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NUCLEAR REGULATORY COMMISSION

Title: Interview of [REDACTED] 75

Docket Number: (not provided)

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

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OFFICE OF THE INVESTIGATOR GENERAL

INTERVIEW

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IN THE MATTER OF: :

INTERVIEW OF : Docket No.

 : (not provided)

(CLOSED) 7C :
-----X

Thursday, September 25, 2003

Region 1

475 Allendale Road

King of Prussia, PA 19406

The above-entitled interview was conducted
at 8:10 a.m.

BEFORE:

Special Agent Eileen Neff

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

(8:10 a.m.)

SPECIAL AGENT NEFF: Today's date is September the 25th, 2003. The time is approximately 8:10 a.m. Speaking is Special Agent Eileen Neff, NRC Region I, Office of Investigations. Also present is [REDACTED] formally [REDACTED] at Hope Creek for PSEG Nuclear.

The subject of this interview will be the safety conscious work environment and some recent incidents at Hope Creek that [REDACTED] has indicated that he's willing to provide some insight on. Is that correct, [REDACTED]

[REDACTED] That's correct.

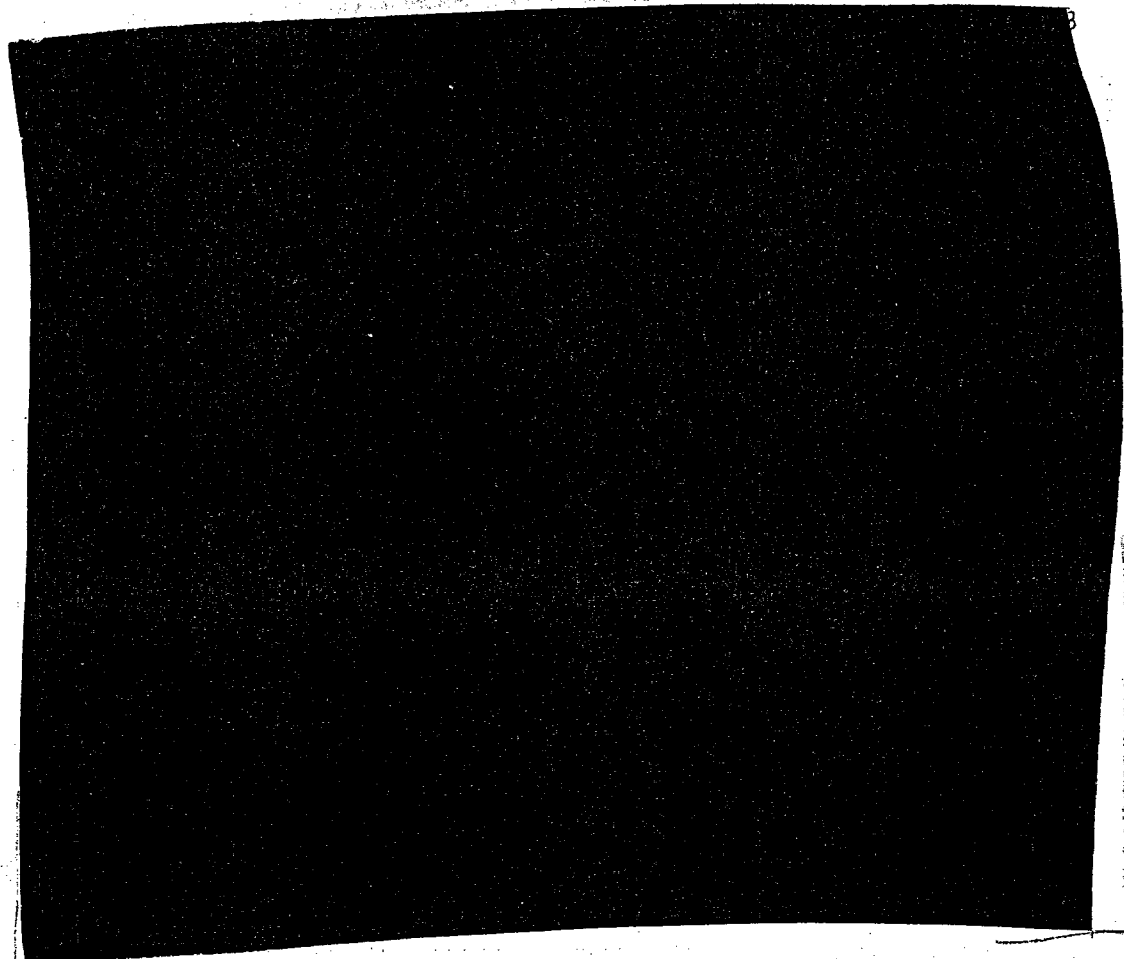
SPECIAL AGENT NEFF: Okay. At this point, what I'd like to do is ask you for some background, your education background.

[REDACTED]

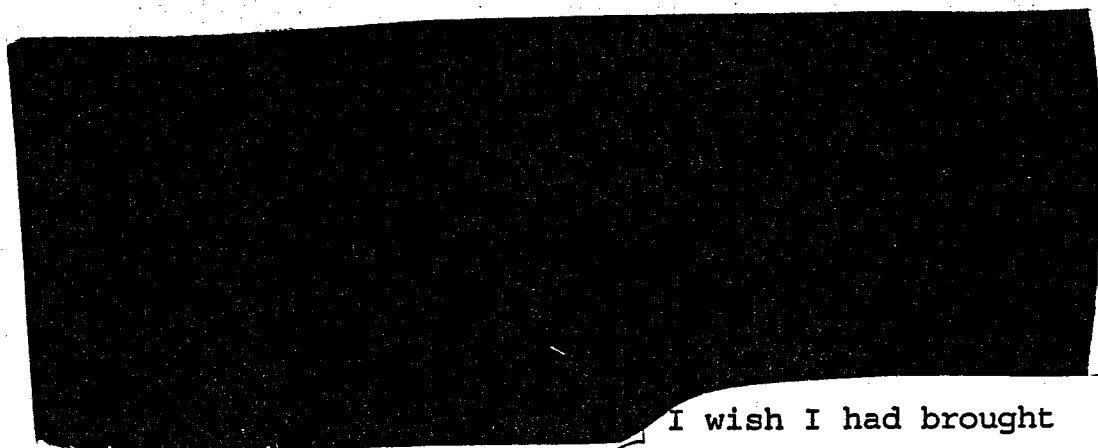
SPECIAL AGENT NEFF: In what position?

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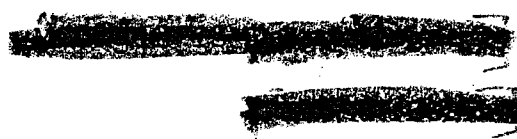


SPECIAL AGENT NEFF: When you were in the
Outage Organizations?



I wish I had brought
my resume, that would have helped.

SPECIAL AGENT NEFF: This org chart might
help. May 2000, it's showing Hope Creek [REDACTED]



Yes.

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1 SPECIAL AGENT NEFF: By [REDACTED] it
2 shows that it's you.

3 [REDACTED] Yes. Oh, yes, [REDACTED] I was
4 definitely the [REDACTED]

5 SPECIAL AGENT NEFF: So would that be
6 [REDACTED] then?

7 [REDACTED] I think it would be -- this
8 is May. I think [REDACTED] Yes, it must have
9 been [REDACTED]

10 SPECIAL AGENT NEFF: When you made the
11 change there?

12 [REDACTED] When I made the change, yes.
13 Because I relieved [REDACTED]
14 [REDACTED] at Hope Creek.

15 SPECIAL AGENT NEFF: Okay. So that was
16 likely in [REDACTED]

17 [REDACTED] Yes, it must have been [REDACTED]
18 because this coming [REDACTED] would be my [REDACTED] on
19 the job.

20 SPECIAL AGENT NEFF: So since [REDACTED]
21 you've been the [REDACTED]

22 [REDACTED] Yes.

23 SPECIAL AGENT NEFF: Okay. Let's talk 7C
24 about the work environment that you've been in since
25 1989. I don't want to go back that far but let me

1 just ask you overall: Do you have any concerns for
2 the safety conscious work environment at Hope Creek?
3 I mean I don't know that you can speak to Salem but if
4 you can, you can include that.

5 [REDACTED]: I don't know if I really can
6 speak to Salem. I mean I know most people at Salem
7 and I've spent some time there, but I haven't spent
8 working time there.

