage, and Taum Sauk was operated from there. That would
14 be a correct statement.

15 Q All right.

16 A Item 7 refers to an e-mail dated November 11th.
17 I'm not aware of that e-mail. I believe the correct date
18 for that e-mail is November 7th.

19 Item 9 refers to Highway Patrol tracking number
20 of 6737-40. I'm not aware of what that is. I -- the
21 e-mail I've seen that looks like it goes with Item 9 is
22 6738-40. So I'm not sure what 37 says. So I couldn't
23 verify this paragraph exactly.

24 Q Okay.

25 A But I think I know what it's talking about. The

1 last paragraph, paragraph 12, there's a sentence that
2 says, He noted the main reason he was promoted to
3 supervisor to the three plants.

4 And two changes to that. I wouldn't say it was
5 the main reason. I'd say it was one reason that I took
6 over the three plants. And the other one is the word
7 "promoted" is not accurate. I was not promoted to take
8 over the three plants. It was just the other two plants
9 were an additional job assignment.

10 Q Okay. With those changes or explanations, it's
11 otherwise accurate?

12 A Correct.

13 Q All right. Now --

14 A Again, I couldn't vouch for the date of these
15 interviews, but --

16 Q Okay. I understand.

17 MR. REED: Judge, am I expected to somehow
18 redact these with these changes and reoffer them at some
19 point? Or do the explanations in the record suffice?

20 JUDGE DALE: I think yesterday we were --
21 yesterday, or some previous day, we were actually asking
22 that corrected versions be put in the record at some
23 point.

24 MR. REED: Well, I understand. Can we discuss
25 that at a later point so I can get through the

1 examination?

2 JUDGE DALE: Yes.

3 MR. REED: Thank you.

4 Q (By Mr. Reed) Who else were you interviewed by
5 besides the Missouri State Highway Patrol?

6 A I don't recall everybody I was interviewed by.
7 There were --

8 Q Several, huh?

9 A A lot.

10 Q FERC?

11 A Yes. FERC. FBI.

12 Q Okay. The FBI.

13 A I talked with DNR people, our own in-house
14 people. The engineering company we hired that was Paul C.
15 Rizzo Engineering Firm, some of his people. I don't
16 remember who all else. There was a lot of people.

17 Q Okay. Well, we have -- we have some of them.
18 Have you been involved in the post-breach investigation?

19 A I was not on the investigation team. My
20 involvement really, as I said, was really kind of
21 escorting investigation teams around the plant site so
22 that they could do their investigation.

23 Q Who was in charge of the post-breach
24 investigation?

25 A I don't know.

1 Q Can you tell me whether -- is it -- is it just
2 AmerenUE involved in the post-breach investigation, or is
3 it Ameren -- Ameren as well as AmerenUE? Does that make
4 any sense?

5 A I -- there are several Ameren and/or AmerenUE
6 employees, and I don't know which ones work for AmerenUE
7 and which ones work for Ameren.

8 Q And Ameren Services as well?

9 A Ameren Services. Correct.

10 Q Okay. Were you involved in the decision to hire
11 Tony Zamberlan after the breach to assist -- for his
12 assistance in the post-breach investigation?

13 A No.

14 Q I wanted to ask you about something we heard
15 about today called a Dam Safety Group. Are you familiar
16 with that?

17 A I am.

18 Q Is that -- is that the correct name?

19 A Yes.

20 Q Is there an official name for this group of
21 people, I guess is what I'm asking?

22 A There is. It's a long name, and I couldn't tell
23 you what it is exactly. Dam Safety Group is -- I know who
24 you're talking about.

25 Q All right. When was -- when was it formed?

1 A It was formed sometime in 2006 as a response to
2 the breach and some discussions with FERC.

3 Q Who made the decision to form this group?

4 A I don't know.

5 Q Did you -- did you, I guess, receive a directive
6 from someone else that said, Mr. Witt, come help us with
7 this, or were you part of the decision-making to put
8 together the group?

9 A I was -- I never received a directive. I was
10 informed that we were considering forming a Dam Safety
11 Group and asked my opinion. And I felt that was a good
12 idea. It really wasn't my decision, and I wouldn't say I
13 was part of the decision. But I was asked for my opinion.

14 Q Have you been part of putting that group
15 together?

16 A Informally. They do not work for me. They are
17 independent of my organization. But, again, I was asked
18 my opinions on the make-up of that group.

19 Q Who do they work for?

20 A They work for Bob Powers in -- I think it's
21 Ameren Energy -- it's the engineering organization that
22 supports power operations.

23 Q Do you know whether or not the group was formed
24 in response to something that the FERC directed to Ameren?

25 A I do not know if it was directed. I know there

1 were a lot of discussions between Ameren and FERC on
2 things that needed to be done to improve our organization.
3 And that was one of them either recommended or directed by
4 FERC. I do not know which.

5 Q Do you -- do you know what kind of authority
6 this group of people has with regard to safety issues?

7 A I know they have authority to shut down our
8 hydro plants if they have a dam safety concern.

9 Q All right. So in other words, this group of
10 people could make a decision to shut down any of these
11 three plants in spite of what the superintendent or
12 manager might say?

13 A That's correct.

14 Q All right. As -- as your -- in your part in the
15 AmerenUE organization, what role would you have generally
16 in supervising the engineers from Ameren Services when
17 they're completing a project at one of the hydro plants?

18 A Essentially, they -- on their -- where -- my
19 organization is their customer. We have essentially
20 brought them in as our engineering support to deliver a
21 product or service to us. So my -- our role -- really, me
22 and my staff's role is their customer.

23 Q Do you know the name Steve Schoolcraft?

24 A I do.

25 Q Do you have any -- what kind of interaction do

1 you have with him on a -- on a day-to-day or week-to-week
2 or month-to-month basis?

3 A I don't interface with him on a daily or
4 necessarily weekly basis. But if we have a major outage
5 or a item that we need to take a plant or unit out of
6 service for some period of time, it's not unusual for me
7 to have a conversation with Steve. But not that
8 frequently.

9 Q What -- at what point in that sort of a
10 conversation when you need to have an outage for repairs
11 or something else, at what point do you get involved?

12 A As I said, normally, on a daily or weekly basis,
13 My staff at each plant handles that. And I don't normally
14 get involved for most outages. It would only be if there
15 were conflicts with getting it scheduled or if we needed
16 to make a significant change that was a concern to them.

17 Q Have I asked you who Steve Schoolcraft works
18 for?

19 A No.

20 Q Would you answer that for me?

21 A He works for -- again, I don't know his specific
22 department title, but it's our power supply organization.

23 Q It's AmerenUE?

24 A I believe it is. Yes. Now.

25 Q Okay. Are you -- are you certain about that

1 or --

2 A I'm not certain of that.

3 Q Okay. I guess what I'm getting at is, would you
4 have a supervisory authority over Steve Schoolcraft?

5 A I have no supervisory authority over Steve.

6 Q Do you know -- do you know who his supervisor
7 is?

8 A I do not.

9 Q You don't know who that is?

10 A I do not.

11 Q I guess, with regard to any outage and any
12 conversation you've had with Mr. Schoolcraft, you've not
13 had occasion to go beyond him to his supervisor to discuss
14 that issue?

15 A I have in the past on occasion. He had
16 different supervisors. And it wasn't that I necessarily
17 couldn't work something out with Steve. It was of a
18 significance that I felt it warranted talking to his
19 supervisor.

20 Q Who was the supervisor you talked to?

21 A I believe Tim Lafser at one time was -- I don't
22 know if it was his direct supervisor, but he was high up
23 in that organization.

24 Q Is it Lafser?

25 A L-a-f-s-e-r.

1 Q All right. Thank you. Do you remember -- with
2 regard to talking to Mr. Lafser in particular, what was
3 the occasion for talking to him about an outage?

4 A I don't remember a specific occasion.

5 Q Do you remember -- do you remember any specific
6 occasions in talking with Mr. Schoolcraft about an outage?

7 A Well, one of particular interest here was the
8 spring outage of 2006 for Taum Sauk. I believe I had some
9 discussions with Steve about that.

10 Q Okay. I think we'll get into that more in
11 particular in a little bit. But I've got some other
12 general stuff I want to get at first.

13 A Okay.

14 Q Other than -- other than the Taum Sauk outage,
15 the spring outage, do you remember any other specific
16 cases where you talked to Mr. Schoolcraft about an outage?

17 A I don't remember a specific one. I've had lots
18 of conversations through the years with Steve.

19 Q Is there -- do you recall any resistance with
20 Mr. Schoolcraft with regard to scheduling outages?

21 A No. I -- I want to make the statement, I guess,
22 that in all my years of dealing as a plant manager at
23 Callaway, Osage and over all three plants, I've never had
24 a time where I felt I needed to have an outage that I was
25 denied having that outage.

1 Really, their role is to bring up to the
2 operating staff concerns, market concerns or different --
3 better opportunities to have an outage. And they express
4 those concerns. And then I make a decision and tell them,
5 This is when I want it, and that's when we do it.

6 Q Is it -- is it generally difficult to get an
7 outage scheduled within 24 hours?

8 A Not if you need one.

9 Q There are some -- some things I want to get
10 straight that maybe you can help me with. We've heard
11 about Energy Supply Operations. Are you familiar with
12 that term?

13 A Yes.

14 Q Is that Steve Schoolcraft's group?

15 A I believe it is.

16 Q We've also heard about a trading group. What
17 would that mean to you?

18 A Same group to me.

19 Q Same group to you. The --

20 A May not be accurate. They're -- they go through
21 reorganizations, and I -- I'm not sure I necessarily know
22 the different names of the actual departments because
23 they've been split off between different FERC rules and
24 stuff.

25 But to me, Energy Supply Operations, Power

1 Supply Supervisor, Trading is all the same person to me.

2 Q All right. Because I was going to ask you about
3 Power Supply Supervisor. Is that Steve Schoolcraft?

4 A He is not a power supply supervisor. He works
5 in that organization.

6 Q I see. Who is the power supply supervisor?

7 A There is a different person -- it's an around
8 the clock covered -- shift work covered position.

9 Q Oh, I see.

10 A It is not Steve.

11 Q There would be a number of people who hold that
12 position?

13 A Yes.

14 Q And that's Steve Schoolcraft's supervisor?

15 A No, it's not. I would say it's probably a peer.

16 Q A peer of his. All right. Where is -- what
17 about the group of people that are called load dispatch?

18 A Same group to me.

19 Q Same group to you. What about Energy Marketing?

20 A I wouldn't know that group.

21 Q What about Ameren Energy Marketing?

22 A I wouldn't know them.

23 Q Do you know anybody who works with Ameren Energy
24 Marketing?

25 A Not that I know of.

1 Q With regard to the -- to the Highway Patrol
2 reports that we went through, I wanted to ask you some
3 specific questions about some of those things. And we've
4 -- we've already heard some evidence today about some of
5 these things, but I -- I need to ask you, nonetheless.

6 Like with regard to Taum Sauk operating more
7 within the last five years than in the previous 35, are
8 you familiar with that statement?

9 A Yes.

10 Q Do you remember making it?

11 A No. But I think it's in one of these -- if I
12 can find it here. Would you like me to find it?

13 Q Does it ring true to you?

14 A Yes.

15 Q Well, why would you say -- can you explain why
16 the plant was operating more in the last five years than
17 in the previous 35?

18 A I'm sure I cannot do justice to that
19 explanation, but I will give you some idea. It really
20 depends on how our system is operated, what the market is.

21 The market has changed drastically in the power
22 industry to where peaking power is a necessary thing we
23 have to have to keep the lights burning during peak times.
24 And how the company chooses to use our power plants, what
25 reserve capacities we have, what the margin difference is

1 between daytime power versus nighttime power because every
2 time is generates, obviously, we have to pump it back up.

3 Q Can you -- I don't mean to interrupt.

4 A That's fine.

5 Q Can you give me specifically the changes in the
6 market or changes at Taum Sauk that have resulted in it
7 being used more in the last few years?

8 A Like I say, I think -- I think a very specific
9 change is the cost of peak power is -- is pretty high.
10 And, really, the different between the cost of peak power
11 versus the cost of nighttime power to pump it back up is a
12 large difference today.

13 And I don't think it's always been that way to
14 where it may not have been cost effective in the '70s or
15 '80s to pump it up at night and generate every day. It
16 was really used for -- simply for a reserve capacity. And
17 it sat there with not many starts and not a lot of
18 generation for many, many years through the '90s, really,
19 I'd say, when peak power prices really started escalating
20 and the difference really started becoming large.

21 And then in the late '90s, we did an upgrade to
22 that plant so that it had additional generation
23 capability. And that upgrade and the price difference in
24 power coincided pretty well that when we came out of that,
25 it was viable to run that plant nearly every day.

1 Q That was the upgrading the turbines?

2 A Correct.

3 Q I guess in 1999, correct?

4 A Correct.

5 Q What about the addition of a liner in 2004? Did

6 that affect the operation of Taum Sauk?

7 A I -- no. That had no impact on it.

8 Q No impact? Was there at any time that you're

9 aware of a change in the operating level of the Taum Sauk

10 reservoir after you took over in, what, November 2005?

11 A After November 1st, 2005, no.

12 Q What was the -- the operating level at that

13 point in time?

14 A I believe it was 1594. Again, operating level

15 is a little bit of an ambiguous term. There's different

16 set points, one that shuts off the first pump, one that

17 shuts off the second point -- pump. I assume you mean the

18 point of the last pump shut-off?

19 Q Yes, sir. That's what I'm getting at. I think

20 that's the way we've been using it, here at least.

21 A Okay.

22 Q And I think the number that you gave me was the

23 one I expected. Do you know -- I think that -- that

24 Mr. Cooper advised that the -- the operating level would

25 be set at 1594. I think he did that about October 7th of

1 2005. Do you remember that?

2 A Yes.

3 Q Do you know whether or not that -- that the
4 level -- the operating level of the reservoir was kept at
5 or below 1594 from the time that he sent that e-mail in
6 October up until the breach?

7 A Up until the breach? It was not or it wouldn't
8 have overflowed.

9 Q Well --

10 A Fifteen -- let me say, 1594, again, was an
11 indicated value. And we knew that it was not a real
12 elevation because the gauges were degraded. And it was
13 actually, I believe, intended that an indicated value of
14 1594 would be a real elevation of 1596 because that's what
15 we had always operated.

16 And I believe it was maintained at that
17 indicated 1594 or below up until the night of the breach
18 when the instrumentation degraded further, and then it was
19 -- still indicated less than 1594, but the real elevation
20 was obviously higher.

21 Q Well, I guess, you know, one of the things that
22 I haven't quite understood is whether there was -- there
23 was something done -- whether the elevation of the
24 reservoir was actually operated 2 feet lower than usual, I
25 mean, like the from the wall, like 2 or 3 feet down from

1 the top of the wall, or whether there was something placed
2 into the -- the logic where the -- what do you call it?
3 The PLC?

4 A Yeah.

5 Q That just indicated that 1594 was really 1596.
6 Do you see the difference?

7 A I do. When they made that change, it would have
8 changed -- real level in that reservoir would have dropped
9 by 2 feet.

10 Q Okay.

11 A Not indicated. Real level would have dropped by
12 2 feet.

13 Q And that's what Mr. Cooper intended, did he not?

14 A Yes, it is.

15 Q All right. And it's your belief that that
16 reservoir was operated for those two months, two-plus
17 months, from October to December at 1594 or below?

18 A Correct.

19 COMMISSIONER GAW: Excuse me, Counsel. I am
20 really confused at this point because I have just heard
21 him say two totally different things within the span of
22 the last three minutes. May I inquire, Judge?

23 JUDGE DALE: Yes, please.

24 CROSS-EXAMINATION

25 BY COMMISSIONER GAW:

1 Q I -- I believe just a little bit ago, Mr. --
2 Mr. Witt, you said -- and I would like the court reporter
3 to go back and look for this. Something to the effect
4 that we knew or that we intended that the -- that the
5 evaluation of 1594 was 15 -- meant an operating level of
6 1596.

7 COMMISSIONER GAW: Now, I am misquoting that, so
8 that's why I want you to go back and see if you can find
9 that for me.

10 THE COURT REPORTER: Okay. If this isn't what
11 you wanted, you'll have to tell me.

12 (The answer was read back.)

13 COMMISSIONER GAW: Okay. That is -- that is
14 what I wanted you to read.

15 THE COURT REPORTER: Okay.

16 Q (By Commissioner Gaw) And, Mr. Witt, I'm not
17 going to, at this point, inquire about the latter part of
18 what was just read back. But what I'm interested in is --
19 is the very first part of what she was reading.

20 A Yeah.

21 Q Is it -- is it accurate, what she just read
22 back, in regard to what was perceived to be the actual
23 operating level of 1596? Is that accurate?

24 A Yeah.

25 Q Okay. So -- so the instrumentation was changed

1 to show 1594 as the shut-off, correct?

2 A Right.

3 Q But it was understood or believed that that was
4 allowing the reservoir to operate at a level of about
5 1596?

6 A Well let me -- let me say this --

7 Q Is that accurate or not?

8 A That may not be exactly accurate. And I did say
9 that. And let me correct it a little.

10 Q Well, you may.

11 A Let me say this. What we knew was we had a set
12 point of about 1596.

13 Q Yes.

14 A And they found that the actual level was very
15 close to the top of the wall, within inches. Okay? So we
16 knew it was off by some amount, and we intended to adjust
17 it by 2 feet to at least compensate for however much it
18 was off. Okay?

19 Q All right.

20 A But when we adjusted it by 2 feet, it should
21 have dropped actual level by 2 feet.

22 Q What do you mean it should have dropped the
23 actual level?

24 A The change in the set point from 1596 to 1594,
25 all right, should have dropped actual reservoir level by

1 2 feet.