9 SPECIAL AGENT NEFF: Okay.

10 [REDACTED]: I mean I've attended some
11 meetings and what not, but --

12 SPECIAL AGENT NEFF: So your comments are
13 going to go exclusively toward Hope Creek?

14 [REDACTED]: I think that would be best,
15 because I mean I can --

16 SPECIAL AGENT NEFF: I understand.

17 [REDACTED]: My comments about Salem
18 would be suppositions, I think, not really based on
19 any substance. For Hope Creek, I'm not really sure
20 how to answer such a broad question. I don't sense
21 that there's a shortfall on the safety culture at Hope
22 Creek as far as nuclear and personnel safety goes. I
23 think that from the top down there's focus on nuclear
24 safety and personnel safety, and it's present in the
25 decisions that we make. We make risk-informed

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1 decisions, and I don't sense that there's a shortfall
2 there.

3 The two examples that you highlighted I
4 think those are I think occurrences or events or
5 decisions that were second guessed by a number of
6 people and caused some to wonder where the safety
7 focus was, and I think we can talk more about those.

8 SPECIAL AGENT NEFF: Okay. Just for the
9 record so that it's clear, what I told you I would be
10 interested in talking about were incidents that
11 occurred in March of 2003 at Hope Creek and in late
12 June of this year. So in considering the work
13 environment at Hope Creek, you're saying you don't
14 note that there's any shortcomings there. Has it
15 always been the case that way or has it been steady
16 since you've been there, let's say since you've been
17 the [REDACTED] That would be since late
18 2000.

19 [REDACTED] From my perspective, I think
20 the focus on safety has been steady.

21 SPECIAL AGENT NEFF: Okay.

22 [REDACTED] With the advent and the
23 transition into a competitive environment, it doesn't
24 take the focus away from safety but it causes
25 additional questions to be asked to make sure that

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1 we're making the most informed decisions, both from a
2 safety perspective and from an economical and
3 commercial aspect. And, frequently, those decisions
4 when they're made are the source of questions that may
5 come up regarding safety. The question always comes
6 up around whether or not the decision was based on
7 economics or whether we made the safest decision. And
8 the two examples that you highlight here are classic
9 examples of decisions that were made from safety. But
10 from those that weren't involved with the decision
11 making process it could appear that they were not made
12 from that perspective.

13 SPECIAL AGENT NEFF: Typically, when
14 you're saying the question will come up, where do the
15 questions come from when you're saying it's questioned
16 whether or not something was done?

17 [REDACTED]: It usually comes from the
18 workers, because if the decision was not well
19 communicated or understood by those that were not
20 necessarily around the table making the decision,
21 that's where the discussions begin to take place.

22 SPECIAL AGENT NEFF: Okay. So somewhere
23 between your level and your [REDACTED] level?

24 [REDACTED]: I would say it's --

25 SPECIAL AGENT NEFF: In between, going

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1 down to the union?

2 [REDACTED]: It's usually between the
3 shift manager level and the equipment operators, the
4 union folks.

5 SPECIAL AGENT NEFF: Where the questions
6 arise.

7 [REDACTED]: Yes.

8 SPECIAL AGENT NEFF: Okay. So where would
9 the breakdown in the communications occur then,
10 typically, if it's not well explained as you're
11 saying?

12 [REDACTED]: It would occur between the
13 shift managers and the equipment operators.

14 SPECIAL AGENT NEFF: Okay. And the shift
15 managers would be a part of the decision making, but
16 it doesn't get adequately explained to the operators.

17 [REDACTED]: Yes.

18 SPECIAL AGENT NEFF: That's what you're
19 saying.

20 [REDACTED]: From my point of view,
21 that's where most of the questions come from. 7C

22 SPECIAL AGENT NEFF: Okay. Right. The
23 work environment, had you been aware -- has it ever
24 come to your attention that the workers or any of the
25 licensed operators have felt that they were asked to

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1 do something unsafe?

2 [REDACTED] I haven't felt them to be
3 asked to do something unsafe. I've never had that.
4 I've had some challenges.

5 SPECIAL AGENT NEFF: Now, are you saying
6 that you haven't thought that it was unsafe. What I
7 was wondering was had anybody expressed to you that
8 they thought something was unsafe?

9 [REDACTED] I have one case that comes
10 to mind where a course of action that had been
11 proposed by senior management to address identifying
12 a source of steam leakage inside our drywall. I don't
13 know if you're familiar with reactors, boiling water
14 reactors or not, but we had a steam leak inside of our
15 --

16 SPECIAL AGENT NEFF: You can be as
17 technical as possible because I don't have a --

18 [REDACTED] -- containment, and the
19 source of our steam leakage was not known. It was
20 hypothesized that it could be from a motor operated
21 valve, containment isolation valve associated with the
22 reactor core isolation cooling system, which is a
23 steam driven injection system, low capacity system.
24 And we were concerned about the leakage. It exceeded
25 the so-called the line in sand, if you will, that I

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1 established for acceptable leakage, and we began to
2 bring the unit down. We had to shut the unit down.

3 SPECIAL AGENT NEFF: When was this?

4 [REDACTED] I'm sorry?

5 SPECIAL AGENT NEFF: When did this occur?

6 [REDACTED]: When? I don't know, the
7 times all run together. It was either in -- I think
8 it was in early 2002.

9 SPECIAL AGENT NEFF: Okay.

10 [REDACTED] And our course of action was
11 to bring the unit down in power and make a containment
12 entry with the reactor still critical. And one of the
13 course of actions that was proposed by my boss and his
14 boss as well, my boss at the time was [REDACTED]
15 [REDACTED]
16 [REDACTED] (phonetic) who
17 was out of town --

18 SPECIAL AGENT NEFF: So [REDACTED]
19 title would be what?

20 [REDACTED] He was the [REDACTED]
21 [REDACTED]

22 SPECIAL AGENT NEFF: Okay.
23 [REDACTED]
24 [REDACTED]

25 SPECIAL AGENT NEFF: Okay.

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1 [REDACTED] And he was acting on behalf
2 of [REDACTED] who was at that time out of town but
3 who was the [REDACTED] And [REDACTED]
4 [REDACTED] had wanted to -- in an attempt to determine where
5 the leakage was, they wanted to close the isolation
6 valve on this steam driven system to see if that would
7 stop the leakage. I mean there's a number of
8 different sources of potential leakage in the drywall.
9 This was thought to be a likely one since we had just
10 stroked the valve for surveillance testing several
11 days before and that's when the leakage started. So
12 we thought that valve was a source of the leakage. TC

13 And they proposed stroking the valve shut,
14 and I initially agreed with that course of action and
15 began to discuss with my team, with the licensed
16 operators, and they expressed concern about, "Hey, if
17 we have leakage and the leakage is getting worse, why
18 would we stroke this valve shut and isolate one of our
19 injection systems that may be needed to put water to
20 the vessel if the leakage should get really worse?"
21 And they strongly recommended that we not stroke that
22 valve closed, and I agreed, and we didn't stroke the
23 valve shut.

24 So we ended up filling in the drywall and
25 we identified another source of leakage was not the

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1 valve in question, and we had to shut the unit down,
2 a cool shutdown, to fix it. So I think that would be
3 an example of where somebody raised a safety concern,
4 a safety question. That's really the only time I can
5 think of a licensed operator raising to me safety
6 concerns that they were concerned were not being
7 addressed.

8 SPECIAL AGENT NEFF: Okay. And you think
9 the actions were appropriate in that instance.

10 [REDACTED] I do, yes.

11 SPECIAL AGENT NEFF: As they proved out to
12 be according to what you're telling me.

13 [REDACTED] It proved to be a good
14 decision, the best decision to make at the time.

15 SPECIAL AGENT NEFF: Okay. The situation
16 where you describe that in certain instances when
17 decisions are made there may be a communication
18 breakdown between the decision makers and the workers
19 along the way, is that's something that's historically
20 been done that way? Has that always been the case in
21 Operations --

22 [REDACTED] I'm not sure I understand
23 the question. 7C

24 SPECIAL AGENT NEFF: -- or is it something
25 that has developed recently where there's a

1 communication breakdown and then there might a concern
2 that, well, what was this done for? Was it based on
3 safety or was it based on economics?

4 [REDACTED] Well, the communication
5 challenge is always there in a large organization. In
6 fact, that's always been there. The new variable
7 that's in play is really the economics aspect of
8 operating the facility. I mean previously we were
9 considerate of that but it wasn't as predominant of a
10 factor in how the business is running. It's truly a
11 business, and although the business aspect doesn't
12 drive how we operate the units, the business aspect is
13 integral with how we make decisions. I mean --

14 SPECIAL AGENT NEFF: When did that change?
15 You said previously it hadn't been.

16 [REDACTED] Well, it all changed with
17 deregulation, I think.

18 SPECIAL AGENT NEFF: Okay.

19 [REDACTED] That's when the -- I mean,
20 for example, when I was -- before deregulation, when
21 I was on shift, I mean if you were to ask me what the
22 cost of generation was --

23 SPECIAL AGENT NEFF: You couldn't tell me.

24 [REDACTED] -- I couldn't tell you. I
25 wouldn't know where to look.

1 SPECIAL AGENT NEFF: And now it's an
2 integral part of what you know?

3 [REDACTED] Now it's a piece that we're
4 aware of, and it's important to be aware of that in
5 that there are some things you can do inadvertently to
6 make decisions that might be less informed that would
7 significantly increase the cost to the company, and so
8 recognizing that there is a cost of generation that
9 needs to be considered that causes good discussion and
10 challenges around key decisions that are made that
11 could have a substantial impact to the company to make
12 sure it's the best decision to make.

13 SPECIAL AGENT NEFF: From what you've
14 observed to date, these cost considerations, are they
15 applied appropriately at Hope Creek?

16 [REDACTED] I think they are. I think
17 they are.

18 SPECIAL AGENT NEFF: Okay.

19 [REDACTED] They're not always -- I
20 would say that not everybody agrees with the decisions
21 that are made, but the decisions that are made are
22 made almost exclusively by a team of knowledgeable
23 individuals who -- I mean I've participated in
24 countless discussions and decisions that laid out the
25 strategies, that laid out the future planning, that

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1 laid out the financial profile for the next several
2 years, the long-range projects. And those discussions
3 take place with a team of individuals, and the outcome
4 of that discussion is presented to the vice presidents
5 for ultimate review and approval. That was our
6 process that we used. And not everybody agrees with
7 those decisions.

8 SPECIAL AGENT NEFF: Where did the
9 objections come from for that, and what are they based
10 on?

11 [REDACTED] Well, they're usually based
12 on personal feelings and insights.

13 SPECIAL AGENT NEFF: Can you think of any
14 examples?

15 [REDACTED] I'll think of an example
16 here. Yes. One example would be the decision to move
17 the replacement of one of our main transformers out
18 one refueling cycle. And we have three main
19 transformers. One is a very good one that we replaced
20 just a couple of years ago, and the other two are very
21 old, and they're susceptible to electromagnetic
22 disturbances and they're not very good transformers.
23 It's not really a safety issue. We had originally
24 planned on replacing one of the remaining two
25 transformers last outage and we reviewed that

1 decisions and the original game plan was to replace
2 one that outage and replace the third one the
3 following outage. And we determined that if we
4 replaced them both in the upcoming refueling outage,
5 that would save the Company about \$2.5 million because
6 we wouldn't have to pay the contractor twice to come
7 in to set up, to change transformers and all that.

8 SPECIAL AGENT NEFF: Makes sense.

9 [REDACTED] And so we did that. We
10 deferred the transformer replacement from the outage
11 that we just had back in the spring and moved that out
12 to the next outage so we're going to be replacing two
13 transformers in the next outage instead of one. A lot
14 of people have a problem with that, because they're
15 concerned about the operational risk that we assume by
16 continuing to run with a transformer that could have
17 been changed out and wasn't.

18 SPECIAL AGENT NEFF: Okay.

19 [REDACTED] And people question that.
20 And that's fine. We explained the decision to them
21 but that doesn't mean they always agree with the
22 decision. TC

23 SPECIAL AGENT NEFF: Okay. In this case,
24 with this particular transformer, had it been causing
25 problems from a nuclear safety perspective?

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1 [REDACTED] No. It doesn't -- they
2 don't cause problems from a nuclear safety aspect but
3 what they can do is since they're sensitive to solar
4 magnetic disturbances, there are conditions that occur
5 a couple of times a year that will require us to
6 reduce power on the unit in order to maintain the
7 temperatures on those transformers within an
8 acceptable band to prevent damage.

9 SPECIAL AGENT NEFF: So it's not that they
10 will affect the unit, the unit will affect them so you
11 have to monitor the unit so as not to negatively
12 affect the transformers?

13 [REDACTED] No, not quite. You monitor
14 the transformers, and we have instrumentation that
15 will detect the onset of the ground-induced currents,
16 that's what they're called. When ground-induced
17 currents occur, they cause overheating of the
18 transformer, so when that -- and that condition is not
19 controlled, we can't control that. It's actually
20 caused by solar flares from the sun.

21 SPECIAL AGENT NEFF: Okay.

22 [REDACTED] So we actually watch the
23 solar forecasts. But there are conditions that occur,
24 if a large solar flare occurs, those ground-induced
25 currents come up and they will exceed the threshold

1 values in our operating procedures that will require
2 us to reduce power in the unit to prevent damage to
3 the transformers.

4 SPECIAL AGENT NEFF: Okay.

5 [REDACTED] And so that -- it's an
6 operational risk that we assume by having those
7 transformers in place. We know there may be times
8 where the solar conditions are such that we'll have to
9 back the units down, and if it gets real bad, we'll
10 have to shut the units down all together. And so
11 there are some people that feel that that operational
12 risk is too much and therefore we should have replaced
13 the transformer last outage when we had the
14 opportunity and not have made the decision to replace
15 it the following outage when we do both.

16 SPECIAL AGENT NEFF: Now, when you say
17 operational risk, just so I'm following you on that,
18 is it operational risk due to the flare ups in the
19 heat generated or is it operational risk in that you
20 have to back the unit down so you're not generating
21 full power?

22 [REDACTED] Yes. It's operational --
23 whenever you have to move the unit you incur
24 operational risk. 7C

25 SPECIAL AGENT NEFF: Okay. So that's from

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1 having to manipulate the unit --

2 [REDACTED] Sure.

3 SPECIAL AGENT NEFF: -- more than you
4 would if the transformer could accept that heat.

5 [REDACTED] Absolutely.

6 SPECIAL AGENT NEFF: Okay.

7 [REDACTED] There's a potential there --

8 SPECIAL AGENT NEFF: Okay.

9 [REDACTED] -- and anytime you have to
10 move the unit you incur some risk. I mean there's
11 always risk in operating the unit, but when you move
12 it around it is more risk.

13 SPECIAL AGENT NEFF: Okay. Now I
14 understand.

15 [REDACTED] It's not dangerous, but
16 there is more risk in it.

17 SPECIAL AGENT NEFF: Okay. So you give
18 that as an example of the cost considerations that
19 some people disagree with when you're planning outages
20 and work at the site. Anything else, can you think of
21 anything else or is that --

22 [REDACTED] Well, that's one that comes
23 to mind. Another example might be, and this might be
24 more closely tied to the reactor, we made some
25 decisions on how to perform maintenance on our control

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1 rod drive mechanisms, and these are pieces of
2 equipment that -- each mechanism services one control
3 rod, and that's how we move the control rods. We have
4 185 control rods, so I have 185 mechanisms to
5 maintain. Some of the control rod drive mechanisms --
6 I mean they all work. Some have performance problems
7 and require some additional maintenance and require
8 some additional work by the operators to work
9 correctly. And we had previously historically every
10 outage done maybe ten to 15 mech changeouts where we
11 actually removed them from the reactor vessel and
12 replaced them with a new or rebuilt mechanism. And
13 that maintenance schedule was not adequate to address
14 the maintenance requirements for 185.

15 SPECIAL AGENT NEFF: Ten to 15 every 18
16 months wasn't going to get it done?

17 [REDACTED] Won't get it done.

18 SPECIAL AGENT NEFF: Okay.

19 [REDACTED] And we recognized that
20 through that performance monitoring of the system and
21 clearly identified the need that we had to change our
22 maintenance strategy. So this last outage we had
23 originally scoped in about 37, I can't remember
24 exactly the number. And 37 was the number that was
25 recommended by the system engineer for the system.

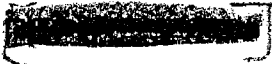
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1 And, ultimately, we reviewed that. We took a look at
2 what impact doing 37 would have both on outage
3 duration because those control rod drive mechanism
4 changeouts normally don't occur on the critical path
5 of the outage, i.e. they don't extend the length of
6 the outage. But if we were to do 37, they would, so
7 we had to understand the impact that that would have
8 and we had to understand the impact that the
9 additional contracted labor costs would have on
10 replacing all 37. And we also didn't have 37 spare
11 drives to go in, so that put us in a position where we
12 would have to remove mechs during the outage, rebuild
13 them at the site during the outage in order to have
14 additional rebuilt spares to go in. And as we looked
15 at the costs, the cost of that was really quite
16 staggering. It was several million dollars to do
17 that.