2 Q From what you would have had it at -- at -- when
3 the piezometers had formerly shut down at 1596, you're
4 saying, assuming that those piezometers were reading
5 consistently, it should have dropped the level of the
6 water from what it would have been with a reading of 1596
7 by 2 feet when you adjusted the -- the software to 1594?
8 Is that what you're saying?

9 A I don't -- I don't think so.

10 Q All right. Because I want to get this --

11 A I know. This is important.

12 Q -- absolutely clear.

13 A All right. Let's say this. With the set point
14 at 1596 --

15 Q Yes.

16 A -- we know the level was higher than 1596. The
17 instruments had degraded, and we found the level close to
18 the top of the wall. So I don't know the exact level.
19 Let's say it was 1597 and a half. Real elevation.

20 Q Okay.

21 A Okay. So with the set point of 1596, real
22 elevation was, for example, 1597 and a half. So we want
23 to get ourselves some margin, bring the actual level down.
24 So we adjusted it by 2 feet.

25 Q Yes.

1 A The day they made that adjustment, before the
2 adjustment, it went to 1597 and a half. After the
3 adjustment, it would have went to 1595 and a half real
4 elevation. Okay?

5 Q If you assume that -- if we assume that your
6 assumptions were correct, that would be what you would --
7 you would have as a result?

8 A That's correct.

9 Q But your statement that the assumption at the
10 time was that the resulting operating level of the
11 reservoir, the actual operating level, was just about the
12 same after the adjustment as what you had traditionally
13 run the plant at at 1596?

14 A It was the same as what we -- with no degraded
15 equipment and a set point of 1596. It would have been
16 very close to that value. Yes.

17 Q That's -- that's what I thought you said
18 earlier. And I just wanted to make sure that you didn't
19 change that because I -- I didn't think it was your intent
20 to do that.

21 A No. You're right.

22 COMMISSIONER GAW: Okay. And I apologize for
23 interrupting, Mr. Reed. And I have more questions on this
24 subject, but I'm going to wait. So go ahead. Thank you,
25 Judge.

1 JUDGE DALE: Sure.

2 CONTINUED DIRECT EXAMINATION

3 BY MR. REED:

4 Q (By Mr. Reed) I wanted to move to your -- one
5 of the Highway Patrol reports where you told the Highway
6 Patrol that cost was never a factor in fixing the gauge
7 piping. Do you remember that?

8 A Yes.

9 Q What do you mean by cost?

10 A Cost for the equipment to repair it or out of
11 service time for the plant was not the issue.

12 Q Not even the cost of not using Taum Sauk for one
13 day?

14 A That's correct.

15 Q Because, you know, the reason I ask is that we
16 heard some testimony from Steve Bluemner who indicated
17 that he talked to Mr. Schoolcraft day after day about
18 getting this outage reduced for repairs and he was told
19 not now.

20 A Uh-huh.

21 Q So other than cost, what would be the reason
22 that we couldn't take one day and -- and repair the gauge
23 piping?

24 A Well, they -- we need Taum Sauk to provide
25 peaking power. And it depends, again, on what reserves we

1 have and what other power plant availability there is to
2 best schedule a plant to do that type of repair.

3 Q If Taum Sauk --

4 A I'm -- I'm sure cost goes into that on somebody
5 else's end of the discussion, not mine.

6 Q But not -- not in your discussion?

7 A Huh-uh.

8 Q Okay. Well, in October/November of 2005, what
9 kind of peaking power would Taum Sauk be used for? Would
10 it be used for air conditioners or -- I mean, what kind of
11 peak would there be during that period of time?

12 A Well, all industrial loads -- there is -- there
13 are peaks all the time. How big those peaks are changes
14 throughout the year, whether it's air conditioning in the
15 summer or heaters in the winter.

16 But the real peak lows are probably more
17 industrial load because factories and large businesses
18 operate during peak times.

19 Q It -- it -- today, we heard from Mr. Fitzgerald
20 who was the manager of Taum Sauk from '99 through 2002.
21 Did you ever supervise Mr. Fitzgerald?

22 A Not during that period. He works for me now.

23 Q He does now?

24 A He does.

25 Q Okay. All right. He had indicated that during

1 his tenure at Taum Sauk, when he needed a repair outage,
2 he could usually get one within 24 hours. Has something
3 changed since 2002 so that it's much -- it's more
4 difficult to get a repair outage within 24 hours?

5 A No.

6 Q Nothing has changed?

7 A Not in my opinion.

8 Q You indicated to the Highway Patrol that you had
9 specifically decided not to hold off until the spring to
10 repair the gauge piping. Explain to us why not, why you
11 had decided not to hold off.

12 A Mostly, because it was something that didn't
13 require a major outage to fix, and it was a degraded piece
14 of equipment. And it doesn't justify to me to wait months
15 to get to a full plant outage in order to fix it.

16 Q You also told the Highway Patrol that you had
17 the decision-making in the ultimate repair to the gauge
18 piping. Remember that?

19 A Something to that effect, yes.

20 Q All right. Can you tell us what efforts you
21 undertook to help Mr. Bluemner get the outage for the
22 repair of the gauge piping?

23 A None.

24 Q You didn't do anything?

25 A I never talked to MR. Bluemner at that period.

1 Q As I understand it, you became manager -- Hydro
2 Operations Manager including Taum Sauk, November 1st,
3 2005, correct?

4 A Correct.

5 Q Were you aware of Bluemner's efforts --

6 A Yes.

7 Q -- during -- during the month of November 2005?

8 A Yes.

9 Q Did you have any discussions with him about the
10 outage he needed?

11 A No.

12 Q Did you have any discussions with Richard Cooper
13 about the necessary outage?

14 A Yes.

15 Q And tell us about those conversations.

16 A I don't specifically recall, you know, word for
17 word any detailed discussions. I know that we had
18 discussions. I knew that he was working with Steve
19 Bluemner to coordinate a time to get it fixed between the
20 needs of the system to run Taum Sauk and the support
21 groups, engineering and the diver that we needed to do
22 that repair.

23 Q Did you -- did you undertake any efforts to help
24 Mr. Cooper arrange for this outage?

25 A No.

1 Q And I take it, then, you never talked to Steve
2 Schoolcraft about this particular outage at Taum Sauk?

3 A I did not.

4 Q Now, it seems like -- it seems like earlier you
5 and I had talked about your discussions with
6 Mr. Schoolcraft and outages. And you said that you -- you
7 had had some discussions with him over the years about
8 particular outages, correct?

9 A That's correct.

10 Q Now, with regard to anything regarding Taum Sauk
11 in particular, what did you talk to Mr. Schoolcraft about?

12 A On a Taum Sauk outage?

13 Q Yes.

14 A We had an outage asked scheduled for the spring
15 of 2006, and there was discussions about how to best
16 schedule that and when to schedule it.

17 Q What do you mean by discussions? Is it -- is
18 everyone in a room, or how did the discussions go?

19 A No. Some of it was e-mail. Some of it was
20 phone calls. Some of it was face to face, although I
21 never had a face-to-face with Steve Schoolcraft. I had a
22 face-to-face with some other individuals in engineering
23 and Rick Cooper about it.

24 And there was just different ideas of what do we
25 need to be able to do the projects that were scheduled for

1 that outage? Could we take one unit at a time or did we
2 need to have two units during part of the outage?

3 And there was discussions about when to do it,
4 whether to start in March or start in April. And there
5 were even discussions about deferring that outage until
6 the fall. And we discussed and looked at the projects we
7 had and resolved when to best do that outage.

8 Q I have some e-mails that I want to show you that
9 I'm going to mark as exhibits, and I'll ask you a few
10 questions about those. The first one will be Exhibit No.
11 20 -- 30.

12 MR. REED: Is that right?

13 (Exhibit No. 30 was marked for identification.)

14 MS. PAKE: Steve, I just note that this -- the
15 copy I have seems to cut off in the middle.

16 MR. REED: It does. That's all I have. I don't
17 know where the rest of it is.

18 MR. SCHAEFER: I'll volunteer. I've got a more
19 complete copy. You can certainly use mine if you want to.

20 MR. REED: We may have to substitute this one.
21 This is all I have or could find at present.

22 MR. SCHAEFER: I'll find that for you real
23 quick. That's the complete, Steve. Just so we're clear,
24 the one I just gave you is going to be 30, right, not the
25 one --

1 MR. REED: Well, can we do -- can we do 30 and
2 30-A? Is that all right? They're the same. One's more
3 complete.

4 MR. SCHAEFER: Do you need 30 and 30-A? Can't
5 you just do 30?

6 MR. REED: We can just do 30.

7 Q (By Mr. Reed) Have you had a chance to look at
8 that, Mr. Witt?

9 A Yeah. But you didn't give me a copy of the more
10 complete one.

11 Q I don't have one for myself either.

12 JUDGE DALE: Here. We have extras.

13 MR. REED: All right.

14 A Thank you. This was a different e-mail.

15 MS. PAKE: Yeah. This is different. There's
16 additional e-mails on this --

17 MR. SCHAEFER: That's the complete strain.

18 MR. REED: The complete strain. Okay.

19 A It's a --

20 MR. SCHAEFER: What you have -- what you had is
21 your 30 starts on the bottom of page 1 and goes on -- it
22 has the complete second page.

23 A Okay. Yeah. I've got it. Okay.

24 MS. PAKE: It doesn't have the same
25 responsive --

1 MR. REED: Oh, it's probably from a different
2 person.

3 MR. SCHAEFER: Is it from a different person?

4 MR. REED: Can we mark those 30 and 30-A?

5 JUDGE DALE: 30 and 30-A.

6 COMMISSIONER GAW: You're going to win. Two
7 exhibits instead of one.

8 (Exhibit No. 30-A was marked for
9 identification.)

10 MR. REED: Well, for my purposes I'm going to
11 stick with 30. Others may have questions about 30-A.

12 A Okay.

13 Q (By Mr. Reed) I wanted to ask you about this
14 particular e-mail because this talks about the transfer of
15 Tom Pierie to the Sioux plant to scrubber installation.

16 Then we have -- this is basically an e-mail from
17 Mr. Cooper to you and to Mr. Birk. And it appears -- I
18 would characterize this as a plea to keep Mr. Pierie here
19 at Taum Sauk. All right?

20 As Mr. Cooper says, There -- there are problems
21 at Taum Sauk. We have control problems, and Tom Pierie is
22 the person who has worked on this project for two years.

23 A Correct.

24 Q And yet it -- it -- in spite of the spring
25 outage coming up and the controls upgrade, Mr. Pierie is

1 going to be transferred. So my question to you is this:
2 Why would a transfer like this be contemplated given the
3 serious problems that Taum Sauk had been experiencing up
4 to this point?

5 A Well, first of all, I don't know that there were
6 serious controls problems at Taum Sauk at this point.
7 This was an upgrade of equipment to a more modern
8 technology.

9 But the reason I would say that this would take
10 place is it's -- it's a work load management for the
11 engineering organization. He didn't work for me, and I
12 can't speak for what the priorities were and what
13 resources they had. But it's not unusual to need people
14 to change assignments based on the needs of the bigger
15 picture.

16 Q When you are -- when you got this e-mail from
17 Mr. Cooper, you took it seriously, didn't you?

18 A I did.

19 Q Did you -- what did you do in response to this
20 e-mail?

21 A I recall having conversations with Bob Ferguson,
22 who was Tom's supervisor, about this concern. And Bob
23 explained to me the needs of what he had in his work load
24 and why he felt comfortable that we could successfully
25 implement the Taum Sauk chromes.

1 I recall having a conversation with James
2 Witges, who was Bob's boss. And probably the biggest
3 thing, to me, was I went and talked with the contractor.
4 I don't remember the guy's name. I think his last name is
5 Wiergie (ph.). It's on one of these e-mails somewhere.

6 I met with him at Taum Sauk and talked to him
7 about his level of expertise to give myself comfort that
8 we had adequate expertise left to bring in a new engineer
9 and successfully complete this project.

10 Q Your concerns were alleviated and Mr. Pierie was
11 transferred, correct?

12 A I don't know if Mr. Pierie was transferred. My
13 concerns were alleviated.

14 Q The -- the response that Mr. Birk gave was that
15 he talked to powers about this and he will make sure we
16 have continuity and the same level of support. What does
17 that mean?

18 A Really, the same thing, what I just said. With
19 the contractor expertise that was on site and working with
20 Tom and that they would remain and that any new
21 engineering support we had would be brought up to speed
22 and be able to adequately perform this job.

23 Q The next exhibit I want to talk about is No. 18.
24 It's an e-mail that's already in evidence, as I understand
25 it. It should be -- it should include an e-mail, Friday,

1 October 7th, 2005, from Richard Cooper, to, in the first
2 entry there, is OSAG and then Warren Witt, et cetera.

3 MS. PAKE: Do you have a copy for the witness?

4 MR. REED: Yes, I do.

5 Q (By Mr. Reed) Are you familiar with this
6 e-mail?

7 A Yes.

8 Q We had talked earlier about -- and there may be
9 more discussion about lowering the -- the operating level,
10 I'll call it, down to 1594. And that's one of the
11 subjects in this e-mail, correct? If you look on the
12 second page on the top, first paragraph there on the top,

13 A Yes.

14 Q All right. What information does AmerenUE have
15 that would tell us whether or not 1594 -- to tell us
16 whether or not the elevate -- the water level stayed at or
17 below 1594? Do you understand my question? I can try to
18 rephrase.

19 A I'm not sure I do.

20 Q I guess let me put it this way: If I were to
21 ask Ameren for information to prove what kind of --
22 whether the reservoir was kept at 1594 or below, what
23 would I ask for?

24 A Well, we have historical level indication
25 trends. We have pump-back times. We have volume

1 indications for both reservoirs. And the investigation
2 teams, at least our in-house team and, I believe, also,
3 the Rizzo team, and I know the FERC team, they all looked
4 through reams of those trends. And my understanding is
5 they found it stayed very steady until the night of
6 December 13th.

7 Q Could I look at, I guess, logs that might have
8 generation information, like the number of megawatt hours
9 that were produced --

10 A Yes.

11 Q -- during a particular period? And could I tell
12 from those whether 2 feet of head were missing from --
13 from dates prior to October 7, 2005?

14 A You could. That would take some calculation to
15 be able to show that. I mean, the generation in the
16 pump-backs change every day. But you can make some
17 correlation, really, with the volume and the level
18 indication and the generation of pump-back periods. You
19 can make that correlation.

20 Q With -- with regard to using an operating level
21 of 1594, what kind of feedback did you hear from anyone
22 about whether that was a good idea or a bad idea?

23 A I'm not sure what you're asking for. I never
24 heard anybody say that was a bad idea at all. I think the
25 feedback from Rick -- and it's in this e-mail right here

1 when -- in the last paragraph, he makes the statement, We
2 feel confident that lowering upper reservoir levels shut
3 down at that point will keep us from overtopping the
4 reservoir wall. That's pretty good feedback from him. It
5 gave him a good level of confidence that he's protecting
6 the plant.

7 Q Do you recall from hearsay or any other source
8 any negative feedback regarding the 1594 level?

9 A No.

10 Q All right. The next exhibit I have is No. 20.
11 it's -- which has already been admitted into evidence, as
12 I understand it. The part that I'm going to talk about is
13 an e-mail from Mr. Cooper dated September 27, 2005, to
14 Pierie, Hawkins in the two line and then others in the
15 cc.

16 MR. REED: I'll give him one.

17 MS. PAKE: Okay.

18 MR. SCHAEFER: That's Exhibit 20?

19 MS. PAKE: Uh-huh. Yeah.

20 Q (By Mr. Reed) Have you had a chance to look at
21 that one?

22 A Yes.

23 Q I want to -- if you -- if you'd turn to the
24 second page, the first full paragraph there, if you look
25 down toward the end of that first full paragraph, it

1 begins with Jeff then added a .4 adjustment. Do you see
2 that?

3 A On the second page?

4 Q Yeah. Second page.

5 A I don't think I have the right e-mail, maybe.

6 Q You may not because I just realized that I may
7 have confused a couple of these up here. But let me try
8 again. Hand me that one. Yeah. I gave you the wrong
9 one. Sorry. Did you see that where it says the .4
10 adjustment?

11 A Yes.

12 Q Okay. Now, if you look back, this -- this is
13 from Mr. Cooper, and it includes you on the CC line,
14 correct?

15 A Yes.

16 Q Okay. I wanted to mention that, because when
17 you talked to the Highway Patrol in -- in one of the
18 interviews, you indicated to them that you didn't know
19 anything about the .4 fudge factor.

20 A Okay.

21 Q But you did know.

22 A I -- I -- at that time, I -- I probably did not
23 know what the .4 fudge factor was for.

24 Q Let's look down at the final paragraph where it
25 talks about moving the current operating level from 1596

1 to 1595. Do you see that?

2 A Yes.

3 Q It says it wouldn't be popular?

4 A Yeah.

5 Q This is before the decision to lower the
6 operating level to 1594, correct?

7 A Correct.

8 Q Now, who would this not be popular with?

9 A I don't know.

10 Q No idea?

11 A I assume he felt it wouldn't be popular with
12 managing marketers.

13 Q The imaging --

14 A I don't know. I don't know.

15 Q No feedback with regard to whether lowering the
16 -- the operating level 2 feet was a good thing or a bad
17 thing? Or let me say this -- was a bad thing? You got --

18 A Did I get any feedback to that?

19 Q Right.

20 A I did not.

21 Q The -- the next one I have is a different
22 e-mail.

23 MR. REED: So this will be 31, Judge?

24 JUDGE DALE: Yes.

25 (Exhibit No. 31 was marked for identification.)