18 SPECIAL AGENT NEFF: Okay.

19  And it was -- I don't
20 remember the exact hit on critical path. It was about
21 a day and a half to two days additional length of the
22 outage. So we began to look at the needs of the
23 system and spoke with the system engineer and we had
24 probably a half dozen meetings to understand the
25 nature of the corrective maintenance that was needed,

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1 the performance of the system. And it turned out that
2 there were 27 drives that really needed to have work
3 done on them. Thirty-seven was the best of all
4 solutions, 27 was what we needed to have done really
5 based on system performance. So we decided to do the
6 27. We paid additional money to the contractor to do
7 that work, and we laid out a long-term plan which is
8 having us buy additional spare drives this year for
9 about three-quarters of a million dollars in order to
10 be able to do more drives the next outage. And we
11 laid out a long-term plan that has us doing between 30
12 and 35 drives, I think, for the next several refueling
13 outages to get ourselves caught back up.

14 SPECIAL AGENT NEFF: So that when you pull
15 them you can replace them immediately and not wait --
16 not add to time to the outage --

17 [REDACTED] Right, right.

18 SPECIAL AGENT NEFF: -- to repair these
19 and put them back.

20 [REDACTED] Exactly right. Exactly
21 right.

22 SPECIAL AGENT NEFF: Okay. So were there
23 some concerns associated with the whole plan?

24 [REDACTED] Well, yes. There are
25 certainly some people that feel that we shouldn't have

1 reduced the scope from 37 to 27, we should have done
2 37 irregardless of the cost or impact to the outage.

3 SPECIAL AGENT NEFF: And length of the
4 outage. And where does that come from, primarily?

5 [REDACTED] It comes from some
6 individuals in Engineering, although the system
7 engineered was -- he agreed to the 27 and felt that
8 that was a prudent decision. There were others in
9 Engineering that did not necessarily agree with that.
10 And I think there are some licensed operators,
11 certainly some NCOs, nuclear control operators,
12 reactor operators, who feel that the decision was
13 shortsighted and that we should have done the 37
14 instead of 27.

15 SPECIAL AGENT NEFF: Did you agree with
16 them on that?

17 [REDACTED] No.

18 SPECIAL AGENT NEFF: You were happy with
19 the decision making process?

20 [REDACTED] I was asked specifically
21 whether I had a significant issue with not doing 37.

22 SPECIAL AGENT NEFF: Who asked you that?

23 [REDACTED]
24 [REDACTED]
25 [REDACTED]

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1 SPECIAL AGENT NEFF: Okay.

2 [REDACTED] They were all part of the
3 discussions.

4 SPECIAL AGENT NEFF: The systems engineer
5 who was in agreement with doing the 27, was there any
6 pressure on that individual to agree to do just the
7 27?

8 [REDACTED] I don't think so. I don't
9 think so.

10 SPECIAL AGENT NEFF: Was he able to come
11 to that decision on his own, do you think, or was
12 there outside influence on him?

13 [REDACTED] Well, he came to the table
14 wanting 37, and as we looked -- because he doesn't
15 understand the impact to the outage, he doesn't
16 understand the mechanics of replacing 37 versus 27.
17 So when we put all that on the table we looked at the
18 impacts and looked at, okay, so what's the basis of
19 the 37, where are the 37 coming from? Well, 27 have
20 these performance problems, and of these 27, these ten
21 are the worst. And then you've got 17 and these -- if
22 we don't address these, these will be really bad next
23 cycle. And these other ones, well, these other ten,
24 the remaining ten are -- they're trending in that
25 direction but they'll be okay for the next cycle but

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7C

1 we'll have to get these next outage.

2 SPECIAL AGENT NEFF: So what you're
3 describing is you more or less came to a compromise on
4 what would be repaired and he had to get educated on
5 the costs and the effects that this would have on your
6 overall outage.

7 [REDACTED] Sure. Yes. We got together
8 and made the best informed decision.

9 SPECIAL AGENT NEFF: With everybody --
10 [REDACTED] With everybody involved,
11 yes.

12 SPECIAL AGENT NEFF: Okay. Okay. That
13 was another key example that you were giving me
14 regarding this decision-making process --

15 [REDACTED] Yes. Right.

16 SPECIAL AGENT NEFF: -- where sometimes
17 some people see it as -- not in the same way as -- or
18 not in agreement with the way you go. Do you want to
19 add anything else to that?

20 [REDACTED] No. I think that's about --
21 I think that's good, unless you want me to give you
22 more examples. I mean we could talk about decisions
23 that create controversy for most of the day, but
24 that's a good example, because I mean with any
25 decisions that's made, not everybody agrees with the

1 decision. You can help them understand why the
2 decision was made and I'm obligated to do that with my
3 people, so I communicate why the decisions were made,
4 what the basis of it was, and they can choose to agree
5 or not agree. I work to gain alignment but at some
6 point you need to move on and recognize that not
7 everybody's going to agree with your decisions.

8 SPECIAL AGENT NEFF: If it's been reported
9 that there's concerns that the site is managed with a
10 production over safety mentality and this would have
11 been raised more recently, in more recent years, where
12 do you think that comes from?

13 [REDACTED] I'm not really sure.

14 SPECIAL AGENT NEFF: Have you seen or
15 heard that particular point of view? Have you seen
16 people talk about having a problem with the production
17 over safety mentality? Do they raise it to you as a
18 problem?

19 [REDACTED] Well, the one diesel leakage
20 example that we'll talk about I think that was --

21 SPECIAL AGENT NEFF: Yes. We'll get into
22 these --

23 [REDACTED] -- that was one that created
24 some angst with my guys and me to an extent. We'll
25 cover that.

1 SPECIAL AGENT NEFF: Okay.

2 [REDACTED] As far as production over
3 safety, I don't see a whole -- I mean all three units
4 are down today. Both Salem units and Hope Creek units
5 are down, and they're down because we have salt
6 deposits on our 500 KB switch gear that makes it less
7 reliable. So we're not generating any electricity
8 today because we want to make sure that those lines
9 are clean and we're washing the switchyard down. Hope
10 Creek's crammed as a result of it, and based on some
11 problems that we saw in the Salem switchyard, we shut
12 both those units down.

13 SPECIAL AGENT NEFF: Okay.

14 [REDACTED] I think that's a good
15 example of safety over production.

16 SPECIAL AGENT NEFF: Safety over
17 production.

18 [REDACTED] And there's a number of
19 other examples I can provide where we either elected
20 to derate the units to fix something or we elected to
21 shut the units down and incur a mini-outage to fix
22 some nagging equipment problems. TC

23 SPECIAL AGENT NEFF: So this is not --
24 it's not something that you've witnessed on site in
25 that that's how decisions are made, that it's

1 production over safety, is what you're saying.

2 [REDACTED] No, I don't see that.

3 SPECIAL AGENT NEFF: I mean, obviously,
4 you're a key individual on site there. I mean I know
5 you're leaving as of this week, but in your position
6 as [REDACTED] that's why the NRC is interested
7 in your opinion on how things are operated, how
8 decisions are made and if this is a concern or has
9 ever been a concern for you. In addition, if you had
10 seen any changes recently that would contribute toward
11 the workers' on-site thinking that there might be this
12 type of an environment, an unsafe environment.

13 [REDACTED] Yes. Yes, right.

14 SPECIAL AGENT NEFF: And you're basically
15 saying, no, that's not the case.

16 [REDACTED] I don't believe so. I
17 wouldn't work there [REDACTED] if I had concerns about
18 nuclear safety; I would not. And I certainly wouldn't
19 have been the [REDACTED] for three years if I felt
20 pressured around nuclear safety. I was a [REDACTED]

21 [REDACTED]
22 [REDACTED] So I don't see that.

23 SPECIAL AGENT NEFF: Okay.

24 [REDACTED]: And I can give probably a
25 dozen examples where we put safety over production.

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1 I don't think it's a theme, a problematic theme.

2 SPECIAL AGENT NEFF: Okay. And your dozen
3 examples, in what time frame would that cover? Would
4 that be recent years or would that be since -- you
5 know, from what time period forward?