1 Q (By Mr. Reed) Mr. Witt, this e-mail, Exhibit
2 31, is one sent by Cooper to Ferguson, Pierie and Scott.
3 But you were not included on this, right?

4 A That's correct.

5 Q But here he references the lower max level. But
6 this time, he's decided to lower the operating level to
7 1594, right?

8 A Yes.

9 Q He had done that two days before, apparently.
10 Correct?

11 A I don't know the day he did that.

12 Q He indicates that keeping the level -- the
13 reservoir lower amounts to some megawatts. And I'm sure
14 "everyone" wants to know what we were going to do. Do you
15 see that?

16 A Yes.

17 Q So, obviously, Mr. Cooper has some concerns
18 about lowering the level and what that means for megawatts
19 and revenue. Would you agree?

20 A I agree.

21 Q Did -- did you feel at the time back in the fall
22 of 2005 that lowering the operating level was going to be
23 an unpopular decision?

24 A I did not. I disagree with this statement that
25 Rick made here.

1 Q What's that?

2 A It didn't cost us megawatts, in my mind.

3 Q It didn't?

4 A It did not.

5 Q Why?

6 A It put us back to the actual level that we are

7 supposed to operate at, so I don't see where it was

8 costing us megawatts.

9 Q Put you back -- what do you mean you're

10 operating at the same as you'd always been? You've got

11 the same water --

12 A Same as where we were supposed to be.

13 Q Same as where you were supposed to be?

14 A That's correct.

15 Q So you're fudging the readings and putting in

16 1594, but it's really going up to 1596, right?

17 A Right.

18 Q So you're not operating at 1594?

19 A That's correct.

20 Q All right. Can you -- can you tell me whether

21 before the breach -- was there any written protocol for

22 bringing safety issues to the attention of supervisors?

23 A I'm sure there is.

24 Q Is there -- do you know whether there is a

25 definition of a safety issue within the Ameren

1 organization?

2 A I don't know.

3 Q Let's see. I'm almost finished. Exhibit 32.

4 There should be six -- six of them.

5 (Exhibit No. 32 was marked for identification.)

6 Q (By Mr. Reed) Mr. Witt, are you familiar with
7 the issues that Mr. Cooper is discussing in this November
8 15, 2005, e-mail?

9 A I'm familiar with the issues in general. I
10 don't recall this specific rain event, but it's not
11 unusual.

12 Q Do you -- you're included in the cc line. Do
13 you remember getting this e-mail?

14 A I don't remember getting it. But like I say,
15 it's not unusual.

16 Q Is it -- are the issues discussed in here a
17 concern?

18 A I -- I was not familiar with this e-mail, so I
19 just briefly went through it. I don't see anything of
20 concern just briefly going through this.

21 Q Well, can you explain -- I don't quite
22 understand it, so one of the reasons I have it is I wanted
23 you to tell me what's going on here --

24 A Okay.

25 Q -- what the problem is.

1 A The problem is, evidently, they had a large
2 rain. And, actually, it didn't even amount to be that
3 large of a rain down by Taum Sauk. It is very rocky
4 ground. And much rain at all runs off very quickly. And
5 all he's talking about here is we maintain a constant
6 volume between the lower and upper reservoir.

7 And, essentially, what that does is any water
8 that runs in, we let it out to -- you know, to keep the
9 river flowing, basically. So what it appears happened
10 here is we had a large rain. The level went up.

11 And so we have to open -- there's two gates down
12 on the lower dam, a small gate and a big gate. And we
13 open those, and we watch the trends. And we try to open
14 them to turn that trend, to let it out.

15 Q And that's for the -- that's for the lower
16 reservoir?

17 A It only affects the lower reservoir.

18 Q Is -- is there any effect to the upper reservoir
19 during high rain?

20 A The only effect would be if we did -- were not
21 able to get rid of this rain water, we would not be able
22 to generate because, our license, if the lower reservoir
23 has too much water in it, we can't dump more into it from
24 the upper reservoir.

25 Q Okay.

1 A So we have to get rid of it in order to be able
2 to generate.

3 Q So that's what this is addressing?

4 A That's what -- well, I don't see anything in
5 here that talks about generation. It's just saying get
6 rid of the water. That's what our license requires us to
7 do.

8 Q All right. Thank you. I just have a couple
9 more questions.

10 A Okay.

11 Q Have you ever had occasion to look at
12 Mr. Cooper's interviews with the Highway Patrol?

13 A No.

14 Q I wanted to ask you about something that --
15 something we've already talked about. Mr. Cooper had
16 expressed that in the past he had received pressure from
17 supervisors to keep the upper reservoir running. Were you
18 aware that he had felt that kind of pressure?

19 A No.

20 Q You were one of his supervisors, correct?

21 A I was.

22 Q As was Mr. Birk?

23 A Yes.

24 Q Who else would have been his supervisor?

25 A Chris Iselin.

1 Q And what was his position again?

2 A I don't know his title. He was -- I think he
3 was Director of Hydro Operations and Personnel. He had
4 all three plants reporting to him before. He's -- he's
5 the gentleman that left to a new position. Mark actually
6 only had us reporting to him for a few months, an interim
7 period, until they named me to that position.

8 Q Mr. Copper said that in this incident, meaning
9 Taum Sauk, he was not -- he had not been overruled, but in
10 the past, he had been with regard to keeping Taum Sauk
11 running. Are you familiar with any incident like that?

12 A I'm not.

13 Q Would -- if it -- if it's true that Mr. Cooper
14 had been pressured from supervisors to keep Taum Sauk
15 running, who are those people that I would talk to who
16 would be his supervisors besides you, Mr. Birk, Mr. Isel?

17 A Iselin.

18 Q I-s --

19 A I-s-e-l-i-n.

20 Q And anybody else?

21 A I believe when Rick was superintendent at Taum
22 Sauk, those were his only three supervisors. There was a
23 period when Rick was not the superintendent at Taum Sauk,
24 but he worked there working for Dave Fitzgerald.

25 MR. REED: Okay. Thank you, Mr. Witt.

1 JUDGE DALE: Let's take a break for ten minutes?

2 And come back at 25 with questions from OPC.

3 (Break in proceedings.)

4 JUDGE DALE: Let's go ahead. Okay. Back on the
5 record. And we're ready for OPC to inquire of the
6 witness.

7 MS. BAKER: I have no questions. Thank you.

8 THE COURT: Thank you. DNR?

9 MR. SCHAEFER: My goodness. That was fast.
10 Thank you very much.

11 CROSS-EXAMINATION

12 BY MR. SCHAEFER:

13 Q Mr. Witt, now, I know at this point you've been
14 involved in working with Ameren to determine what caused
15 the failure of December 14th, 2005, correct?

16 A Again, I was not part of the official
17 investigation team, but I was obviously at the plant for
18 months working with different groups investigating.

19 Q Okay. Have you reviewed the Rizzo report, which
20 is -- it's the report that -- that Rizzo -- the Rizzo
21 group put together for Ameren that was submitted to FERC.
22 Have you reviewed that?

23 A I reviewed it probably almost a year ago.

24 Q Okay. And then the next -- if I'm correct, the
25 next report that came out chronologically was the FERC

1 staff report. Did you review that?

2 A I don't remember reviewing that one.

3 Q And then -- let me ask you this: Were you --
4 Did you assist in putting documents together to supply to
5 FERC as part of their investigation?

6 A Yes.

7 Q Okay. And then the third report that came out
8 was the FERC Independent Panel report. Have you read that
9 one?

10 A Yes.

11 Q Okay. We'll get to those in a minute. Now, you
12 took over your responsibilities as being responsible for
13 Taum Sauk on November 1st of 2005, correct?

14 A Correct.

15 Q And that's -- that's before the breach?

16 A Correct.

17 Q Okay. So we can expedite this, you now know
18 that the gauge piping was disconnected at the time of the
19 breach, correct?

20 A Disconnected. I don't know if that term is
21 correct. It was degraded.

22 Q Okay. Well, you know that it was supposed to be
23 attached securely to the wall all the way from top to
24 bottom, correct?

25 A It was not attached to the wall. It was

1 attached to some cables to keep it straight. And it --
2 some of those attachments had come loose.

3 Q Okay. Because it wasn't supposed to move,
4 right? Wasn't supposed to be able to flop around?

5 A It was not supposed to flop around. It did have
6 to move. It had to grow linearly with temperature
7 changes.

8 Q Okay. Fair enough. But it was supposed to be
9 stabilized, correct?

10 A Correct.

11 Q And you are aware now that, at the time of the
12 break, it was not stabilized, correct?

13 A Correct.

14 Q Okay. At what point did you become aware that
15 the control piping was not stabilized?

16 A I knew that it had become degraded sometime in
17 middle of October.

18 Q Okay.

19 A Probably around October 7th.

20 Q How -- how did you find that out?

21 A Rick Cooper probably told me.

22 Q Did you discuss that -- that circumstance with
23 Rick Cooper?

24 A Yes.

25 Q Okay. Who else did you discuss that with other

1 than Rick Cooper? And I'm talking about in terms of from
2 the time you found out about that condition up until the
3 breach.

4 A I don't specifically recall. I probably talked
5 with Jeff Scott about it. He is at the plant. I probably
6 talked with somebody in engineering. I don't know who I
7 probably talked to. Bob Ferguson, maybe, in looking at
8 different repairs that we had to make.

9 Q Okay. Did you discuss that with Mr. Birk?

10 A I probably did. I don't recall it.

11 Q Okay. But you think you probably discussed the
12 fact that the gauge piping was not secure with Mr. Birk
13 prior to the breach?

14 A Yes.

15 Q Okay. Did you discuss it with Mr. Voss?

16 A No.

17 Q I take it you don't have regular conversations
18 with Mr. Voss?

19 A I do not.

20 Q Do you have regular conversations with Mr. Birk?

21 A I do.

22 Q Okay. Other than Mr. Birk and Mr. Ferguson and
23 Mr. Scott and Mr. Cooper, who else did you discuss the
24 condition of those gauge piping -- who else did you
25 discuss the condition of the gauge piping with prior to

1 the breach?

2 A I expect I discussed it with some folks at Osage
3 to explain to them what the condition was since they
4 operated the plant.

5 Q Okay. And who specifically at Osage did you
6 discuss that with?

7 A I don't know specifically.

8 Q Well, why would you discuss that with somebody
9 at Osage?

10 A As I said, we -- when we adjusted the set point
11 by 2 feet, they were the people operating. They needed to
12 understand what that set point adjustment was doing to
13 them.

14 Q We'll get to this in a minute. I'll come back
15 to it. But the decision to actually adjust the set point
16 2 feet, were you involved in actually making that
17 decision?

18 A I was not.

19 Q Okay. Who actually made that decision?

20 A I do not know for sure. I assume Rick Cooper.

21 Q Okay. But you were Rick Cooper's supervisor at
22 the time the decision was made; is that correct?

23 A I was not.

24 Q Okay. That's because the decision was made in
25 October, correct?

1 A Correct.

2 Q But were you aware of the decision being made at
3 the time it was made in October?

4 A I was.

5 Q Okay. And then, also, you were -- you still
6 possessed that knowledge when you became responsible for
7 the Taum Sauk plan on November 1st of 2005, correct?

8 A Correct.

9 Q Okay. Now, are you aware at this point in time
10 that at the time of the breach the high-high probe was set
11 4 inches from the top of the wall and the high probe was
12 set 7 inches from the top of the wall?

13 A I was not.

14 Q I'm asking you right now. Do you know that now?

15 A Oh, what was the question?

16 Q Okay. As you sit here today, are you aware that
17 at the time of the breach on December 14th, 2005, the
18 warrick probes on the high end --

19 A Yeah.

20 Q -- the high was set at 4 -- or 7 inches from the
21 wall, top of the wall, and the high-high was set at 4
22 inches from the top of the wall; is that correct?

23 A I don't know that.

24 Q Okay. As you sit here today --

25 A It sounds right.

1 Q As you sit here today, do you know that, or do
2 you not know that?

3 A I do not know that.

4 Q Okay. And have you heard anybody at Ameren ever
5 discuss that fact?

6 A Oh, yes. I've heard a thousand discussions
7 about where those probes were set.

8 Q Okay.

9 A I know they were -- let me say this. This is
10 what I know today.

11 Q All right.

12 A I believe they were set below the top of the
13 wall in the location that they were mounted.

14 Q Okay. In fact, I can't remember now. Did you
15 look the FERC independent report, independent panel
16 report? Is that one you said you looked at?

17 A I think I did. Yes.

18 Q And did you see that they actually concluded
19 that, at the time of the breach, the high was 7 inches
20 from the top of the wall and the high-high was 4 inches
21 from the top of the wall? Do you remember seeing that in
22 there?

23 A I don't remember seeing that.

24 Q Okay. Do you have any reason to disagree with
25 that?

1 A I do not.

2 Q Okay. When did you first become aware that the
3 high was set 7 inches from the top of the wall and the
4 high-high was set 4 inches from the top of the wall?

5 A As I said, I don't know that I knew that number.
6 I did not become aware of where those probes were set in
7 any place until after the breach.

8 Q Okay. But I believe you said that you were part
9 of a whole bunch of discussions, thousands of discussions,
10 I can't remember your exact phrases, in Ameren about that
11 subject, correct?

12 A After the breach.

13 Q Okay. That was all after the breach?

14 A Yes.

15 Q Okay. So prior to the breach, did you have any
16 knowledge that that's where the high and the high-high
17 were set?

18 A I don't know.

19 MS. PAKE: Objection. Asked and answered.

20 MR. SCHAEFER: He didn't answer that.

21 JUDGE DALE: What was the question again? If at
22 the time of the breach, were you --

23 Q (By Mr. Schaefer) At the time -- prior to the
24 breach -- well, if -- did you become aware prior to the
25 breach that the high probe was set at 7 inches from the

1 top of the wall and high-high probe was set at 4 inches
2 from the top of the wall?

3 JUDGE DALE: Okay. That has been asked and
4 answered.

5 MR. SCHAEFER: Okay.

6 JUDGE DALE: Because he's still not aware of
7 that.

8 MR. SCHAEFER: The problem is he said he was
9 involved in lots of discussions at Ameren, and I'm just
10 trying to figure out exactly when those discussions were.

11 MS. PAKE: Well, he's answered that they were
12 all post-breach.

13 MR. SCHAEFER: All right. We can move on
14 because I've got some documents I can ask some questions.

15 JUDGE DALE: Okay.

16 Q (By Mr. Schaefer) As you sit here today, are
17 you aware that the high and the high-high probes were
18 wired in series -- I'm sorry -- were wired series as
19 opposed parallel? Not wired, but programmed.

20 A I am.

21 Q Okay. When did you first become aware that the
22 high and the high-high probes had been programmed to
23 function -- or to trip in series as opposed to parallel?

24 A I don't remember the specific date. Sometime in
25 the spring of 2006.

1 Q Okay. Again, that would be after the breach?

2 A After the breach.

3 Q Okay. Do you have Exhibit 20 in front of you?

4 That's the e-mail from Richard Cooper to Steve Bluemner
5 dated September 27th, 2005.

6 A I have that e-mail attached to the back of
7 another e-mail.

8 Q Okay.

9 A Is that good enough?

10 Q Yeah. Is it marked -- it's Exhibit 20. Is it
11 marked on your exhibit?

12 A No. Mine are not marked.

13 Q Okay. Now, this e-mail, it's dated September
14 27th, 2005, at 4:35 p.m., correct?

15 A Correct.

16 Q And it's from Mr. Cooper to Thomas Pierie and
17 Chris Hawkins, correct?

18 A Correct.

19 Q And the ccs on there are Jeffrey Scott, Steve
20 Bluemner, Robert Ferguson and you, Warren Witt, correct?

21 A Yes.

22 Q Do you recall, did you receive this e-mail
23 around September 27th?

24 A I'm sure I did.

25 Q Okay. As you sit here today, do you recall

1 actually receiving it and reading it?

2 A I do not.

3 Q Now, I believe you said that you became
4 responsible for the Taum Sauk plant on November 1st,
5 correct?

6 A Correct.

7 Q Okay. When was the decision actually made to
8 make that part of your responsibilities?

9 A Around the middle of September.

10 Q Okay. So would it have been before September
11 27th, 2005?

12 A Yes.

13 Q Okay. So you were aware on September 27th,
14 2005, that Taum Sauk was going to be become one of your
15 responsibilities, correct?

16 A Correct.

17 Q Now, if you look at second paragraph, it says,
18 When the guys went up to the upper reservoir, they
19 witnessed what they described as Niagra Falls. Do you see
20 that?

21 A I do.

22 Q Okay. It says, Specifically, the northwest
23 corner of the reservoir. Are you -- I take it that as
24 part of your responsibilities in becoming responsible for
25 the Taum Sauk facility that you were aware of the

1 operating functions of the facility, correct?

2 A Well, I'm not sure what you mean by operating
3 functions.

4 Q Let me ask you this: That was a bad question.
5 Let me restate it.

6 Effective November 1st when you took over
7 responsibility for Taum Sauk, what did your
8 responsibilities include?

9 A As I answered earlier, I'm responsible for the
10 operations and maintenance of all three hydro plants.

11 Q Okay. So on November 1st, you became
12 responsible for the operation and maintenance of Taum
13 Sauk, correct?

14 A Correct.

15 Q And what did you do to satisfy yourself that you
16 knew what the correct operation and maintenance of the
17 Taum Sauk facility was?

18 A I -- I don't know how to answer that question.
19 I'm not sure what you're asking there.

20 Q Okay. Before November 1st, had you worked at
21 Taum Sauk before?

22 A No.

23 Q So before November 1st, did you have any
24 familiarity with how the plant functioned?

25 A Yes. I had familiarity as the manager of Osage

1 plant because we operated that plant. I had familiarity
2 in general how it operated, what its purpose was, when we
3 ran it, when it needed to pump up.

4 Q Okay. But on November 1st, your duties and
5 responsibilities in the operations and maintenance, those
6 things became yours then at that time, correct, the
7 operation and maintenance responsibilities?

8 A Yes.

9 Q Okay. Did -- you may have had familiarity
10 before from your time at Osage, but after November 1st --
11 or I take that back. At any point when you were going to
12 become responsible for the operation and maintenance, did
13 you do anything additional to look at -- at operating
14 manuals or specifics or anything on the Taum Sauk facility
15 to assure yourself that you understood how it was supposed
16 to be operated and maintained?

17 A Yeah. There's a lot of things. Mostly what it
18 involved is talking with the staff, walking through the
19 plant, having them explain to me various functions of the
20 plant, various pieces of equipment.

21 There was a one-week training session during the
22 month of November of 2005 that I went to with the plant
23 operators. And it was essentially an introduction class
24 to Taum Sauk.

25 It was a new class, first time that it had been

1 put on. And I attended that class because that plant now
2 worked for me.

3 Q Who actually put that class on?

4 A Ameren's training department.

5 Q Okay. So did anyone go through that class with
6 you, or was it just you by yourself?

7 A No. It was -- yeah. There was others that went
8 through it. Some of the operators at Taum Sauk.

9 Q Okay. Do you recall who anybody else that went
10 through that with you?

11 A No. But there's only nine people down there.
12 It was half of the nine. Four or five of them.

13 Q And was this a one-day class or --

14 A No. It was a week-long class.

15 Q One week -- a week-long class. In that class,
16 were you presented with any information regarding
17 overtopping of the reservoir? Was that a topic of
18 discussion?

19 A No.

20 Q At any point, have you looked at any operational
21 manuals or specifics for the facility regarding
22 overtopping of the reservoir?

23 A No.

24 Q Okay. On November 1st, were you aware that the
25 reservoir was not designed to overtop?

1 A Depends on how you say it. Yeah. I would say I
2 knew it wasn't supposed to overtop.

3 Q Okay. Are you aware that it was designed that
4 no water was supposed to ever come over the parapet wall?

5 A No.

6 Q You're not -- you weren't aware of that?

7 A No.

8 Q And do you believe it was acceptable to have
9 some water come over the top of the parapet wall?

10 A Acceptable? No.

11 Q Okay. So on November 1st when you took over
12 responsibility for the plant, you knew that no water was
13 supposed to ever come over the top of that wall, correct?

14 A No, I didn't say that. I said it wasn't
15 acceptable. It's not an accepted practice to have water
16 come over the top of that wall.

17 Q Right. Why --

18 A Waves or wind blowing water.

19 Q Why is that?

20 A It wasn't designed to be flowed down the side of
21 a hill.

22 Q Okay. Now, when you got this e-mail on
23 September 27, 2005, from Mr. Cooper, he describes Niagra
24 -- what -- what he calls Niagra Falls at the northwest
25 corner of the reservoir, correct?

1 A Correct.

2 Q When you got this e-mail, did that cause you any
3 concern?

4 A No, it did not. Because I was at the plant the
5 day before this e-mail was sent, and I verbally talked to
6 some of the guys about this very event.

7 Q And who were those guys that you talked to?

8 A The whole -- most of the staff. We had a
9 celebration on September 26th, and it was kind of my
10 introductory to the plant staff. They had their families
11 there. It was kind of a picnic celebration.

12 And we're just sitting around talking, and some
13 of them bought up -- I think Chris Shorty was one of them.
14 But probably most of the staff was sitting there talking
15 about it.

16 Q Okay. And what were they saying?

17 A They used this term, Niagra Falls. And they --
18 they're -- what they were saying was we had very high
19 winds and they believed these high winds caused big waves,
20 bigger than what they had seen on that reservoir and those
21 waves were splashing over the top of that wall.

22 Q Okay. Did you see any water coming over the top
23 of the wall when you were there on the 26th?

24 A I did not go to the upper reservoir, so no.

25 Q Okay. In fact, when -- unless -- well, let me

1 restate that. Where were you on the 26th? Were you at
2 the pump house?

3 A No. At the Visitors Center.

4 Q And you can't see the upper reservoir from the
5 Visitors Center, can you?

6 A You cannot.

7 Q Okay.

8 A It's approximately a mile away.

9 Q Okay. But, again, the fact that Mr. Cooper used
10 the term Niagara Falls in this e-mail and you were there on
11 the 26th and people were discussing it looked like Niagara
12 Falls, that didn't cause you any concern?

13 MS. PAKE: Objection. Asked and answered.

14 A No.

15 Q (By Mr. Schaefer) And the next sentence goes on
16 -- sentence goes on to say, We had some small rock washed
17 away at the base of the parapet wall which left a trench a
18 foot deep in some areas. Do you see that?

19 A Yes.

20 Q Did that cause you any concern?

21 A No. I live on a gravel road. Every time it
22 rains, I have rock washed away.

23 Q But your gravel road is not holding in 1.3
24 billion gallons of water in a state park was it?

25 A Neither was that road.

1 JUDGE DALE: The witness should refrain from
2 volunteering any additional information.

3 A Okay.

4 JUDGE DALE: And the counsel should refrain from
5 responding to that.

6 MR. SCHAEFER: Yes, your Honor.

7 Q (By Mr. Schaefer) Now, Mr. Cooper goes on in
8 that sentence, and he's talking about winds from Hurricane
9 Rita. Or he says Rita. Do you see that?

10 A Yes.

11 Q Do you understand that to be Hurricane Rita?

12 A Yes.

13 Q Do you have any personal knowledge that there
14 was actually any elevated wind levels at the upper
15 reservoir from the remnants of Hurricane Rita?

16 A Firsthand knowledge, myself?

17 Q Yes.

18 A No.

19 Q Anyway, if you'll look at the fourth paragraph,
20 it says, This morning, Jeff and I went up to the upper
21 reservoir. The controls indicated we were at 1596
22 elevation. There were no waves on the surface, but we
23 could see a couple of wet areas on the west side of the
24 reservoir parapet wall. Do you see where I read that?

25 A Yes.

1 Q Okay. We pulled the vehicle up to these wet
2 areas and climbed onto the vehicle to see the water level.
3 We were surprised to see the level within 4 inches of the
4 top of the wall. It was above the top bat on strip
5 holding the vinyl on. This level is at least 6 inches
6 higher than what I remember from when we first came back
7 from the controls upgrade last fall.

8 Do you see where I read that?

9 A Yes.

10 Q Is -- is that what you discussed with
11 Mr. Cooper?

12 A No.

13 Q Okay. Did you ever discuss that with
14 Mr. Cooper?

15 A I don't know that we've never discussed it.
16 When I said we had discussed earlier about the waves
17 coming over the wall, it wasn't this piece.

18 Q Okay. But at least on September 27th, you knew
19 that at a time when there apparently were no waves,
20 Mr. Cooper was still seeing water coming over the top,
21 correct?

22 A No. I don't recall that.

23 Q Okay. Okay. But you see in his e-mail here
24 where he says that he went up there and there were no
25 waves on the surface but he could see wet areas on the

1 west side. Do you see that?

2 A Yes.

3 Q Okay.

4 A I don't think you should assume that everything
5 that's written in an e-mail that I know.

6 Q Okay. And, again, I'm just asking -- I think
7 you already said you saw this e-mail when he sent it to
8 you, correct?

9 A I don't know if I saw that or not. I -- I
10 remember getting this e-mail. I don't necessarily recall
11 reading this whole e-mail.

12 Q Okay. Do you have any reason to believe that
13 around September 27th you didn't receive this e-mail?

14 A No. I believe I received this e-mail.

15 Q Okay.

16 A That doesn't mean I read every e-mail and
17 everything that's written in it. That's all I'm saying.

18 Q Okay.

19 A I may have read it all. I -- I don't recall.

20 Q Okay. If you go down to -- there's a paragraph
21 that says, Moving to current operations -- operating
22 levels from 1596 to 1595 wouldn't be popular. Do you see
23 that?

24 A Yes.

25 Q It says, I'm not sure what that would mean in

1 dollars of generation, but we need to add additional
2 monitoring and tightening up existing controls if we're
3 going to continue to operate at 1596. Do you see that?

4 A Yes.

5 Q And the next sentence says, I'm asking for some
6 help and direction. Do you see where I read that?

7 A I do.

8 Q Okay. Now, by this time on September 27, 2005,
9 you already knew you were taking over the facility,
10 correct?

11 A Correct.

12 Q Okay. What did you do to provide help and
13 direction to Mr. Cooper in response to this e-mail?

14 A I don't believe he was asking for me for that
15 help and direction. He just copied me for my information.
16 He was asking Mr. Pierie and Mr. Hawkins for help.

17 Q Right.

18 A That's who he addressed it to.

19 Q But this facility -- you knew at this point you
20 were going to be responsible for this facility, correct?

21 A Yes.

22 Q And you see that Mr. Cooper is talking about
23 water coming over the side looking like Niagara Falls,
24 correct?

25 A Uh-huh. Yes. And I had talked to Rick the day

1 before this e-mail. And I talked to him throughout
2 October, November. We talked many times about this.

3 Q So did you do anything to provide him help and
4 direction?

5 A I didn't feel he needed any --

6 Q Okay.

7 A -- from me.

8 Q Okay. The next sentence says, We now have built
9 in a .4 fudge factor and switched out of the one XMTR
10 which -- what does XMTR mean?

11 A Transmitter.

12 Q Transmitter. Can you tell me, what is that .4
13 fudge factor, as you understand it?

14 A As I told the other gentleman earlier, I -- I
15 don't know exactly what that .4 fudge factor -- reading
16 this, I would say what it means is they took the set point
17 and they adjusted it by point 4 feet.

18 Q Okay. And how would they do that?

19 A I don't know.

20 Q Okay.

21 A Computer, I would assume.

22 Q Okay. Do you actually know how to go into the
23 computer system there at Taum Sauk and make adjustments
24 like that?

25 A I do not.

1 Q Okay. Do you have Exhibits 17 and 18 in front
2 of you? If you don't, I can help you find them.

3 A I don't have exhibit numbers, so you'll have to
4 tell me which --

5 Q It's 17. It's an e-mail from Cooper and it's
6 got Monday, October 10th at the top. That's the 11th.
7 That's the 7th.

8 A Here it is.

9 Q No, it's a different one. It's the 10th.

10 A That is? I don't have it.

11 MR. SCHAEFER: Your Honor, do we know where the
12 rest of the exhibits are? They don't all seem to be in
13 front of the witness.

14 A Could I read yours?

15 Q (By Mr. Schaefer) Yeah. But I need mine.

16 JUDGE DALE: Don't we have -- hasn't the court
17 reporter been marking a set?

18 A Oh, is that what this is?

19 Q (By Mr. Schaefer) No. That's -- that's a
20 different one.

21 JUDGE DALE: Do you have a set?

22 THE COURT REPORTER: He wants 17 and 18.

23 JUDGE DALE: Okay.

24 A 7th. 11th.

25 JUDGE DALE: Wait a minute. Those might be --

1 no. I have through 12. Oh, no, we don't have them
2 because the court reporter took them yesterday.

3 MR. BYRNE: Which one are you looking for?

4 MR. SCHAEFER: Exhibit 17 is the Monday, October
5 10th, 2005 --

6 MS. HOUSE: I've got additional copies. This is
7 the one that his name's not on.

8 MR. SCHAEFER: On this one?

9 MS. HOUSE: Yeah.

10 MR. SCHAEFER: It's on the second one in the
11 strain I think, isn't it?

12 MS. HOUSE: No.

13 MR. SCHAEFER: Oh, that's right. It's not the
14 correct -- his name is not on that one.

15 MS. HOUSE: Here's 17.

16 MR. SCHAEFER: I'll just write it on there. How
17 about 18? We don't have 18 either, do we?

18 MS. HOUSE: I've got another copy of it.

19 MR. SCHAEFER: I think I gave all my copies out
20 yesterday. 18 is the October 11th --

21 MR. BYRNE: Here. I've got it.

22 MR. SCHAEFER: He may have that. Here.

23 Q (By Mr. Schaefer) Mr. Cooper, I've handed you
24 what we're marked -- wait. Witt. I'm sorry. I slipped
25 there. I'm handing you what was marked earlier as

1 Exhibits 17 and 18. Do you have those in front of you?

2 A I do.

3 Q Okay. Now, if you look at Exhibit 18, this is
4 an e-mail from Richard Cooper dated October 11th, 2005, at
5 the top. Do you see that?

6 A Yes.

7 Q Okay. If you go down about halfway, you'll see
8 in the strain that there's an e-mail from Richard Cooper
9 dated October 7th, 2005, at 7:31 p.m. to OSAG. Who is
10 that?

11 A That's the operators at Osage.

12 Q Okay. And to you, Warren Witt, to Power Supply
13 Supervisor and to Mark Birk. Do you see that?

14 A I do.

15 Q Do you recall getting this e-mail on October
16 7th?

17 A I don't specifically recall it. But I probably
18 did.

19 Q Okay. Do you have any reason to believe you
20 didn't?

21 A I do not.

22 Q Okay. Do you see it says, We have several
23 things going on at once, and I'll try to explain each one
24 and the impact. If we make it through the week end, we
25 will address them on Monday. Do you see where I read

1 that?

2 A Yes.

3 Q Okay. And then it has a paragraph numbered 1
4 right below that. And if you go down about five lines,
5 there's a sentence that says, This bend in the pipes gives
6 us a false reading and causes the reservoir level to look
7 lower than it actually is. Do you see where I read that?

8 A Yes.

9 Q Okay. It goes on to say, Until these pipes can
10 be reattached, we are lowering the pump-back shutdown
11 point to 1594, down from 1596. We want to give ourselves
12 enough cushion so that we won't pump over the reservoir
13 walls. Do you see where I read that?

14 A I do.

15 Q And, again, now, this is October 7th on this
16 e-mail. So this, again, is after the point where you know
17 you're taking over the Taum Sauk plant, correct?

18 A Correct.

19 Q Okay. And this time you're not just cc'd. This
20 e-mail is actually to you, correct?

21 A Correct.

22 Q Do you recall having any discussions with
23 Mr. Cooper about the bend in the pipes giving a false
24 reading and causing the reservoir level to look lower than
25 it actually is?

1 A Yes.

2 Q Okay. And, specifically, what did you discuss
3 with Mr. Cooper about that?

4 A I don't recall specifically what we discussed.
5 But we talked about that the pipe attachments had degraded
6 and we -- we -- really, he felt, and I agreed, that an
7 adjustment was appropriate to compensate for that bend.

8 Q Okay. And, in fact, he says, We want to give
9 ourselves enough cushion so that we won't pump over the
10 reservoir walls, correct?

11 A Correct.

12 Q So were you involved in the decision to lower it
13 -- or to -- or to operate the facility, at least according
14 to the gauges, from 1596 to 1594?

15 A I was not part of the decision to do that. I
16 was -- I knew about it. We did discuss it.

17 Q But he sent you this e-mail saying that he
18 wanted to have enough cushion in the operation of the
19 facility, correct?

20 A Correct.

21 Q Okay. What did you do, if anything, to assure
22 yourself that that was an adequate cushion?

23 A At that time on October 7th?

24 Q Yes.

25 A Probably nothing.

1 Q Okay. And why would -- why wouldn't you do
2 anything?

3 A It was Rick's facility. He manned that facility
4 for several years. I would assume he knew how to run that
5 facility.

6 Q Okay. So are you saying because it was October
7 7th, it wasn't your responsibility?

8 A Well, that's a true statement, too. I didn't
9 say that, but --

10 Q But you knew about it at that time, correct?

11 A Yes.

12 Q And you already knew that you were taking over
13 responsibility for the plant, correct?

14 A In November. Yes.

15 Q Okay. And so then on November 1st, you took
16 over the plant. Did you ever go back to Rick and say,
17 Hey, what happened with -- with those pipe gauges? Do we
18 have enough cushion to operate the facility?

19 A I -- we had conversations throughout October and
20 November about those gauges -- about those pipes.

21 Q All right. So you knew of the condition, and
22 you discussed it with Mr. Cooper?

23 A That's correct.

24 Q All right. Now, I handed you Exhibit 17 as
25 well. And if you look about a quarter of the way down in

1 that e-mail string, there's an e-mail from Thomas Pierie
2 to Rick Cooper and Jeff Scott with ccs to Robert Ferguson,
3 Steve Bluemner, Jeff Scott and Robert Lee. Do you see
4 that?

5 A Yes.

6 Q And the subject is upper reservoir problems?

7 A Yes.

8 Q And do you see that's actually dated the same
9 day as the e-mail that you were just involved in, October
10 7th, 2005, but this one is at 12:56 p.m.? Do you see
11 that?

12 A I do.

13 Q Okay. Now, if you do go down to the fourth
14 paragraph, it says, The high and the high-high warrick
15 probes are 7 inches and 4 inches from the top of the wall
16 respectively. Do you see that?

17 A I do.

18 Q Okay. I believe you testified that -- first of
19 all, you're not on this e-mail, are you?

20 A That's right.

21 Q Did you ever discuss with Mr. Cooper -- because
22 you had already been discussing with him around the same
23 day the issue of the fact that the cables or the pipe
24 gauges were disconnected, did Mr. Cooper also tell you
25 that the high and high-high warrick probes were 7 to 4

1 inches from the top?

2 A I never remember discussing the high and the
3 high-high warrick probes with Rick before the breach.

4 Q Would you agree with me Mr. Cooper is on both
5 these e-mails, correct?

6 A Yes.

7 Q Okay. Is your statement today that you don't
8 recall him discussing that with you or that you know he
9 did not discuss that with you?