6 [REDACTED]: I could give a number of
7 examples in recent years. I mean the decision to shut
8 the reactor down less than a month before a scheduled
9 refueling outage to replace a leaking seal on a
10 reactor recert pump. That was safety over production.

11 SPECIAL AGENT NEFF: Okay.

12 [REDACTED]: That was safety over
13 production. We had rising drywall leakage, it was
14 well within the tech spec limits.

15 SPECIAL AGENT NEFF: I'm not even going to
16 ask you to go into all dozen of the incidents, and I'm
17 not trying to challenge you on what your opinion is.
18 I'm interested in what your opinion is, as is the
19 staff at the Region because of your key position. If
20 somebody wanted more detail on where you would put
21 safety over production, I'm assuming would it be all
22 right for them to ask you directly --

23 [REDACTED]: Sure. Absolutely.

24 SPECIAL AGENT NEFF: -- at a later date?

25 [REDACTED]: Absolutely.

1 SPECIAL AGENT NEFF: I think your point is
2 made that this is not a concern of yours that you can
3 see where it comes from because after the deregulation
4 it became an integral part of doing business. You
5 were made aware that --

6 [REDACTED] Sure.

7 SPECIAL AGENT NEFF: -- there's cost
8 decisions that go along with what you were doing
9 before, which would have just been running a reactor.

10 [REDACTED] Right.

11 SPECIAL AGENT NEFF: So now it's -- as of
12 later years, the cost decisions are now in place and
13 you're aware of what it costs to produce the
14 electricity.

15 [REDACTED]: That's right. And where the
16 cost decisions really come into play is not really on
17 today's problems. I mean if today's problems pose a
18 safety issue that needs to be resolved, it gets
19 resolved. If the units need to be shut down because
20 we have salt deposits on the lines, we shut the units
21 down.

22 SPECIAL AGENT NEFF: Okay.

23 [REDACTED] I think where most of the
24 questions and concerns that some of the folks may have
25 why is where we lay out the long-term plans, and the

1 long-term strategies are blended with addressing
2 equipment performance issues in the best manner
3 possible and also blending that in with the economic
4 facet, so we do it, one, when we plan to do it and we
5 can budget accordingly, and, two, we do it in a way
6 that minimizes the cost to the Company. And that's
7 where some of the people I think may have
8 disagreements. That's all part of running a business,
9 I suppose.

10 SPECIAL AGENT NEFF: Okay. Is there
11 anything else you'd like to add to this area that we
12 talked about where some of these concerns come from,
13 where they might possibly come from?

14 [REDACTED] The other angle that may be
15 coming, and this is very recent, is with the
16 reorganization of the site. We've recently
17 reorganized into a very different albeit more
18 traditional plant management structure. Previously,
19 we were aligned in a very unique structure to manage
20 the site, and we've realigned into a traditional plant
21 management structure, and that resulted in a reduction
22 in the number of people that work there too.

23 SPECIAL AGENT NEFF: A lot of management
24 people, right?

25 [REDACTED] Yes. Yes. Some management

1 people. We reduced the number of engineers in some
2 aspects, and we've reduced the administrative support
3 on the island. Nobody in the Union was reduced
4 through this reorganization. It was staff and
5 management.

6 SPECIAL AGENT NEFF: But you think that's
7 had an effect on where some of the concerns regarding
8 safety come from.

9 [REDACTED] I think that's a natural
10 fear to that. I mean most organizations when they
11 undergo a reorganization and there are fewer seats at
12 the table that usually breeds concerns and
13 allegations, and from my perspective it's usually a
14 natural out come of reorganizing. I don't know
15 whether that has been a variable here, but I just
16 offer that as a potential other reason or source.

17 SPECIAL AGENT NEFF: Okay.

18 [REDACTED] It's caused a lot of stress
19 in the organization, that's for sure.

20 SPECIAL AGENT NEFF: In terms of raising
21 concerns that a worker or a manager might have, do you
22 feel that the environment there is conducive, do they
23 think they can raise a safety concern without fear of
24 retaliation?

25 [REDACTED] I believe so.

1 SPECIAL AGENT NEFF: Do you have instances
2 where people have done so and -- I mean what makes you
3 say that you believe that? Have you seen them be able
4 to do that without experiencing retaliation?

5 [REDACTED] Yes. I gave you an example
6 where some of my most senior licensed operators raised
7 a concern to me and that caused our decision making to
8 change with the drywall leakage. I've seen concerns
9 raised most recently over some reliability of some
10 ventilation systems associated with cooling our
11 reactor recirculation motor generator sets, and we had
12 one unit trip, one ventilation trip. The standby fan
13 failed to start. Operators were concerned over rising
14 temperatures on the generators that were in service
15 without cooling and reduced power on the unit until we
16 got the redundant fan started. And concerns were
17 raised over the reliability of that system and whether
18 or not we should return the unit back to full power
19 without ensuring that the ventilation was reliable.
20 And we held the unit derated I think for four days,
21 three or four days, until we were assured of unit
22 reliability, and then we allowed it to return to full
23 power. TC

24 SPECIAL AGENT NEFF: And when you say
25 concerns were raised, were these from the union

1 workers or from your SROs?

2 [REDACTED]: I think those concerns were
3 from the reactor operators to the on-shift SROs.

4 SPECIAL AGENT NEFF: And they came through
5 the on-shift SROs?

6 [REDACTED]: They came through the on-
7 shift SROs to my [REDACTED] who
8 recommended that we not return the unit to rated power
9 until we understood why the problems were occurring
10 and how we would be assured of reliability.

11 SPECIAL AGENT NEFF: When concerns are
12 raised are you aware -- is this an across the board
13 people will raise concerns if they have to or do you
14 generally get concerns from maybe one or two or three
15 individuals, the same people?

16 [REDACTED]: I don't know if I can answer
17 that question. I was trending for a while within
18 Operations -- I can't speak for Maintenance or the
19 other organizations -- but I was interested to see who
20 -- which shifts were writing notifications and which
21 ones weren't so I could identify and look for
22 inconsistencies and understand why one crew was not
23 writing notification. Notification is our process for
24 identifying things that need to be fixed, whether it
25 be a valve that's not working right or whether a

1 procedure that doesn't work and needs to be fixed.

2 SPECIAL AGENT NEFF: Okay.

3 [REDACTED] We initiate notifications,
4 and that creates action to fix the problem.

5 SPECIAL AGENT NEFF: Okay.

6 [REDACTED] And I found an interesting
7 pattern, and I did this a few times, and then it got
8 to be too laborious so I stopped doing it, and I was
9 also getting some feedback that some of the guys on
10 shift were concerned that I was expecting them to
11 produce a certain number of notifications as a bean
12 count, which is not what I was doing. But I did find
13 that essentially across all five operating shifts at
14 Hope Creek -- and this is not Salem, this is Hope
15 Creek -- they initiated about the same amount of
16 notifications for a given crew. And I found that when
17 I looked at the classifications, like how many
18 notifications were written by SROs, how many were
19 written by reactor operators, how many were written by
20 any of us, there were some differences on some of the
21 shifts. For example, on one particular crew -- and
22 this was about the way the numbers ran -- on one
23 particular crew an equipment operator would initiate
24 I think it was about 0.8 notifications per shift.

25 SPECIAL AGENT NEFF: Okay. 7C

1 [REDACTED] Because I had it broken
2 down, all right, so I got five guys on a shift, so on
3 any given watch I would expect at that rate that they
4 would initiate for notifications on something they'd
5 find out in the field. On another shift, the NEO
6 ratio was very, very low, but the NCO ratio on that
7 shift was higher than the others. And when I began to
8 talk to the shift managers -- I kept all this
9 information very confidential amongst my [REDACTED]
10 [REDACTED] and I discussed it with the shift
11 managers -- we found that on the crews that the NEOs
12 weren't writing as many notifications as the others
13 that they were relying on the reactor operators to put
14 their notifications in for them and that one shift had
15 the chief union steward, as he was a reactor operator,
16 and he liked to put in all the notifications, and he
17 wrote very good ones, very thorough ones. So he was
18 initiating the majority of the notifications on that
19 shift.

20 SPECIAL AGENT NEFF: And that just
21 affected the percentage of what the NEOs did on that
22 shift.

23 [REDACTED]: Right. Right. But it
24 didn't affect overall for the operating shift.