10 MS. PAKE: Objection. Asked and answered.

11 A I don't recall.

12 JUDGE DALE: Okay.

13 Q (By Mr Schaefer) You don't -- just so we're
14 clear on the record, you don't recall if you discussed
15 that with him?

16 A That's correct.

17 Q Okay. But you will agree with me that it
18 appears from these e-mail that Mr. Cooper was aware of
19 both of those issues, the placement of the high and the
20 high-high probes and the dislocation of the gauge pipes on
21 October 7th, 2005, correct?

22 MS. PAKE: Objection. Asked and answered.

23 JUDGE DALE: That one really has been asked and
24 answered.

25 MR. SCHAEFER: And I'll move on.

1 JUDGE DALE: Thank you.

2 Q (By Mr. Schaefer) Mr. Cooper, do you have
3 Exhibit 15?

4 MS. HOUSE: Witt.

5 Q (By Mr. Schaefer) Witt. I don't know why I
6 keep saying that. I'm sorry. Do you have Exhibit 15?
7 Because it's -- because it's ten after seven. That's why
8 I'm saying that.

9 A No.

10 Q It's a diagram. I know yours aren't marked, but
11 do you see that up there?

12 A I do see it. I don't have it up here, but --

13 Q I'll give you my copy.

14 JUDGE DALE: I've got an extra.

15 A I know the diagram, unless you've got specific
16 number questions.

17 Q (By Mr. Schaefer) Well, that's fine. It's the
18 same thing. Mr. Witt, do you see what's been marked as
19 Exhibit 15, which is a -- it appears to be a handwritten
20 diagram of the instrument cabinet at the upper reservoir?

21 A Yes.

22 Q Did you make this diagram?

23 A I did.

24 Q Okay. What day did you make this diagram?

25 A I do not know a day. It was part of the

1 investigation, probably late January, early February.

2 Q Okay. So it was after the breach?

3 A Yes.

4 Q Okay.

5 A Also, I did make this diagram, but there are a
6 bunch of little light numbers and not -- that does not
7 look like my writing, and I don't think I put those on
8 there.

9 Q Let's just -- let's just be clear about that.
10 It appears that the diagram -- the majority of the diagram
11 appears to be in black Sharpie or black magic marker?

12 A Yes.

13 Q And it shows the pipes going into the instrument
14 cabinet?

15 A Yes.

16 Q And I believe what you're referring to there
17 appear to be some notations maybe in pencil, and they
18 appear to be elevation listings. Does that -- is that
19 what it looks like to you?

20 A That's what it -- I can't hardly read them, but
21 that's what it looks like. And I did not put those on
22 there.

23 Q Okay. That was my question. You drew the
24 diagram, but you didn't draw those?

25 A That's correct.

1 Q And do you know who did?

2 A I do not know who did that.

3 Q Okay. Have you got a copy of the FERC
4 independent panel report up there with you? I can --

5 A Not unless somebody gave it to me.

6 Q You should have -- I'm not sure what's piled up
7 there.

8 JUDGE DALE: You should have it.

9 A Is that some of this?

10 Q (By Mr. Schaefer) Yeah. It sure is.

11 A Okay.

12 Q Let me see the front of that real quick. Okay.
13 Mr. Witt, I believe you've got in front of you what's been
14 marked as Exhibit 3, which is the FERC Independent Panel
15 report. Do you see that?

16 A Yes.

17 Q Will you turn to page 23, please? Now, before
18 we get into this, let me ask you -- you were aware prior
19 to the breach that -- that the facility -- that somehow
20 operation -- the operational level and the programming had
21 been lowered from 1596 to 1594, correct?

22 A Correct.

23 Q Okay. Who made that determination that -- that
24 2 feet was an adequate amount?

25 MS. PAKE: Objection. Asked and answered.

1 MR. SCHAEFER: No. I asked him if he was
2 involved in the decision. He said he wasn't. But I
3 didn't ask him who made the decision?

4 A I do not know who all was involved in that
5 decision.

6 Q (By Mr. Schaefer) Okay. Did you do anything to
7 satisfy yourself that that was a reasonable decision?

8 MS. PAKE: Same objection.

9 A Should I answer it?

10 JUDGE DALE: Sustained.

11 Q (By Mr. Schaefer) Let me ask you this: I
12 believe you testified to some previous questioning that
13 the gauging, while off, was stable up until the failure in
14 December; isn't that correct?

15 A Yes.

16 Q Okay.

17 A From September to December 13th.

18 Q Okay. Well, on page 23, if you look at the
19 bottom paragraph --

20 A Yes.

21 Q -- it says, A review of two pump -- two pump
22 operations during 2005 shows that the upper reservoir
23 water level indications are reasonably stable until early
24 August. Do you see that?

25 A I do.

1 Q And then it says, Figure 7 -- 715 through 722
2 are examples of these levels from the pressure
3 transducers. Beginning in early August, the water level
4 plots begin to show the erratic behavior that increased
5 until December 14th, 2005. Do you see that?

6 A Yes.

7 Q So what is the basis of your statement that the
8 levels, even though off, were stable until the time of the
9 failure on December 14th, 2005?

10 A Everything that I have seen and been told was
11 that the level basically maintained constant until the
12 night of December 13th. At some point, there was a step
13 change.

14 Q Well, did you do anything to satisfy yourself
15 that what these people were telling you was true?

16 A This -- this is all after the breach. So I --
17 no.

18 Q Okay. Let's go up a paragraph above where I
19 just read where it says, The graphs of upper reservoir
20 water level for December 1st through December 13th, 2005,
21 show relatively stable indications during generation with
22 one or both units standstill and pumping with only one
23 unit. Do you see where I read that?

24 A Yes.

25 Q What graphs are they referring to there?

1 A I don't know.

2 Q Okay.

3 A There were some graphs in this report probably
4 of level indication.

5 Q Okay. Where would those -- where would those
6 graphs have come from?

7 A From our computer.

8 Q Okay. So you are aware that your computer that
9 controlled the facility had the ability to print off
10 graphs or -- or show graphs showing the reservoir water
11 levels during various stages of operation, correct?

12 A Yes.

13 Q Did you ever look at those graphs?

14 A Yes.

15 Q Okay. Did you look at those graphs between
16 August of 2000 -- or between November 1st, 2005, and
17 August -- or December 14th, 2005?

18 A I don't recall.

19 Q Okay. Do you see it there today? Did you ever
20 notice anything erratic in those graphs?

21 A No.

22 Q As you sit here today, do you know that you
23 actually looked at them?

24 A During that time period? No.

25 Q Yeah. You don't know if you looked at them?

1 A I've said I didn't know.

2 Q Okay.

3 A Between November 1st and December 13th, I do not
4 specifically recall whether I looked at those graphs.

5 Q Was that specifically anyone's responsibility to
6 monitor that kind of activity, to look at those graphs?

7 A No.

8 Q Now, I'll get jumped on if I've already asked
9 you this, but I don't think I have. At this point, you're
10 aware -- you're aware that at the time of the breach the
11 -- the high and the high-high were 4 and 7 inches from the
12 top, correct?

13 MS. PAKE: Objection. Asked and answered.

14 MR. SCHAEFER: This is a foundation question. I
15 can run through it, I mean, and ask five questions to get
16 to this point, but it's just foundation, your Honor.

17 JUDGE DALE: I'm sorry. It's been asked and
18 answered. Sustained.

19 Q (By Mr. Schaefer) Okay. Mr. Witt, I think
20 you've already testified that you were aware that at the
21 time of the breach that the -- or at least you know now
22 that, at the time of the breach, the high and the
23 high-high probes were 4 inches from the top?

24 A And what I want to ask you is do you know how
25 they got set at those points?

1 MS. PAKE: Objection. Asked and answered.

2 JUDGE DALE: Sustained.

3 Q (By Mr. Schaefer) Do you know if FERC ever
4 found out how those were set at those levels?

5 A I don't think they did.

6 Q Okay. In fact, can you turn to page 26, please?
7 Do you see the first full paragraph that says, After the
8 breach the high and the high-high conductivity probes were
9 found to be at 4 inches and 7 inches below the top of the
10 wall as described in the above e-mail of October 7, 2005?
11 Do you see where I read that?

12 A Yes.

13 Q And if you go to the end of that paragraph, the
14 last sentence says, We received no documents or interview
15 responses indicating why or when the conductivity probes
16 were raised to these elevations. Did I read that correct?

17 A Yes.

18 Q Do you have any reason to disagree with that
19 statement?

20 A No.

21 Q Mr. Cooper, do you receive bonuses? I don't
22 know why I keep doing that. Mr. Witt.

23 A Just keep talking. I know who you're talking
24 about. I'll take it as a compliment.

25 Q I guess because I'm not going to get to talk to

1 Mr. Cooper, I'll call you Mr. Witt. Let me ask you this:
2 As part of your compensation, are bonuses part of your
3 compensation?

4 A Yes.

5 Q Okay. What are your bonuses based on? And let
6 me ask you this: For the operating -- for the year that
7 would have included December 5th, 2005, the year that
8 would include that, what was your bonus based on?

9 A One, it's -- it's several factors. One is
10 earnings per share that the company makes.

11 Q Okay.

12 A One is equivalent availability of our plants,
13 personnel injuries, and budget compliance and MPDES
14 violations.

15 Q Okay. And you did, in fact, receive a bonus for
16 the year that included December 14, 2005, correct?

17 MS. PAKE: Well, your Honor, if we're going to
18 get into issues related to Mr. Witt's personal
19 compensation, I think we should go in-camera.

20 JUDGE DALE: I agree.

21 MR. SCHAEFER: Okay with me.

22 COMMISSIONER GAW: And -- and I want to make a
23 point of clarification. I understand that we need to go
24 into an in-camera proceeding in order to deal with an
25 individual's compensation.

1 But if that compensation is a general policy of
2 the company and is -- is generally the way compensation is
3 handled by Ameren, that is a different issue. So I
4 understand that -- that there may be some need in this
5 inquiry. But if we find out that the compensation was
6 broadly available or more specifically available, that
7 should -- that should determine whether or not that gets
8 declassified, I would think, Judge.

9 So -- so after the fact here, some of this
10 information may need to be declassified.

11 MR. SCHAEFER: Right. That's fine.

12 JUDGE DALE: I assume you're asking a similar
13 line of questioning that you've asked other witnesses
14 before about --

15 MR. SCHAEFER: That's correct. And I'm going to
16 specifically ask him about some of the factors on his
17 individual bonus.

18 JUDGE DALE: Okay.

19 COMMISSIONER GAW: So if somebody could go get
20 -- the reporter from Associated Press.

21 MR. LEONARD: Chris.

22 COMMISSIONER GAW: Yes. I didn't know if you
23 wanted your name specifically mentioned.

24 MS. BAKER: I don't mind.

25 COMMISSIONER GAW: Mr. Leonard when he gets --

1 when we get done with the IC.

2 JUDGE DALE: Ms. Kramer in the back is on Staff.

3 REPORTER'S NOTE: At this point, an in-camera
4 session was held, which is contained in Vol. 6, pages 1132
5 through 1148.

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1 CONTINUED CROSS-EXAMINATION OF WARREN WITT

2 BY MR. SCHAEFER:

3 Q Mr. Witt, to follow up on Commissioner Gaw's
4 question, the facility operating with the gauge piping
5 disconnected and with the high and the high-high probes
6 essentially disabled to where they wouldn't work, that's
7 not a safe condition for operating of the plant, is it?

8 A No.

9 Q Okay. Yet, as long as it didn't fail, if it was
10 in that condition, it would still be available for service
11 or for generation, correct?

12 A Not if we knew that condition existed.

13 Q Okay. Are you saying that Ameren did not know
14 this condition existed prior to the breach?

15 A Correct.

16 Q Okay. And what do you base that on?

17 A Because we had the plant in service.

18 Q Okay. Is that the only thing you base this on?

19 A A year and a half of discussions lead me to the
20 conclusion that nobody had put all those factors that
21 resulted in a breach together. And if they would have, we
22 would have taken the plant out of service.

23 Q Do you agree with me that when I showed you
24 Exhibits 17 and 18, it, in fact, showed that Mr. Cooper
25 knew all of those things?

1 MS. PAKE: Asked and answered.

2 A No.

3 Q (By Mr. Schaefer) You do not agree with that?

4 A I do not.

5 Q Did you ever see the facility before the liner,
6 the new liner, was installed in 2004?

7 A Yes.

8 Q Did you ever actually go up and look in the
9 upper reservoir before that new liner was installed?

10 A I did.

11 Q Then you're aware that -- that prior to the
12 liner being placed in there, there was a staff gauge,
13 wasn't there, that actually would show you feet on the
14 inside of the -- of the reservoir?

15 A Yes.

16 Q Okay. And that went up the side of the berm of
17 the structure up to the top of the parapet wall, correct?

18 A I believe that's correct.

19 Q Okay. And then are you aware that after -- and
20 what's the purpose of the staff gauge?

21 A To read water level.

22 Q Okay. But you've got to be able to see the
23 staff gauge as it's sticking out of the water, correct?

24 A Yes.

25 Q But you can't see it below the water, can you?

1 A No.

2 Q All right. Now, after the 2004 liner was
3 installed, the staff gauge was put back in the facility,
4 correct?

5 A Correct.

6 Q But the staff gauge only went up on the berm,
7 but did not go up on the parapet wall, correct?

8 A I do not believe that's correct. But it may be.

9 Q Okay. As you sit here today, is it your
10 testimony that you know that the staff gauge went up on
11 the parapet wall after the liner was installed in 2004?

12 A No. It's my testimony that I don't know that it
13 didn't.

14 Q Okay. But you don't know either way?

15 A I do not.

16 Q Okay. Do you recall ever seeing after the liner
17 was put in in 2004, a -- a staff gauge on the parapet
18 wall?

19 A No.

20 Q Okay.

21 A I saw a staff gauge. I don't recall if it went
22 on the parapet wall or not.

23 Q Okay. If I tell you that it did not go to the
24 parapet wall, do you have any reason to disagree?

25 A Yes.

1 MS. PAKE: Objection. Asked and answered.

2 MR. SCHAEFER: Well, the evidence will show what
3 it shows.

4 Q (By Mr. Schaefer) Let me ask you this. Did you
5 ever do anything, once you became responsible for the
6 plant, to ground truth the actual water level in the
7 reservoir compared to what the instrumentation was telling
8 you?

9 A I did not.

10 MR. SCHAEFER: Okay. I don't -- I don't have
11 any other questions.

12 JUDGE DALE: Thank you. Commissioner Gaw?

13 CROSS-EXAMINATION

14 BY COMMISSIONER GAW:

15 Q Mr. Witt, clear something up for me, would you?
16 In regard to your particular job, prior to November of
17 '05, help me out there. What -- what was it again?

18 A I was the Plant Manager of our Osage power
19 plant.

20 Q Okay. As -- and that started when?

21 A October of 2004.

22 Q Okay. And in that position, tell me what your
23 role was in regard to the operation of Taum Sauk from --
24 from Bagnell.

25 A My specific role was, truthfully, fairly

1 minimal. Probably the real role I had was if Rick Cooper
2 at Taum Sauk or somebody had some information that needed
3 to be communicated to the Osage operators, they would
4 provide that communication directly to them. But if they
5 felt it was of significance enough or it needed further
6 explanation, that may come through me.

7 Q Okay.

8 A Or if, let's say, Rick would have had concerns
9 or Jeff, anybody at Taum Sauk would have had concerns
10 about how the operators at Osage were operating it, they
11 may have brought that through me to work out with Rick.

12 Or vice versa. If the guys at Osage were being
13 asked to operate Taum Sauk in a way they didn't understand
14 or had concerns about, they may bring that through me.

15 Q Okay. And -- and I -- what I'm trying to
16 understand, too, is the hierarchy here in regard to
17 reporting. Now, that -- the operators located at -- at
18 Osage, they operated the Osage facility, the Bagnell Dam
19 facility?

20 A Yes.

21 Q And the Taum Sauk facility?

22 A Yes.

23 Q Anything else?

24 A Kiakuck.

25 Q Kiakuck, also?

1 A Yes.

2 Q Okay. When they were operating the Taum Sauk
3 facility, was the operation that they performed an area of
4 responsibility that they had under your supervision?

5 A Yes.

6 Q Okay. That's what I thought. But I --

7 A Yes, that's correct.

8 Q I wanted to make sure I was following that.

9 Now, describe for me what it is that they have in front of
10 them as operators regarding the Taum Sauk plant.

11 A Basically, they have computer screens with a --
12 they're -- I believe they have two physical screens. But
13 on any individual computer, they can flip between a
14 multitude of screens --

15 Q Okay.

16 A -- that gives them a lot of indicators. It
17 gives them buttons to push to start and stop units, run
18 the trends that he's talking about. They can look at
19 those on the computer.

20 Q Okay.

21 A It gives them alarms if something is abnormal.
22 Basically, it's computer screens to operate the equipment.

23 Q Is there anything else visually that they have
24 besides those two screens?

25 A Not that I'm aware of.

1 Q Okay. And the -- the starting and stopping of
2 the -- of the Taum Sauk plant, what does that look like?
3 Is it -- are there buttons? Are there gauges? Is it on
4 the machine? Help me to understand that.

5 A It's -- it's -- I'd say it's more like pictures
6 of buttons and gauges.

7 Q On the computer screen?

8 A It's on the computer. There's no physical
9 gauge. There's no physical button.

10 Q Okay.

11 A It is push keys on a computer.

12 Q Yes.

13 A And -- and touch screen.

14 Q Is it the same -- is that the same screen that
15 you were talking about that -- that they -- they would see
16 -- be able to see other multiple things?

17 A Yes. Yes.

18 Q And there are two of those screens, correct?

19 A I believe there are two at Osage, yes.

20 Q Okay. Now, are those screens dedicated to Taum
21 Sauk?

22 A Yes.

23 Q And then there are -- are there screens also
24 dedicated to Kiakuck?

25 A Yes.

1 Q Two for Kiakuck, also? Or do you know?

2 A I believe -- I believe right now, there's two
3 for each plant.

4 Q Okay. Do you know at the time of '04/'05 what
5 it would have been?

6 A There -- we were in the transition changes on
7 equipment. There may have been one at that time for each
8 plant.

9 Q Okay. You don't recall?

10 A I don't recall specifically.

11 Q Would -- would there be a document that said
12 somewhere?

13 A I don't know.

14 Q Who would know that information about how many
15 screens were available for the plant?

16 A Phil Thompson at Osage may know that.

17 Q Okay.

18 A Somebody at Osage would know that.

19 Q Phil Thompson's position is what?

20 A He's the plant superintendent at Osage.

21 Q Okay. He would have reported to you?

22 A Yes.

23 Q Now, there would also be screens or a screen for
24 the Bagnell facility?

25 A Yes.

1 Q Okay. And how many operators would have been on
2 duty at -- at one time dealing with those three plants?

3 A There's always two operators on duty at Osage.
4 One of them is remote -- or local operation of the Osage
5 equipment. He -- he can be in the control room helping
6 monitor, but he's not always. There is always one person
7 in the Osage control room operating those three plants.

8 Q Okay. And is it viewed as adequate to have one
9 person that's -- that's monitoring three different hydro
10 plants?

11 A Yes.

12 Q Okay. And -- and what -- what made that
13 determination that that was adequate? Is that internal
14 policy? Is it something else?

15 A I do not know. Those decisions were made before
16 I was involved.

17 Q You just carried forward with that?

18 A Yes.

19 Q And do you know whether there's any -- any rules
20 or regulations from FERC regarding that?

21 A I'm pretty sure there's not.

22 Q Okay. The -- this -- these screens, have you
23 observed them before?

24 A I have.

25 Q Have you -- have you operated them before?

1 A I have not.

2 Q What kind of training do you have to have in
3 order to -- to do that job of -- of operation?

4 A At Osage, it's a -- I believe it's a 16-week
5 training program they go through. They have -- I think
6 it's 54 lesson plans of different equipment that trains
7 them on Osage equipment since they're locally operating
8 it. And it trains them on Kiakuck and Taum Sauk.

9 Q Okay. Do those -- do those -- well, let me ask
10 you this: When an operator is -- is being trained, are
11 there written training manuals that they go from?

12 A Yes.

13 Q Okay. And that was true in '04 as well?

14 A Yes.

15 Q All right. And those training manuals, do they
16 include specific operations of each of the hydro plants?

17 A Yes.

18 Q Okay. Did -- do we have copies of those
19 manuals?

20 A It's a set of three-ring binders. I think it's
21 15 or 20 three-ring binders.

22 Q Fifteen or twenty?

23 A It's quite a few. Maybe -- maybe only 12. It's
24 quite a few.

25 Q Okay. Do you know how many of those are

1 dedicated to Taum Sauk?

2 A That would, I believe, be in one binder.

3 Q One binder?

4 A Okay.

5 Q And this binder would have been in -- around in

6 '04, correct?

7 A Yes.

8 Q All right. Do you know if it's been changed

9 subsequent to the breach?

10 A It has.

11 Q Okay. Are the changes -- are the modifications

12 documented in such a way somewhere where we could see what

13 was changed subsequent -- subsequent to the breach?

14 A I don't know that.

15 Q Okay.

16 A I'm not sure the lesson plans on Taum Sauk have

17 been revised. The entire set was updated because we have

18 a class going on right now. And we updated it before that

19 class. They may not have touched Taum Sauk's because

20 we're waiting to get final designs of what the new plant

21 will look like.

22 Q Oh, okay. I'm following you because --

23 A So Taum Sauk may not have had anything done to

24 it.

25 Q Because Taum Sauk itself isn't operational, so

1 at this point, it would not have been necessarily a reason
2 to change that specific volume yet?

3 A Right.

4 Q Okay. Do you know whether the other -- the
5 changes that are in the other -- other volumes were in any
6 way related to the Taum Sauk breach?

7 A I don't know that.

8 Q Okay. That's fine. Now, as far as the -- I
9 want to get back to these -- these screens for a moment.
10 The -- the screens that you -- that you would observe,
11 would -- is it easy to flip through different screens? Do
12 you know?

13 A Yeah. Relatively. Yeah.

14 Q Is there any protocol in regard to what screens
15 should be observed as mandatorily observed, you know?

16 A There is some -- I don't -- I don't know that
17 specifically. I think there are some standard
18 expectations for what to be looked at. But the operators
19 do have flexibility. If they want to go and specifically
20 call up another instrument or something, they can do that.

21 Q Okay. Where would we find information on what
22 protocols might exist for observation of different
23 screens?

24 A In the Osage operating manuals.

25 Q Okay. The -- the Taum Sauk plant, do you know

1 whether or not it was used for operations other than
2 energy?

3 I'll be more specific. Do you know whether it
4 was used for ancillary services, for instance?

5 A I don't believe it is.

6 Q Okay. So you don't believe it's used for
7 spending reserves?

8 A No.

9 Q Or quick start capability?

10 A We may take credit for it for quick start. I'm
11 not sure about that.

12 Q Okay. Probably not for regulation?

13 A Not for regulation.

14 Q Okay. Is that because the plant isn't
15 well-suited for those?

16 A Yeah. It's -- they're big units.

17 Q Okay. Now, the -- the screens that -- that you
18 mentioned, I believe you said include these level
19 indicators --

20 A Yeah.

21 Q -- is that correct?

22 A You could look up level indicator on the screen,
23 yes.

24 Q Okay. Now, as -- and if you don't know what the
25 process was, just tell me. I --

1 A Okay.

2 Q But as the -- as the pump action is done to fill
3 the upper reservoir, do you know what the operators would
4 be likely to -- to be observing during the filling process
5 on those screens?

6 A I do not.

7 Q Okay. They would have the ability to look at
8 the level indicating -- indicating how the rise is going,
9 correct?

10 A Yes. Yes.

11 Q All right. A side question here. Do you know
12 whether or not there was any alarm feature on the upper
13 reservoir that would have been transmitted to Bagnell?

14 A Yes, there was.

15 Q Tell me what it was.

16 A Well, one I know of, if we got too high a level,
17 there was an alarm that would go off at Osage.

18 Q Okay. Do you know -- do you know specifically
19 what was required in order to trigger that alarm?

20 A I do not. I've heard a lot of different
21 stories.

22 Q You have?

23 A Yeah.

24 Q Can you -- can you give me --

25 A I believe the high level -- the high warrick

1 probe would set off the alarm.

2 Q You believe the high one would?

3 A I believe.

4 Q Okay. Is that based upon what you've been told

5 subsequent to the breach?

6 A Yes.

7 Q Not based upon what you observed prior to the

8 breach?

9 A No.

10 Q And the fact that -- and so this is just --

11 you're just telling us what you -- what you think may be

12 the case, not what you observed?

13 A That's correct.

14 Q All right. Now, I want to get this -- see if I

15 can find this here. There's so many different documents.

16 Do you have that Independent Panel of Consultants

17 report --

18 A I do.

19 Q -- from FERC? Now, toward the back of that,

20 there are several figures that begin with the No. 7.

21 A Yes.

22 Q And then there's a dash. Let's start at -13 if

23 you can find that.

24 A I've got it.

25 Q I don't see page numbers on this.

1 A I've got it.

2 Q Figures. Can you tell me what that is or

3 appears to be?

4 A If looks like it's a trend of the level

5 indication on the night of December 1st when we were

6 pumping up the reservoir.

7 Q Okay. Do you -- do you notice the jagged nature

8 of the line?

9 A Yes.

10 Q Okay. Would this have been an available screen

11 to operators in Osage?

12 A Probably not in this form, no.

13 Q In another form?

14 A Yes. In another form.

15 Q Just -- tell me what the distinction could have

16 been.

17 A I mean, I just know their graphs don't look like

18 this. It's -- it's --

19 Q Is it perhaps an enhanced so that you would have

20 actually a -- a larger area of coverage on the screen?

21 Did you --

22 A It's -- it probably is that because I'm sure

23 theirs -- theirs goes up to 1600. So the increments would

24 definitely be different. The time line along the bottom,

25 it's an adjustable, so it would only be if they wanted to

1 look at this long of a period of time --

2 Q Oh, I see.

3 A -- that they would look at. You know, they --

4 they may run it just over an hour trend.

5 Q Okay.

6 A This looks like it's, you know, five, six, eight

7 hours here. I don't know what it is.

8 Q Do you know whether it is -- this data that is

9 kept on -- or let me ask you this. Is there data kept

10 regarding the filling of the reservoir?

11 A Yes.

12 Q Okay. So it -- is it possible that this

13 represents a -- a generation from the history of this

14 film?

15 A Yes. I suspect that's what it is.

16 Q Okay. In looking at that, does the jagged

17 nature of that line tell you anything?

18 A Not with any more information than this. No.

19 Q Okay. Would you -- if you -- well, let's --

20 let's go on and look at some others. Look at 714, Figure

21 714. Can you tell me what that appears to be?

22 A That looks like it's the finish of the pumping

23 operation on the morning of December 2nd and then a

24 generation on the day of December 2nd.

25 Q Okay. Now, would this screen be something that

1 an operator would see?

2 A Again, not in this format, I don't think.

3 Q All right.

4 A I -- I don't know if this is one level indicator

5 or it's an average of multiple level indicators. So I --

6 I know he would not see it in this form, but similar data

7 he would have available to him.

8 Q Okay. You see the jagged lines particularly --

9 A Yes.

10 Q -- between, it looks like, about 1540 and

11 somewhere below 1570? There's a particular -- it looks

12 particularly jagged. Would you agree?

13 A Yes.

14 Q Now, would that tell you anything if you saw

15 that on the screen?

16 A It would not tell me anything.

17 Q Would -- would you -- and why is that?

18 A Well, just with this -- I don't know what it

19 would normally look like or what it should look like.

20 Q I see. Okay. Look at figure 715. Again, does

21 that appear to be a similar --

22 A Yes.

23 Q -- data -- data point connector on -- on a fill

24 of the upper reservoir?

25 A Yes.

1 Q Okay. All right. Now, just -- just for a
2 moment, if -- can you just -- as you look at this, I want
3 you to look at the -- at Figure 715, 716, which seems to
4 be April 2005. 715 is January of '05, right?

5 A Yes.

6 Q Figure 717 is June of '05, correct?

7 A Yes.

8 Q And Figure 718 is July of '05, correct?

9 A Right.

10 Q All right. And then Figure 719 is August 1st of
11 '05, correct?

12 A Yes.

13 Q Figure 720 is August 10th of '05, correct?

14 A Yes.

15 Q August 17th of '05 is 721?

16 A Yes.

17 Q Okay. September '05 is 722 --

18 A Yes.

19 Q -- correct? All right. Now, as you move
20 through that time line -- line from January into
21 September, do you see any -- any trend there in regard to
22 the nature of these lines?

23 A Looking at these graphs, I would say it became a
24 little more erratic in August/September than it was in
25 January.

1 Q Okay. And when we say erratic, this is a line
2 that is intended to reflect the depth of the reservoir as
3 its being filled, correct?

4 A Correct.

5 Q And if you're filling the reservoir, would you
6 expect there to be a lowering of the water level in the
7 reservoir?

8 A If you're filling the reservoir, would I expect
9 there to be a lowering?

10 Q Yes.

11 A No.

12 Q In fact, if the line is going down as you're
13 moving forward in time from what it was a few moments
14 before, that would seem to indicate a lowering of the
15 reservoir, correct?

16 A Yes.

17 Q Okay. So -- so the fact that earlier you were
18 asked about the -- the portion of this report which
19 indicated the that FERC found erratic -- the erratic
20 behavior that is represented in these figures that we're
21 looking at now to be of significance. Wouldn't you agree?

22 A Yes.

23 Q And -- and, in fact, that -- that erratic
24 behavior was an indication that -- that the piezometers,
25 the transducers were unsecured from their original secured

1 location?

2 A They concluded that?

3 Q Yes. Would you agree with that or not?

4 A No.

5 Q I'm asking you.

6 A I would have to review this data in more detail.

7 I could see where somebody could come to that conclusion.

8 Q Okay. Look at Figure 723 and tell me if that is

9 of any significance to you.

10 A I'm not sure what the question is.

11 Q I'm just asking you if you know what that --

12 what that graph represents and if it means anything to

13 you.

14 A I don't know where this graph came from. It

15 looks like it's a level indication again and somebody has

16 labeled what they think was two units off and two units

17 generating.

18 Q All right.

19 A That graph doesn't really make sense to me.

20 Q And why is that?

21 A It shows that -- I guess it could have happened.

22 Somewhere around 2:00 in the afternoon, the level went up,

23 which we could have turned pumps on. We do pump in the

24 middle of the day once in a while. So they added a little

25 bit of level. And later on, we turned them on to

1 generate. That's possible.

2 Q Is there another possible explanation here?

3 A There's probably a whole lot of --

4 Q Is it possible that the -- that, in fact, there
5 was an adjustment to the level because the transducers
6 moved?

7 A That's possible. That data wouldn't indicate
8 that to me because, if that happened, I would think it
9 would be a step change.

10 Q What do you mean by that?

11 A Straight up or down, depending on which day it
12 moved, not a gradual increasing line.

13 Q Well, that's -- let's think about what those
14 transducers look like and what those conduits look like
15 for a moment.

16 Now, they were, you understand, at this point in
17 time to, have had some bend in them, correct?

18 A Yes.

19 Q And you understand them to have been loosened
20 from their secured position on the -- on some of the
21 places down as you move down into the reservoir, correct?

22 A Yes. Yep.

23 Q So if there was a turbulence in that reservoir
24 when it was being filled, it is possible that there was
25 also some movement going on during the pump-up procedure?

1 A Yeah. But this graph is labeled, and it says
2 both units were off.

3 Q Keep following me.

4 A Okay.

5 Q Keep following me. It's possible that that
6 could -- could generate some movement, correct?

7 A Well, if it was pumping --

8 Q If it was being pumped?

9 A Yes.

10 Q Pumped up. Okay. Now, let's -- assume with me
11 that during that time frame the bend became more
12 significant --

13 A Right.

14 Q -- than it was before the pumping up.

15 A Yes.

16 Q What would that do if that occurred in relation
17 to the water level if it -- if the bend increased? The
18 indication of the water level would do what?

19 A It would go down.

20 Q Yes. Now, assume with me for a moment that the
21 pumps are turned off --

22 A Yeah.

23 Q -- and there's a gradual settling of the
24 turbulence after that, correct?

25 A Yes.

1 Q All right. Now, what would occur if, as a
2 result of the movement, the gravitational pull that might
3 have been on the conduits overcame the friction of
4 whatever existed up against the side of the -- of the
5 reservoir and they moved down?

6 A The level would go up.

7 Q And is that what this picture seems to show?

8 A It could.

9 Q I'm not asking you why it did it.

10 A I'm not making that conclusion.

11 Q I'm asking you if that is a possible explanation
12 of why this graph looks like this.

13 A It's possible.

14 Q And, again, there are -- this -- this
15 information appears to you, does it not -- does it not, to
16 have been information that was gathered from Ameren's
17 Osage system?

18 A They wouldn't have had to go to Osage. But the
19 same system, yes.

20 Q It would have been the -- at least it would have
21 been available at that -- at that location?

22 A Yes.

23 Q Okay. We could look at -- at 724, but I -- I
24 don't think we need to do that today. Let me -- let me
25 then go on here for -- for a moment. Oh, if -- who would

1 have been -- did you -- have you named the operators that
2 were working at the Osage facility during 2005? Did you
3 name them?

4 A No.

5 Q Can you?

6 A All of them?

7 Q How many of them are there?

8 A There's 11 or 12.

9 Q Could you just get us a list?

10 A Sure.

11 Q If we don't already have the information. I
12 don't need you to have to go over the names. That's okay.
13 Earlier, you testified about utilizing the -- the
14 facility, the Taum Sauk facility for peaking power. I
15 believe you were talking about that some, correct?

16 A Yeah.

17 Q And you said something about the cost of peaking
18 power having changed --

19 A Right.

20 Q -- if I followed that.

21 A Yes.

22 Q All right. Now, generally, when you're talking
23 about a peaking unit in the traditional -- traditional
24 term, outside of what Taum Sauk facility is, what kind of
25 a generation unit are you probably talking about for use

1 for peaking purposes?

2 A Well, it can be a lot of kinds. I mean, we have
3 hydro plants, obviously. We use all three of our hydro
4 plants to do some peaking. Gas can turbines do a lot of
5 peaking for us. But you can also use coal plants to do
6 peaking power.

7 Q Okay. But generally, in order to dispatch,
8 let's talk about it that way, what is generally the order
9 of dispatch within the Ameren system as far as -- and I'm
10 not trying to get you to tell me specific plants because
11 that could get a little bit difficult to -- to sort
12 through.

13 But in regard to just, generally speaking, your
14 dispatch would be what first? First you go from low cost
15 to high cost, correct, in determining that dispatch order
16 as a general matter?

17 A As a general matter, I'm -- I'd say that's true.

18 Q Okay. So your low cost facility within the
19 Ameren system is going to be what?

20 A Well, cost is -- I'm not sure I can answer that
21 very well because if you had -- let's say you had a big
22 fossil plant that you normally would think is maybe not
23 that low cost.