25 SPECIAL AGENT NEFF: They were all about 7C

1 equal --

2 [REDACTED] Yes, within 15 or 20
3 percent. I didn't think that was a significant deal.
4 So to answer your question, I think that I would
5 conclude that they all feel free to raise concerns
6 because I'm getting about the same amount per shift,
7 and I think that some individuals like to do it more
8 than others, and therefore they solicit input from
9 their crews to put those notifications in. And
10 there's three or four guys in Hope Creek operations
11 who write really thorough notifications. The
12 notifications are more than, "Valve is broke, fix the
13 valve," it's --

14 SPECIAL AGENT NEFF: More detail?

15 [REDACTED]: "Tried to stroke the valve,
16 it stroked in 22.6 seconds. Had a slight squeal, last
17 25 percent of the valve --" I mean very, very
18 detailed.

19 SPECIAL AGENT NEFF: Would you say the
20 notifications, do they address issues that would be
21 considered of a nuclear safety type issues as well as
22 something's broken or --

23 [REDACTED] Sure, yes.

24 SPECIAL AGENT NEFF: My understanding is
25 the notification can cover quite a bit of territory.

1 [REDACTED] It does, yes. It covers a
2 wide spectrum.

3 SPECIAL AGENT NEFF: So within all the
4 notifications, you were seeing some safety concerns as
5 well?

6 [REDACTED] Sure. Yes.

7 SPECIAL AGENT NEFF: This might be unfair,
8 but is there any way to estimate what percentage would
9 be a safety-related issue?

10 [REDACTED] I don't know if I could
11 estimate that for you.

12 SPECIAL AGENT NEFF: It didn't sound as
13 though that was the focus of your -- you were looking
14 at numbers and percentages by shift.

15 [REDACTED] From that aspect, yes. Each
16 day with my [REDACTED] we reviewed
17 the notifications for the station for the last 24
18 hours, so I'm seeing all that come in. The safety
19 concerns raised -- the nuclear safety concerns aren't
20 significant in numbers. I would say maybe one a
21 month.

22 SPECIAL AGENT NEFF: Okay.

23 [REDACTED] Maybe one a month.

24 SPECIAL AGENT NEFF: But they're in there.

25 [REDACTED] Sure.

1 SPECIAL AGENT NEFF: They're blended in
2 these notifications.

3 [REDACTED] Yes.

4 SPECIAL AGENT NEFF: These are reports
5 that are signed and identify the originator.

6 [REDACTED] Yes.

7 SPECIAL AGENT NEFF: Okay. And from your
8 experience, is it coming from more than one individual
9 or is it all coming from one union steward on one
10 shift? Is it -- has it been demonstrated that --

11 [REDACTED] Well, they come from
12 multiple individuals, yes.

13 SPECIAL AGENT NEFF: Okay. So you're
14 saying that a number of people are comfortable in
15 raising concerns --

16 [REDACTED] Sure.

17 SPECIAL AGENT NEFF: -- based on this.

18 [REDACTED] Yes, I think so. I think
19 so.

20 SPECIAL AGENT NEFF: It's just that you're
21 saying there's very few nuclear safety concerns,
22 probably an average of one a month.

23 [REDACTED] I think that's about right.

24 SPECIAL AGENT NEFF: Okay.

25 [REDACTED] Not many more than that.

1 And most question the decisions that are made, which

2 --

3 (END TAPE 1, SIDE A)

4 (BEGIN TAPE 1, SIDE B)

5 SPECIAL AGENT NEFF: Okay. We're on Side
6 B. The time is approximately 8:58 a.m. When the tape
7 cut off you were explaining how people question.

8 [REDACTED] Yes. Most of the safety
9 notifications, if I was to do a rough categorization,
10 if you will, I think most lie in with questioning
11 decisions that have been made, much as we previously
12 spoke about.

13 SPECIAL AGENT NEFF: Okay. Let's talk
14 about the incidents in 2003. This first incident that
15 occurred in March, as I understand it, you were away
16 at the time of the incident --

17 [REDACTED] I was.

18 SPECIAL AGENT NEFF: -- and you primarily
19 handled the fallout that went with it. Can we talk
20 about what you know regarding this? It's a valve that
21 needed to be fixed, and apparently there was a
22 decision made to continue operating versus fixing the
23 valve. There was some debate over that.

24 [REDACTED] Yes.

25 SPECIAL AGENT NEFF: What do you know

1 about the incident?

2 [REDACTED] I don't remember the exact
3 dates but it was March.

4 SPECIAL AGENT NEFF: I think I've got in
5 mid-March, around March 17.

6 [REDACTED] Yes. March 17 will live a
7 long time for me for another reason, but we had -- as
8 I mentioned earlier, this was about a month before our
9 refueling outage. We scheduled a small maintenance
10 outage to replace a seal on a reactor recert pump that
11 had exhibited degrading performance. Good example of
12 safety before production. We shut the unit down, we
13 fixed the seal, the maintenance outage was very
14 successful. And upon restart, this was on a Friday,
15 Friday night, I believe, we were -- the reactor was
16 critical, it was at about 14 or 15 percent power.

17 We synchronized the main generator and one
18 of the main turbine bypass valves failed to go full
19 shut. The bypass valves are valves that move steam
20 from the reactor to the main condenser when the main
21 turbine's not running. So when the main turbine is
22 running, the bypass valves should close because
23 they're no longer needed to be opened. Well, one of
24 the bypass valves failed to go full shut, and that was
25 a problem.

1 So we held the unit there and this was
2 Friday night into Saturday morning, did some
3 troubleshooting and determined that it looked like the
4 valve may be mechanically bound. It didn't look like
5 it was electronic signal going to the valve, the
6 hydraulics to the valve looked okay. And that day,
7 that Saturday, I [REDACTED] to attend a
8 [REDACTED] that had passed two days
9 before. So [REDACTED]
10 [REDACTED] and in my absence he became the
11 [REDACTED] He was left in charge to
12 facilitate the repair of that valve.

13 And decisions were made to shut the unit
14 down and place it in a condition that we could do
15 maintenance on the valve, and with the valve being
16 stuck open I had to -- we had to get the unit in a
17 cold shutdown condition or in a condition that would
18 take steam off the valve and we would also have to
19 break main condenser vacuum, which is a big maneuver
20 for the Plant. And we spent two days, we spent
21 Saturday and Sunday developing that plan.

22 We developed new procedures, we trained on
23 it in a simulator, we did do a lot of good stuff, and
24 we commenced the shutdown Sunday night and got in the
25 position to secure the main turbine early on Monday

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1 morning. Then when we tripped the main turbine to
2 take it offline the valve went shut. The valve that
3 was stuck open --

4 SPECIAL AGENT NEFF: Fixed itself.

5 [REDACTED] -- seemed to fix itself. So
6 questions were raised when it was found that the valve
7 was shut, "Well, do we need to continue shutting the
8 unit down to fix the valve given that the valve is now
9 shut?" And those questions were raised to [REDACTED]
10 [REDACTED] that Monday morning,
11 early Monday morning. This is probably around
12 daybreak or so, pretty early in the day.

13 SPECIAL AGENT NEFF: Okay. And who's
14 raising these questions?

15 [REDACTED] These questions were raised
16 by [REDACTED] who was asking whether or not we
17 needed to consider revising the plan, whether having
18 the valve shut would change our strategy, what changes
19 would be needed? Is it still prudent to shut the unit
20 down and go after the valve or do we have confidence
21 that the valve is now mechanically unstuck?

22 SPECIAL AGENT NEFF: Before you go any
23 further on that, just at this point before we go too
24 far, when you say that over that Saturday and Sunday,
25 the period where you're preparing to take some action

1 and you're in the simulator, I think you indicated
2 that there were some good things done there?

3 [REDACTED] Yes.

4 SPECIAL AGENT NEFF: Specifically, what?
5 What were you doing specifically in the simulator, and
6 what were the good things that you refer to?

7 [REDACTED]: Okay. Well, we developed a
8 new operating procedure to allow us to shut the unit
9 down in a unique way to place it in a configuration to
10 do work on the valve. We brought the operating crew
11 that would be doing the evolution Sunday night we
12 brought them in Saturday night and had them practice
13 in the simulator working through that evolution. We
14 set up and treated the evolution as an infrequently
15 performed evolution, which brings forth a whole other
16 evolution oversight structure with an evolution
17 manager, an evolution engineer. There's a whole
18 separate plan that gets developed. It was reviewed by
19 our Safety Review Committee, SORC, it was briefed and
20 it was executed on Sunday night.

21 SPECIAL AGENT NEFF: Okay.

22 [REDACTED]: And we -- this may be
23 another good example of safety over production -- we
24 held the unit at 20 percent power and allowed
25 ourselves two days to develop the plan before taking

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1 a course of action. So we took two days to get ready
2 for it.