24 Q Yes.

25 A But if it's running at an unefficient point --

1 Q Yes.

2 A -- because there's not enough load, you may

3 bring what you would think normally would be a more

4 expensive plant up in power to do some of your peaking so

5 it can run more efficiently. Again, this is outside my

6 game a little bit.

7 Q Let's not -- I don't want to --

8 A If everything was running efficiently.

9 Q Yes.

10 A I would say we would probably run a hydro plant

11 if water were available.

12 Q Yes. The limits on the question of hydro

13 because the fuel -- other than Taum Sauk, fuel is free,

14 right?

15 A Yeah.

16 Q So what you're -- your only consideration there

17 is do you need to keep it in reserve for some other

18 purpose that would make more economic sense?

19 A Yes.

20 Q Then you get to what next? It would be Callaway

21 next, right?

22 A If it was not already fully loaded, probably.

23 Q I'm starting from the bottom here.

24 A Oh, nothing's on?

25 Q Nothing's on. I'm working up. Okay?

1 A Oh.

2 Q I'm not working down. I'm working up. Next in
3 order of dispatch is probably Callaway. In fact, Callaway
4 is probably going to be on unless there's an outage,
5 right?

6 A Yes.

7 Q Okay. Then you get into your coal plants,
8 correct?

9 A Right.

10 Q And they rank according to efficiency --

11 A Yes.

12 Q -- generally, all other things being equal?

13 A Yes.

14 Q And then you get into if you had a combined
15 cycle, that might come into play, but you don't have any,
16 right?

17 A I don't know.

18 Q All right. Well, we'll forget that. In regard
19 to -- where does Taum Sauk fit into that order of
20 dispatch? Or is that difficult because it varies so much
21 based -- depending on the price of electricity when you're
22 filling?

23 A I think that's exactly right. It varies from
24 day-to-day depending on not so much I'd say necessarily
25 the absolute value of price to fill. It's the difference

1 between the cost to fill versus what you get to generate.

2 Q Yeah. It's that differential?

3 A It's the differential.

4 Q Let's move on up. Now, when you get up to the
5 upper levels here on cost to run, then you're getting into
6 your gas turbines, right?

7 A Yes.

8 Q Okay. Now, when you said the cost of peaking
9 power had been on the rise, that -- is that related to the
10 fact that the price of natural gas went up significantly
11 during -- during the period of time from, say, 2000 on? I
12 realize -- is that part of the reason?

13 A Probably in the most recent years. But early
14 on, no, I wouldn't think it was that.

15 Q Okay.

16 A Because I think, at that time, actually, gas was
17 fairly cheap. And that's why a lot of people went to
18 building combustion turbines.

19 Q Yes.

20 A It was only after that, which I would say is
21 maybe in the last three or four, five years.

22 Q Okay.

23 A The gas went up and, you know, makes it not so
24 economical.

25 Q Okay.

1 A I really think it was more deregulation, moving
2 towards competitive markets.

3 Q Okay. Okay.

4 A You know, selling power across utilities.

5 Q Well, let's -- I want to talk about that just a
6 little bit. This is really --

7 A I may not be the best person for you to discuss
8 this with.

9 Q You tell me when I get to the margins here
10 because I can ask other people this. I don't want to get
11 -- take a lot of time with you trying to speculate on
12 this.

13 But you -- you proffered an explanation, and I'd
14 like to explore it briefly. When you say the market --
15 opening the markets increased the cost of peaking power,
16 why do you think that?

17 A Maybe it's just as simple as those two things
18 were occurring at about the same time.

19 Q Okay. So it -- so you can't give me an
20 explanation necessarily that breaks that down?

21 A No.

22 Q Okay. But it is -- it is accurate to say that
23 the MISO market opened in when? What year? Do you
24 remember, the Day 2 market?

25 A No. I didn't mean specifically the MISO Day 2

1 market.

2 Q All right. So tell me what you were talking
3 about.

4 A I meant -- again, in the '90s, a lot of changes
5 were being made in the utility industry because of the
6 opening. It was really --

7 Q Opening the access to the grid?

8 A I think so.

9 Q FERC saying, You've got to give equal access no
10 matter who owns the generation?

11 A Right.

12 Q Is that what you're talking about?

13 A Yes.

14 Q Okay.

15 A Yes.

16 Q Okay. Keep going.

17 A I mean, there was periods -- I think in the '90s
18 there were sometimes when power went to \$3,000 or even
19 higher --

20 Q Yes.

21 A -- for some short periods of time.

22 Q Okay.

23 A And, again, I'm not a market expert. I'm sure
24 Mark or Steve Schoolcraft or those guys could answer much
25 better than I. But, I mean, again, when peak power went

1 to \$3,000, \$9,000 a megawatt hour, you could afford to
2 pump up a lot of water for \$9,000 a megawatt hour.

3 Q Especially when you didn't pump it up at that
4 price, right?

5 A Oh, no. You pump it up at 20.

6 Q Yeah. Now, when you -- do you know how it was
7 determined what the cost was to pump the water up at Taum
8 Sauk before the opening of the MISO markets?

9 A I do not know.

10 Q Okay. We'll ask some of the market people about
11 that.

12 A Yeah.

13 Q I hope I can find this quickly. Are you aware
14 of what the operating level was of Taum Sauk prior to the
15 installation of the liner in '04?

16 A I am aware -- I have an idea today. I was not
17 before that.

18 Q Okay. Well, what do you know --

19 A I think it was about 1596.

20 Q Okay.

21 A I didn't work in hydro before that liner, so --

22 Q You don't -- now -- so you didn't -- you didn't
23 have any idea what it -- what it was in 2005 prior to the
24 installation of the liner? In 2005, the -- the knowledge
25 that you had in 2005, you were not aware of what the

1 operating level was prior to the installation of the liner
2 in '04?

3 A That's correct.

4 Q Okay. And -- and would it surprise you if the
5 FERC had found that the actual operating level of the
6 reservoir prior to the installation of the liner was 1595
7 as opposed to 1596 due to the settling of the wall and the
8 way it was measured prior to the installation of the
9 liner?

10 A Would it have surprised me in 2005? Is that
11 your question?

12 Q You know, why don't you answer that question in
13 2005 and today both.

14 A In 2005, that probably wouldn't have surprised
15 me. Today, that -- that wouldn't surprise me. Either
16 way.

17 Q Okay. Your answer would be the same?

18 A Yeah. I guess so.

19 Q Now -- now, prior to you actually taking over
20 the Taum Sauk supervision in November of '05, who was --
21 who was the supervisor over Rick Cooper in the hierarchy
22 in the UE system?

23 A Just prior to me taking over, it was Mark.
24 There was an interim period like there.

25 Q How long did that last?

1 A Three or four months, maybe.

2 Q Three or four months?

3 A Yeah. It was sometime in, I think, early summer
4 that Chris Iselin had changed jobs. And Rick, myself and
5 the manager at Kiakuck started reporting to Mark until
6 they decided later in the summer to have them all report
7 to me.

8 Q Okay. So it was -- the reporting was done
9 directly to Mark Birk?

10 A Yes.

11 Q Okay. Now -- and then prior to Mark having that
12 -- that window of supervision, who was it? Do you know
13 or --

14 A Chris Iselin.

15 Q That's who you referred to?

16 A Right.

17 Q Okay. And was he over all three plants?

18 A Yes.

19 Q The discussion that was held in regard -- in
20 e-mails and otherwise in regard to Tom Pierie's leaving,
21 were you aware of -- of any conversations or
22 communications where there was a verification that the
23 information that Tom Pierie might have had about the Taum
24 Sauk plant was downloaded to someone else before -- in
25 that time frame of November of '05?

1 A No.

2 Q Did you ever have conversation with Tom Pierie
3 about what he knew about the plant in the fall of '05?

4 A No.

5 Q Or the winter?

6 A No. Or what?

7 Q The fall or winter of '05.

8 A No.

9 Q Okay. Have you ever talked to Tom Pierie?

10 A Not until recently, actually.

11 Q Okay. All right. But you have -- you have in
12 the last -- last, what, few months or something?

13 A Yeah. I spent the last week with him.

14 Q Did you talk about this?

15 A Well, yeah. Some.

16 Q Some. Yeah. Was your counsel present?

17 A No. Well, sometimes, probably.

18 Q I'll leave that to others. Okay. So when you
19 took over the management of this plant, did you have a
20 conversation with Mark Birk about the plant?

21 A Yes.

22 Q Tell me what he downloaded to you about the
23 plant itself.

24 A I don't specifically recall. I don't expect it
25 was a whole lot. Again, I was familiar with Taum Sauk.

1 Rick and I were peers. We talked and met together various
2 times as a hydro group. And I probably had nearly as much
3 familiarity with it as Mark would have had. Rick only
4 reported directly to Mark for a few months.

5 Q Okay. You were aware of the -- of the fact, or
6 were you, that there were -- there were proposals to do
7 things regarding the probes at Taum Sauk, correct, in --
8 at the time you were taking the plant over?

9 A Are you talking about proposals to fix the
10 degraded level instruments?

11 Q Yes.

12 A Yes.

13 Q Okay. Did you have any conversations with Mark
14 Birk about that?

15 A Not that I recall.

16 Q You -- you did have with Rick -- Rick Cooper?

17 A Yes.

18 Q Okay. Were those conversations other -- other
19 than e-mails, those communications?

20 A With Rick?

21 Q Yes.

22 A Oh, yes.

23 Q What level of concern did he display to you
24 about getting those -- those probes fixed?

25 A My impression, at least of his level of concern.

1 Was it is degraded, and it's something we should fix, but
2 it's not an immediate safety concern.

3 Q All right. Did he say that specifically to you?

4 A No. Not that I recall.

5 Q Did he say to you -- that -- that -- tell me
6 specifically what you remember him telling you in those
7 conversations or communications.

8 A I cannot recall specifically what he said. But
9 just -- even in looking at the e-mails that's in some of
10 these exhibits we went through tonight, there's several
11 times in there where, you know, he makes the statement,
12 We're confident the adjustment we've made is adequately
13 compensated for this, and we have efforts underway to plan
14 and schedule a time to fix it.

15 Q Now, the basis for that confidence, did you
16 evaluate that?

17 A No.

18 Q Should you have?

19 A Probably. I wish I would have.

20 Q An evaluation of that -- that would have been
21 appropriate to have done by you or others in regard to
22 that assumption, what would have -- what should it have
23 entailed?

24 A I think it should have entailed what's -- what's
25 the worst thing that could happen if it continues to

1 degrade? What's the design basis of this equipment and
2 this plant, and are we within that design basis? And
3 what's different here than what we've told FERC? And are
4 there things we should be telling FERC about this and
5 getting other people involved?

6 Q And in particular, were there things that should
7 have been told to FERC that were not?

8 A Yes.

9 Q Okay. And tell me what those were, if you
10 could.

11 A I don't know all of them. But examples are
12 there were changes made in the design of that
13 instrumentation when it was put in that did not agree, as
14 I understand it, with the drawings that were submitted.

15 When we had the wave action go over the top, we
16 should have notified FERC. When we found the pipes
17 degraded, we should have notified FERC.

18 Q Okay. What -- what about the -- what about the
19 warrick probes? Would that have been something that they
20 should have been notified about if you assume that -- that
21 an Ameren employee found them 4 to 7 inches from the top
22 of the parapet all in October of '05? Would that have
23 been a FERC notification?

24 A Not -- not that I understand it. If -- if --
25 let's say this. If that four and 7 inches, or whatever it

1 was, was below the low point of the parapet wall, I don't
2 know that that would have been a problem at all.

3 Q But if they were above, what would your answer
4 be?

5 A Then that should -- if somebody would have
6 recognized that those probes were above the low point of
7 the parapet wall, that should have been told to FERC.

8 Q Okay. Would -- would the movement of those --
9 and you may have already answered this. I just want to
10 make sure that I -- that this is answered.

11 Would the movement of those warrick probes from
12 the original level that was given to FERC as a level of
13 their setting, would that have been something that FERC
14 should have been notified about?

15 A Probably.

16 Q Okay.

17 A I don't know for sure.

18 Q Okay. Is that because you're just not familiar
19 with that regulation about that particular issue?

20 A Yeah. I think it would depend on what level of
21 detail we had communicated to FERC in the first place.

22 Q Okay. If the -- if FERC had been told, these
23 warrick probes are placed at X elevation --

24 A Yes.

25 Q -- then should they have been notified --

1 A Yes.

2 Q -- if that elevation had changed?

3 A Yes.

4 Q Okay. Did you know about the fact that surveys
5 were done of the parapet wall as -- as -- in the past
6 incentive?

7 A Yes.

8 Q Did you know that that was a part of the
9 requirement to FERC, that those measurements be given?

10 A Yes.

11 Q Okay. Were you privy to any of that
12 information?

13 A I could have gotten access to it if I wanted. I
14 had not seen it.

15 Q Okay. Do you know who normally would see that
16 information in the Ameren system?

17 A I would expect our Civil Engineering Department.

18 Q Okay. And -- and are those -- tell me who those
19 people are, just generally. Are we talking with the
20 Ameren Services people or AmerenUE people or both?

21 A They are now Ameren Services people.
22 Historically, they would have been AmerenUE years ago.

23 Q Okay. At the time of the -- of 2004/2005, they
24 would have been Ameren Services people?

25 A I think that's correct.

1 Q Did you have -- dealt with -- with repairs on
2 the hydro systems before that involved divers?

3 A Yes.

4 Q Okay. Do you -- have you procured divers
5 yourself for repairs?

6 A Me personally?.

7 Q Yes.

8 A No.

9 Q Who generally does that at Bagnell?

10 A Either the plant superintendent or the
11 maintenance supervisor.

12 Q Okay. Are you familiar with -- with the
13 logistics of procuring divers to the extent that you know
14 who -- who -- who they call or how long it takes to get
15 them in? Are you familiar with that?

16 A Yeah. A little bit.

17 Q Give me a little bit of background on -- on the
18 -- how it's -- what the list -- not their names
19 necessarily, but how extensive the list of -- of -- of
20 entities or individuals that -- that there are that can be
21 called for diving work.

22 A I don't know how extensive a list there are.
23 There are multiple diving companies. However, we
24 generally use one diving company.

25 Q Okay.

1 A It's a company that we've built some confidence
2 in. He does good work for us. And we have some comfort
3 that he not only works hard, but he does good quality
4 work. So we generally try to get that diver.

5 Q Okay. Is that an individual, or is it a company
6 that he runs that -- that you're utilizing?

7 A I believe he has his own company.

8 Q Okay. Does he have other divers that work --

9 A Yes.

10 Q -- in addition to him --

11 A Yes.

12 Q -- on Ameren projects?

13 A Yes.

14 Q Okay. And have you ever -- do you know of a
15 situation where the availability of that company prevented
16 you from being able to get work done in -- in a time frame
17 that you felt like it was necessary to get it done in?

18 A Not that -- in a time line that we felt was
19 necessary.

20 Q Okay. Have you had -- have you had experience
21 where it might be difficult to get them in as soon as you
22 wanted them to get in?

23 A Yes. We have rescheduled work to a time frame
24 when we could get that specific diver.

25 Q Okay. Sometimes you have delayed whatever it is

1 you needed them to do so you could get that particular
2 diver in?

3 A Yes.

4 Q Okay. How -- how long of a time frame is the
5 longest that you've ever delayed on that circumstance that
6 you -- that you're aware of?

7 A I don't know that.

8 Q Okay. If it was an issue that you felt was as
9 -- was a certain level of significance, however, you would
10 go to a different dive company?

11 A Probably not. Probably what we'd do is we'd get
12 that diver to come.

13 Q Okay. Would they do it if you -- if you said --

14 A Yes.

15 Q -- hey, we need you tomorrow?

16 A There has never been a time if we really need
17 something that he didn't come and get it.

18 Q Okay. You keep saying he. And I'm trying to
19 make sure I'm following --

20 A They.

21 Q -- whether that is just one person or could be
22 several different individuals.

23 A If they're all housed in -- they're all divers
24 that work for this company.

25 Q Yes.

1 A But this -- the owner of the company always
2 comes with other divers.

3 Q Okay. I'm following you now.

4 A Okay.

5 Q So -- so you're -- it is -- it is an individual
6 under that company that you normally are dealing with and
7 is usually coming to dive. He sometimes brings other
8 divers with him for the work?

9 A That's correct.

10 Q All right.

11 A He doesn't always do the diving himself, but he
12 is there.

13 Q Okay. Do you know what the name of that company
14 is off the top of your head?

15 A I thought I knew it a second ago. Now I can't
16 remember.

17 Q That's because I asked you.

18 A His name is Steve.

19 Q Okay.

20 A I can't remember his last name now. He'll kill
21 me when he sees this.

22 Q Yeah, he will. So let me ask you this: In
23 regard to work that's being done by divers when you're
24 doing work on a system like Taum Sauk, what is the
25 requirement in order to get that work done in regard to

1 water level?

2 And what I'm asking you is -- I think we've
3 already got it pretty much established. You don't want
4 the pumps running while you're diving?

5 A Correct.

6 Q That's dangerous?

7 A Yes.

8 Q But what I don't quite understand at this point
9 is, is there a water level that -- that you need in --
10 when the work is being done? And I need some background
11 on that.

12 A Okay. It -- that really depends a lot on what
13 work you're trying to do.

14 Q That makes sense.

15 A For some evolutions, you need the thing almost
16 drained. And he may be doing some work at the very bottom
17 and he just needs enough water to be able to dive.

18 Q Okay.

19 A For some other evolutions, he may want it
20 completely full because the water aids him in doing what
21 he wants to do.

22 Q Okay.

23 A So --

24 Q Why would it aid him? Because of the
25 weightlessness --

1 A Yeah.

2 Q -- that you get with the water?

3 A Exactly.

4 Q So heavier things that would be there, would be
5 difficult to handle out in the open air under the water
6 that you get some buoyancy?

7 A Exactly. Or even not necessarily weight. Just
8 think of that reservoir with that sloped incline.

9 Q Okay.

10 A With water, you can swim to the side of the
11 wall. Without water, you're going to build ladders and
12 fall protection and a lot of other things.

13 Q Okay. That makes sense, too. In regard to the
14 particular work that would have been required -- and I'm
15 really not going to ask you if you don't know what it --
16 what the specifics of it would be.

17 But view if we're talking about resecuring or
18 trying to deal with this -- this securing of those
19 conduits, do you -- do you know what kind of water level
20 would have probably been used for that purpose while the
21 work was being done?

22 A I don't know the specific level that they
23 wanted. My understanding was for part of the work on that
24 very project, they needed water -- a lot of water. And
25 for part of the work, they needed it lowered.

1 Q Okay. Have you any understanding as to -- as to
2 how long it was going to take to resecure those conduits?

3 A My impression was it was only a couple days.

4 Q Okay. And can you tell me, if you know, how
5 much interference that would have brought to the -- would
6 have brought to the -- to the use of the reservoir for
7 generation purposes?

8 A I don't know specifically.

9 Q Okay. Would -- if -- if you -- it would be
10 likely that they would want to do the driving during the
11 daytime, correct?

12 A Yes.

13 Q So it would have been possible, I suppose, then,
14 that the portion that you deal with when the reservoir was
15 full would -- would be normally -- it would be normally
16 full in -- in the morning, correct?

17 A Yes.

18 Q So that diving, if that was -- if you were able
19 to do that first, you could have done that in however many
20 hours that part took during that first day, I guess?

21 A Yeah. I don't know how long it would have
22 taken.

23 Q Sort of speculating here --

24 A Yeah.

25 Q -- so I won't belabor this. Then the other

1 portion would have been done with the reservoir dropped
2 down some, if I'm following you?

3 A That was my understanding.

4 Q Okay. I think you were asked questions earlier
5 in regard to what conversation you may have had with Rick
6 Cooper in regard to the September 27th incident and --
7 well, strike that.

8 In regards to the -- to the setting, do you
9 recall any conversations that you had with Rick Cooper in
10 regard to -- to the setting of the warrick probes at 4 to
11 7 inches down from the parapet wall?

12 A No.

13 Q Okay. Have you had any conversations with
14 anyone else about that?

15 A Since the breach?

16 Q Prior to first.

17 A Prior to the breach?

18 Q No. Subsequent.

19 A Yes.

20 Q Okay. Other Ameren employees?

21 A Lots of people.

22 Q Okay.

23 A Ameren, FERC, DNR.

24 Q All right. How did you -- when you took over
25 the plant in November of '05, did the -- did the

1 information that you had regarding the overtopping event
2 in -- or events in December cause you any concern about
3 what you would do in regard to the supervision of that
4 plant?

5 A No.

6 Q And explain why.

7 A Cause me concern with what I would do with
8 regard to the supervision? Maybe I don't understand the
9 question.

10 Q Let me see if I can ask it a little bit
11 differently. What was your information about when you
12 took over the plant regarding the condition of the
13 reservoir, and especially in light of what you had been
14 told and observed, I think, with the September --
15 September overtopping events?

16 A My understanding at the time was that we had had
17 wave action only go over the top of that wall. I had
18 never before or today heard of another time that any water
19 has gone other.

20 So it was one event. It was wave action. That
21 wave action was -- happened because of a combination of a
22 degraded level instrument and high winds from Hurricane
23 Rita.

24 Q Okay.

25 A We had compensated for that degraded level

1 instrumentation with the 2 foot offset. And my
2 understanding when I took over is that Rick and Jeff had
3 good control and understanding of the significance of that
4 and they were pursuing a fix.

5 Q Okay. And your understanding, then, in November
6 was that there was something that was eventually going to
7 happen to -- to fix this issue about the what? What
8 issues were going to be fixed?

9 A Well, there was several issues. But relative to
10 the breach --

11 Q Yes.

12 A -- the level instrumentation pipe that had
13 partially come unsecured was going to be resecured with a
14 better mechanism to secure it so it wouldn't fail again.

15 Q Anything else?

16 A That's the only thing I know relative to the
17 breach.

18 Q Anything regarding wind instrument?

19 A No. I think by the time I took over in
20 November, they had decided they -- originally, they
21 thought it was just a wind deal --

22 Q Yes.

23 A -- and they were going to get some wind
24 compensation for level indicators. As I recall, by
25 November, they had decided it was really this degraded

1 level instrument, and we just needed to fix the level
2 instrument.

3 And I believe they had decided they didn't need
4 the wind -- they may have put a wind indicator, but not a
5 wind compensation for the level indicator. If they were
6 still pursuing that, I didn't --

7 Q I'm not sure what you just said. Explain that.

8 A There's two different things you can have
9 indication, This is what our wind speed is right now.

10 Q Yes.

11 A But, originally, my understanding was they were
12 pursuing to take something that measured wind speed, and
13 based on that wind speed make adjustments to the level set
14 points based on how high the wind was so that if there was
15 real high wind, we would lower -- automatically lower the
16 level set point so that waves didn't go over.

17 Once they decided that really the level was just
18 too high and if -- if the level were where it was supposed
19 to be, waves wouldn't take it over the top, my
20 understanding is we were no longer pursuing adjusting
21 level based on wind.

22 Q Where -- are you aware of whether or not any
23 kind of wind instrument was ever delivered to -- for use
24 at Taum Sauk?

25 A I do not know.

1 Q And who was it -- when you say it was decided
2 that it was no longer needed, who was it that made those
3 decisions?

4 A I don't know specifically. I would say it was
5 between Rick, Jeff and the engineers.

6 Q Okay. Which engineers?

7 A I don't know.

8 Q Okay.

9 A Probably -- I don't know.

10 Q Okay. And how was it communicated -- that
11 information communicated to you?

12 A There may have been e-mails. But probably in
13 verbal discussion I had, really around that October
14 seventh time frame, when we found the level indication,
15 all the discussion I had after that was all focused on
16 fixing the level indication. And I don't recall having
17 any more discussions about wind speed.

18 It may be that was an assumption I made. I
19 don't know. But I just didn't hear any more discussions
20 that I can recall on wind speed.

21 Q Were you aware of any plans to install an
22 additional warrick probe?

23 A No.

24 Q No one ever told you about that?

25 A No.

1 Q Would it surprise you to know that there was --
2 part of the proposal was to install an additional warrick
3 probe at a lower level than the other two high and
4 high-high probes were set?

5 A That would surprise me today after hearing a
6 year and a half of discussion and never having heard that.

7 Q Well, okay. Is that -- that's what I was going
8 to ask you, why you would be surprised? It's because you
9 hadn't heard that before?

10 A Yeah.

11 Q Would that have made sense to you?

12 A Not particularly.

13 Q And why not?

14 A Because if the instruments were working
15 correctly, the level indicators and two warrick probes are
16 more than adequate.

17 Q And if -- if that proposal was made by
18 Mr. Bluemner, would it make sense to you?

19 A No. I mean, he -- if he made it, he may have a
20 good explanation, and he could explain it to me. But just
21 from what I know, it wouldn't make sense.

22 Q Okay. If you would have known that the other
23 two warrick probes were set at 4 and 7 inches from the top
24 of the parapet wall, would installing an additional
25 warrick probe at a lower level make sense to you?

1 A No. What would make sense is to move those to
2 the right place.

3 COMMISSIONER GAW: I believe, Judge, that for
4 the time being, I am done. Thank you, sir.

5 JUDGE DALE: You are -- excuse me. You are
6 dismissed from this proceeding,

7 MS. PAKE: Judge, I'm sorry. I just briefly
8 have a few clean-up questions.

9 JUDGE DALE: I'm sorry. I forgot.

10 MS. PAKE: I don't blame you. I will be very
11 brief, I assure you.

12 CROSS-EXAMINATION

13 BY MS. PAKE:

14 Q Mr. Witt, you testified earlier that one of your
15 responsibilities after the breach was to escort various
16 officials around the Taum Sauk site --

17 A Correct.

18 Q -- and get information; is that correct?

19 A Correct.

20 Q I'm just going to give you what's been
21 previously marked as Exhibit 2, which is a memorandum that
22 a Jim Alexander of DNR prepared of a visit that he made to
23 Taum Sauk on December 29 -- where he indicated that he had
24 contact with you and Mr. Birk. Would you turn to the
25 second page of that exhibit? And do you see -- I believe

1 it's the second bullet point. I've highlighted the first
2 sentence there?

3 A Yes.

4 Q What does that say?

5 A A second set of instruments served as --

6 Q Oh, sorry. It's the one just above that.

7 A Piezometers have been removed from the reservoir
8 and on December 29th were lying on a table in the power
9 house.

10 Q Okay. Again, what are the piezometers?

11 A Piezometers are the three level indicators.

12 Q Those are the level transducers. Are they the
13 high and the high-high probes?

14 A They are not the high and high-high probes.

15 Q Were the high and the high-high probes removed
16 and lying on the table in the power house at the time of
17 Mr. Alexander's visit?

18 A No.

19 Q Did you tell Mr. Alexander that the high and the
20 high-high probes were sitting there on the table?

21 A I don't believe so.

22 Q Where were the high and the high-high probes at
23 that time?

24 A They were coiled up in the metal box that
25 they're mounted in up on the upper reservoir.

1 Q Still up at the gauge house in the upper
2 reservoir?

3 A Yes.

4 Q And does Mr. Alexander say anywhere in that
5 paragraph that he saw the high and the high-high probes in
6 the power house?

7 A In that paragraph?

8 Q Yes.

9 A In that bullet?

10 Q Correct.

11 A No.

12 Q Okay. Now, Mr. Alexander also testified
13 previously that on that visit he talked to you and
14 Mr. Birk about why he did not see rocks on the road at the
15 base of the reservoir as a -- as a result of the breach.
16 Do you recall that conversation?

17 A I don't recall specifically with Jim, but I know
18 I had that conversation with some people.

19 Q And what do you recall telling the officials
20 when they asked you about that?

21 A That there were on the morning of December 14th
22 -- again, hearsay because I wasn't there, but that there
23 were a few rocks on the road and they had been removed
24 very early that morning.

25 Q So that's what you told the officials at the

1 time?

2 A Yes.

3 Q You didn't say, I don't know?

4 A Well, I -- I don't know. Somebody may have
5 asked me at one point. I could have said I don't know.

6 Q Well, what -- what's your best recollection of
7 what you told them?

8 MR. SCHAEFER: Objection. Asked and answered.

9 A My recollection is I told them --

10 MS. PAKE: Well, touche.

11 MR. SCHAEFER: He's already answered it twice.

12 MS. PAKE: Touche.

13 Q (By Ms. Pake) Mr. Witt, you were asked earlier
14 about an e-mail, Exhibit 30, that related to Mr. Pierie's
15 transition from a project at Taum Sauk to another project,
16 and he was going to be replaced by an engineer from SEGA,
17 Mr. Weary. Do you recall that?

18 A Yes.

19 Q What was the project that Mr. Pierie was
20 turning over to Mr. Weary at that time?

21 A It's a digital controls upgrade in the power
22 house. It involves replacing some of the relaying and
23 putting in PLCs down at the plant.

24 Q And that was the project that Mr. Cooper was
25 writing his e-mail about?

1 A Yes. Correct.

2 Q Okay. Did that project have anything at all to
3 do with getting the gauge piping repaired?

4 A It did not. It had nothing to do with the upper
5 reservoir.

6 Q And, finally, you were asked some questions,
7 again, about why you did not personally get involved in
8 trying to schedule an outage in the fall of 2005 to get
9 the gauge piping repaired. And why was it that you did
10 not feel the need to get involved?

11 A Because, normally, I don't get involved in that
12 unless one of my subordinates is having trouble getting it
13 in the time that he feels is prudent.

14 And if they have trouble, they come to me and
15 tell me that, Hey, I think I need this outage. I'm not
16 able to get it. Can you help me? And nobody asked me for
17 that help.

18 Q Did you have any concerns about the safety of
19 the facility, or were any concerns expressed to you about
20 the safety of the facility that would have caused you to
21 get involved?

22 A No.

23 MS. PAKE: Okay. Thank you, Mr. Witt.

24 COMMISSIONER GAW: I'm -- I'm sorry, Judge. I
25 do have a couple of other things. They're not related to

1 what was just inquired about. But I want to -- I think
2 this is the only witness that can probably answer that.
3 Well, maybe not.

4 RE CROSS EXAMINATION

5 BY COMMISSIONER GAW:

6 Q In regard to the -- to the -- the event that you
7 went to in September that you refer to as the
8 celebration --

9 A Yes.

10 Q -- I aimed to ask you earlier, what -- what was
11 that event celebrating?

12 A It was an IEEE milestone award that Taum Sauk
13 had received that is a very unique award for a plant to
14 get. And it was dealing with the controls designed of
15 Taum Sauk that in the 1960s it was designed to be operated
16 remotely. There are many plants that way today. But in
17 the 1960s, that was unique.

18 Q So it was an award given to -- to Ameren because
19 of the fact that it was the first plant to operate
20 remotely in the country? Is that what you're telling me?

21 A I don't know that it was first, but it -- it was
22 considered an engineering milestone to have a plant of
23 that type to be designed to be able to operate remotely.
24 It may have been the first.

25 Q IEEE is, for the record, if you know?

1 A I don't know.

2 Q It's an engineering --

3 A It's an electrical engineering type
4 organization.

5 Q Okay. Was there a resolution or something that
6 went along with that award?

7 A Yes. I believe there was.

8 Q Who has that?

9 A It's probably at the plant. Well, maybe it's at
10 our General Office Building. I don't know.

11 Q Okay. And in -- on December the 14th, 2005,
12 when the breach occurred, was that day scheduled as -- as
13 an exercise day for the emergency action plan?

14 A Yes, it was.

15 Q Do you know whether or not the fact that it was
16 scheduled as that kind of an event caused any confusion to
17 anyone that you're aware of regarding information that
18 there was a problem at the plant?

19 A I don't believe it did.

20 Q Okay. Did the potential for that confusion to
21 exist?

22 A Yes.

23 Q Do you know what, if anything, is done in
24 preparation for that exercise?

25 A There is -- I know there is some mean or

1 preparation. I don't know all the specifics. But I know
2 part of it is to have discussions with some of the
3 response organizations to inform them that we're going to
4 have a drill on this day.

5 Q Do you do a similar drill for Osage?

6 A Yes.

7 Q And does Kiakuck require one?

8 A I don't know if they do a drill, per se. They
9 have communications periodically with their response
10 organizations.

11 Q It's a different kind of a situation up there --

12 A Yes.

13 Q -- in that facility? So -- but in regard to the
14 preparation work that's done, most -- to your knowledge,
15 it -- it involves exclusively notification of those
16 individuals and entities that would normally be a part of
17 the drill?

18 A I didn't say that's exclusively all it involves.
19 That's just one thing I know that would normally be done.

20 Q Do you know --

21 A I expect there are others.

22 Q Do you know who would know that, what other
23 things would be involved?

24 A For that particular one, Rick Cooper and Brenda
25 Parks.

1 Q Okay. Do you know whether or not there is a
2 difference in the way a plant is run when a drill is
3 scheduled?

4 A I would not expect there to be any difference.

5 Q Okay. And would that be true of the Osage, of
6 the Bagnell Dam plant?

7 A Yes.

8 Q There would be no difference?

9 A No difference.

10 COMMISSIONER GAW: That is all I have, Judge.
11 Thank you. Thanks, sir.

12 MR. WITT: You're welcome.

13 JUDGE DALE: Are we all finally, utterly
14 concluded with this witness?

15 COMMISSIONER GAW: For now.

16 JUDGE DALE: Now I'll give you my speech. You
17 are dismissed from this proceeding, but you're subject to
18 re-call if we have further hearings. Thank you.

19 MR. WITT: Thank you.

20 JUDGE DALE: With that, we will go off the
21 record and resume --

22 MR. REED: Wait. I'd like to move to admit
23 Exhibit 27s through 32.

24 JUDGE DALE: Any objections?

25 MS. PAKE: We just object, your Honor, to

1 Exhibits 27, 28 and 29, the Highway Patrol statements
2 based on the same running objection.

3 JUDGE DALE: Okay. 26, 27 and -- no. 27,
4 28 and 29 are admitted subject to the standing objection.
5 30, 30-A, 31 and 32 are admitted unreservedly. And now
6 we'll go off the record and reconvene tomorrow morning at
7 9:00.

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1 REPORTER'S CERTIFICATE

2

3 STATE OF MISSOURI)
) ss.
4 COUNTY OF OSAGE)

5

6 I, Monnie S. VanZant, Certified Shorthand Reporter,
7 Certified Court Reporter #0538, and Registered
8 Professional Reporter, and Notary Public, within and for
9 the State of Missouri, do hereby certify that I was
10 personally present at the proceedings as set forth in the
11 caption sheet hereof; that I then and there took down in
12 stenotype the proceedings had at said time and was
13 thereafter transcribed by me, and is fully and accurately
14 set forth in the preceding pages.

15

16 IN WITNESS WHEREOF, I have hereunto set my hand and
17 seal on August 6, 2007.

18

19

20

21 _____
Monnie S. VanZant, CSR, CCR #0539

22 Registered Professional Reporter

23

24

25

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1	E X H I B I T S			
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4	22	FERC Staff Report	838	838
5	23	Missouri Highway Patrol Report of Investigation	839	842
6	24	12/23/02 E-Mail	843	843
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16	30-A	E-Mails	1211	1211
17	31	10/9/05 E-Mail	1211	1211
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