3 SPECIAL AGENT NEFF: Okay. I didn't mean
4 to interrupt you, I just thought that some of that
5 preparation might be of interest to the staff, the
6 particular points involved. Now we're at the point
7 it's Monday morning.

8 [REDACTED] Right.

9 SPECIAL AGENT NEFF: You said, I think, it
10 was daybreak, and this involves [REDACTED]

11 [REDACTED]
12 [REDACTED] I don't know [REDACTED] was
13 involved. [REDACTED] was approached. I think [REDACTED] had called
14 into the Outage Control Center. We also staffed the
15 Outage Control Center to manage the evolution, which
16 brings dedicated maintenance managers, engineering
17 managers, a focus team around the clock to focus on
18 the issues and help the organization through them. I
19 believe, and this is just what I have been told,
20 conversations with [REDACTED] that [REDACTED] called into the OCC
21 and asked whether or not the decisions needed to be
22 revisited and changed since the valve was closed. And
23 that got to [REDACTED] and he was questioned whether or not
24 the shutdown still needed to continue.

25 SPECIAL AGENT NEFF: Okay.

1 [REDACTED] That bothered him greatly.
2 Not knowing this, I called [REDACTED] from my hotel room in
3 [REDACTED] I guess it was about seven-thirty on
4 Monday morning, seven o'clock, seven-thirty, just to
5 see how the shutdown went, because the unit was
6 expected to be shut down. We should have been in a
7 position to do the maintenance, so I called just to
8 check how it went. And [REDACTED] told me the shutdown had
9 gone pretty good, and he indicated that the valve had
10 closed on the --

11 (Phone rings.)

12 SPECIAL AGENT NEFF: I'm sorry. Excuse me
13 a minute.

14 [REDACTED] Sure.

15 (Whereupon, the foregoing matter went off
16 the record for a short period of time and
17 went back on the record at 9:12 a.m.)

18 SPECIAL AGENT NEFF: Okay. We're back on
19 the record. It's approximately 9:12 a.m. after a
20 brief break.

21 [REDACTED] Yes. So on the morning of
22 the 17th, I called in from [REDACTED] to speak with
23 [REDACTED] to understand how the shutdown went, and [REDACTED]
24 indicated that they had no significant issues with the
25 shutdown, and he also indicated that when the turbine

1 was tripped as part of the plan that the bypass valve
2 went shut. And we had some dialogue around that, and
3 actually I laughed when he said that because it seemed
4 like one of those -- sometimes very unusual things
5 happen in nuclear power, and we tried for a couple
6 days to get the valve shut, and it seems like we're
7 getting ready to fix it and now the valve shuts, so it
8 was kind of interesting. And then he indicated that
9 the OCC had been asked by [REDACTED] and he was now being
10 asked whether or not we needed to continue the
11 shutdown to fix the valve.

12 SPECIAL AGENT NEFF: The OCC?

13 [REDACTED] Outage Control Center. That
14 was the group that was put in place around the clock
15 to manage the repair window.

16 SPECIAL AGENT NEFF: Okay. They had been
17 asked by [REDACTED] had been asked by
18 [REDACTED]

19 [REDACTED] I believe that's the way
20 that it had worked.

21 SPECIAL AGENT NEFF: Okay.

22 [REDACTED] And [REDACTED] was -- he said he
23 was pretty disturbed about being asked about that. I
24 said, "Well, how do we know the valve's not going to
25 stick if we start back up and we don't come down and

1 fix it? I mean what caused the valve to stick in the
2 first place?" And he goes, "I don't know." I said,
3 "Well, we've got to fix the valve." I said, "How can
4 we not continue down to fix the valve if we don't know
5 why it's stuck open?"

6 SPECIAL AGENT NEFF: This is what you're
7 saying to him.

8 [REDACTED] Yes.

9 SPECIAL AGENT NEFF: And is he in
10 agreement with you?

11 [REDACTED] Oh, absolutely.

12 SPECIAL AGENT NEFF: Okay.

13 [REDACTED] Absolutely.

14 SPECIAL AGENT NEFF: So you're both
15 questioning that they would -- that [REDACTED] would
16 want to keep it running.

17 [REDACTED] It seemed -- to me it seemed
18 like a silly question.

19 SPECIAL AGENT NEFF: Okay.

20 [REDACTED] I don't think [REDACTED] intended
21 his question to be, "Okay, great. The valve is shut
22 so let's start back up." I think his question to the
23 OCC was, "Now that the valve is closed, does that
24 change any of our decisions, does that change our
25 strategy? Have we looked at that?" That was the way

1 I understood -- after talking to [REDACTED] following the
2 event, that's how I understood it to be.

3 SPECIAL AGENT NEFF: That it was not a
4 direction to keep it running, it was --

5 [REDACTED]: No, it was not a direction.

6 SPECIAL AGENT NEFF: -- can you consider
7 changing the course of action.

8 [REDACTED]: That's right. It was -- and
9 [REDACTED] is very skillful at that. He's skillful at asking
10 questions that create different thinking, different
11 ways of viewing a problem. But that bothered [REDACTED]
12 quite a bit.

13 SPECIAL AGENT NEFF: What was [REDACTED] -- did
14 he tell you what his response was at that time to [REDACTED]

15 [REDACTED]
16 [REDACTED]: He said that he questioned
17 how we could not fix the valve.

18 SPECIAL AGENT NEFF: Okay. And you were
19 in line with that thinking.

20 [REDACTED]: Absolutely. Yes. I told
21 him, "We can't restart the unit unless we fix the
22 valve."

23 SPECIAL AGENT NEFF: Okay. So what
24 happened from there? Was there more discussion on it?

25 [REDACTED]: Yes. Yes. This was early

1 on Monday morning, probably seven o'clock or seven-
2 thirty and the unit shutdown was actually put on hold.
3 It was held where it was at until additional reviews
4 and discussions could take place on whether or not the
5 strategy for the shutdown would change based on the
6 valve being closed.

7 SPECIAL AGENT NEFF: Now, who participated
8 in those?

9 [REDACTED] I'm not exactly sure. I
10 know [REDACTED] was participating. I don't know
11 exactly who else was there.

12 SPECIAL AGENT NEFF: Okay.

13 [REDACTED] But the decision to me was
14 very clear, and we ultimately brought the unit to a
15 shutdown condition to fix the valve.

16 SPECIAL AGENT NEFF: At what time then?

17 [REDACTED] I don't know the exact time.
18 Later on in the afternoon, around one or two o'clock
19 in the afternoon the remaining cooldown sequence and
20 shutdown sequence resumed.

21 SPECIAL AGENT NEFF: So the delay here
22 then from -- it started at about dawn on that Monday,
23 and you were involved at around seven or seven-thirty

24 --

25 [REDACTED] Yes.

1 SPECIAL AGENT NEFF: -- where you as
2 [REDACTED] are in agreement that the unit
3 should be brought down. There's a delay till later
4 that day. Was that due to the question raised by [REDACTED]

5 [REDACTED]
6 [REDACTED] Yes.

7 SPECIAL AGENT NEFF: Did you think the
8 delay caused a problem in terms of the safe operation
9 of the Plant?

10 [REDACTED] No. No. The Plant was not
11 unsafe being where it was.

12 SPECIAL AGENT NEFF: Okay. Can you
13 explain why?

14 [REDACTED] Well, the Plant was in a hot
15 shutdown condition. It was very stable. The reactor
16 was shut down, all the rods were in. It was really a
17 matter of reestablishing a cooldown to get into a cold
18 shutdown condition to do the repair work. So it
19 didn't place the unit -- the decision to wait until
20 restoring or reestablishing the cooldown until the
21 afternoon, that didn't place the unit at any
22 additional risk. It just -- it really extended the
23 outage. 7C

24 SPECIAL AGENT NEFF: Okay. Do you think
25 the situation could have been better handled in some

1 way?

2 [REDACTED] Yes. I think so. I mean
3 hindsight is always 20-20. I don't think that the
4 possibility of the valve closing during the shutdown
5 was considered before we commenced the plan. So one
6 of the things that our organization does pretty well
7 is when we take on complex evolutions like that, we
8 develop multilayers of contingency plans and we do a
9 lot of, "Well, what if this happens, what are we going
10 to do? What if that happens, what are we going to
11 do?" I don't think we had a contingency plan in place
12 for, "What happens if the valve closes, what are we
13 going to do?"

14 SPECIAL AGENT NEFF: What if it fixes
15 itself?

16 [REDACTED] Yes.

17 SPECIAL AGENT NEFF: You said that was
18 quite a surprise.

19 [REDACTED]: It was, yes. I mean I was
20 surprised to hear it, but when I heard it wasn't
21 surprised, because things like that happen sometimes.
22 And it turns out we did get into the valve and we
23 found broken welds on some fastening bolts and some of
24 the bolts had come loose, and that was what was
25 causing the valve to stick open. So it wasn't a

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7C

1 condition that fixed itself. The reason the valve
2 closed was because when the turbine tripped, the
3 perturbations caused the bolt to shift out of the
4 valve and allowed the valve to go full shut. It was
5 still in the valve chest rattling around waiting to
6 stick again.

7 SPECIAL AGENT NEFF: And the problem was
8 still there.

9 [REDACTED] It was still there, yes.

10 SPECIAL AGENT NEFF: Okay. The length of
11 time that this -- it waited -- now, you're saying the
12 Plant was in a safe condition. The fact that there
13 was debate over whether or not you would return to
14 power or go into cooldown didn't affect the safety of
15 the Site, in fact it lengthened this particular --

16 [REDACTED] It lengthened the outage.

17 SPECIAL AGENT NEFF: -- outage.

18 [REDACTED] Yes, it did.

19 SPECIAL AGENT NEFF: It would seem that
20 the debate has caused some concern over this. It adds
21 to the production over safety issue that we were
22 talking about earlier.

23 [REDACTED] Yes.

24 SPECIAL AGENT NEFF: Do you see how
25 something like that would contribute to this?

1 [REDACTED] Sure. I think the length of
2 time that was taken to make what to me and [REDACTED]
3 seemed to be a very black and white decision --

4 SPECIAL AGENT NEFF: Pretty early.

5 [REDACTED] -- I think that caused some
6 angst. That caused some angst. And I was surprised
7 -- when I called in later Monday evening after the
8 [REDACTED], I was surprised that the unit had not yet
9 been placed in a cold shutdown condition, and I
10 learned that they had delayed for five or six hours to
11 reassess whether or not the plan needed to be changed
12 as a result of the valve being closed.

13 SPECIAL AGENT NEFF: And the delay at this
14 point is coming from [REDACTED] or is it more than
15 [REDACTED]

16 [REDACTED] I'm not sure I know. I
17 don't think it was from [REDACTED] I think [REDACTED] question
18 spawned additional reviews and discussions on whether
19 the plan had to be changed. I don't know if [REDACTED] was
20 involved in those discussions or not. I'm sure [REDACTED]
21 [REDACTED] was involved. I don't know to what level
22 [REDACTED] was.

23 SPECIAL AGENT NEFF: Okay. Is there
24 anything else you'd like to add to that situation?

25 [REDACTED] Well, not for that decision,

1 but that evolution also -- I mean we did a lot of
2 things to plan for it. It didn't go very well on the
3 shutdown. We had a --

4 SPECIAL AGENT NEFF: When you actually
5 came into the shutdown?

6 [REDACTED] Yes. We had a level
7 perturbation which caused -- a perturbation on reactor
8 power during the shutdown sequence not associated with
9 this decision making on the bypass valves.

10 SPECIAL AGENT NEFF: What caused that?

11 [REDACTED] It turned out to be a
12 significant event.

13 SPECIAL AGENT NEFF: And what had caused
14 that?

15 [REDACTED] What caused that was a
16 problem with the bypass valve potentiometer that was
17 being utilized to lower reactor pressure as we were
18 shutting down the reactor. It had a fault on it such
19 that when the operator was manipulating it to bring it
20 down and to lower reactor pressure, it actually opened
21 more by pass valves than it should have, which
22 resulted in a larger reactor pressure drop than was
23 anticipated. 7C

24 SPECIAL AGENT NEFF: So you had a whole
25 separate problem on top of the original problem.

1 [REDACTED] Yes. And that was a big
2 issue, and it highlighted, although when I say we did
3 a lot of good things to get prepared, we did, but we
4 didn't do them well enough to be as well prepared as
5 we could have been. And we ended up having an event
6 that we should not have had. And that was a
7 significant operating experience event that was
8 reported by INPO. I don't know if you've read that or
9 ont, but that's why I said March 17 kind of lives in
10 my head for a different reason.

11 SPECIAL AGENT NEFF: You indicated that
12 after you had talked to [REDACTED] earlier that Monday
13 then you checked in with him later that Monday and you
14 were surprised that the system still hadn't been
15 brought into the cooldown.

16 [REDACTED] Actually, I talked with the
17 operating shift that night. I didn't speak with [REDACTED]
18 until the next morning. 7C

19 SPECIAL AGENT NEFF: When you found out
20 that it hadn't been brought down at that point, and
21 this was due to the debate that raised or the question
22 that raised that said, "Can we just keep operating as
23 opposed to shutting down and fixing this valve," had
24 anything like that happened before? Maybe not with
25 these particular circumstances but a situation where

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1 it was clear to you and your [REDACTED]
2 what had to be done but you had debate coming from
3 another angle over what you were going to do?

4 [REDACTED]: Well, the other instance
5 would be on the diesel leakage issue, that's the other
6 example.

7 SPECIAL AGENT NEFF: This would be the
8 subsequent issue in June?

9 [REDACTED]: Yes.

10 SPECIAL AGENT NEFF: Okay. So not prior
11 to this then?

12 [REDACTED]: No, not of that nature.
13 It's not uncommon to be questioned for understanding
14 and challenged on decisions. I mean I don't think
15 I've made a decision that hasn't been challenged or
16 questioned. I mean that's just part of the job. So
17 given a decision that might affect the operation of
18 the unit, it's quite common and expected to be
19 questioned by senior management: "So why is that
20 decision being made? I mean what's the basis of that?
21 Why do you have to do that?" And it's normally a very
22 easy answer because I wouldn't have made the decision
23 without good basis. Sometimes decisions are made
24 based on operator experience and gut feeling. I mean
25 sometimes that's the basis that you make a decision

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1 on, and those are a little bit harder to substantiate.

2 SPECIAL AGENT NEFF: Gut feeling.

3 [REDACTED] Yes, gut feel. But it's a
4 healthy level of challenging. It's not an
5 inappropriate level. To some people that aren't
6 accustomed to that level of discussion, that might be
7 a little unnerving, because some of them can be a
8 little intense if you're not accustomed to having
9 people question your decisions. But that's part of
10 the way that the best decisions are made.

11 SPECIAL AGENT NEFF: Are you saying that
12 in view of the fact that this was [REDACTED] who was
13 acting for you, is it that he was inexperienced with
14 having to say, "We're going to go forward and cool
15 this down," --

16 [REDACTED] Yes. Exactly.

17 SPECIAL AGENT NEFF: -- and [REDACTED]
18 was coming to him to say, "Look, can you do things
19 another way? Can you consider doing things another
20 way?"

21 [REDACTED] Yes. [REDACTED] was asking whether
22 or not our decisions had to be revisited and would
23 they change as a result of the valve being closed.

24 SPECIAL AGENT NEFF: Okay.

25 [REDACTED] had been on the job --

1 it's a very challenging the job, the [REDACTED]
2 [REDACTED] job -- he had been in that role for
3 about [REDACTED] Pretty new, pretty new to
4 the spot. And I think that was probably the second
5 time, maybe the third time I had left him in charge.
6 I think the previous time -- that was the second time.
7 The previous time I was on vacation but I was still in
8 the area so I talked with him a couple times a day.
9 So he was somewhat, I think, new to the level of
10 challenge that can be felt, and maybe he felt a little
11 frustrated about having really a fundamental answer
12 questioned.

13 SPECIAL AGENT NEFF: Do you think -- had
14 you been on site would the debate have lasted that
15 long?

16 [REDACTED] Absolutely not.

17 SPECIAL AGENT NEFF: You would have made
18 your point quicker than [REDACTED] was able to?

19 [REDACTED] Yes. I think so. I think
20 we would have been moving ahead within a half hour, 45
21 minutes.

22 SPECIAL AGENT NEFF: Was it something that
23 he was not communicating properly to [REDACTED] that
24 led to the length of time and the debate over this?
25 Is there something that he failed to do to convince

1 him, do you think?

2 [REDACTED] I don't know if it was a
3 matter of failing to convince [REDACTED] The length of time
4 --

5 SPECIAL AGENT NEFF: Let me ask you this
6 way: What would have been the difference had you
7 handled it as opposed to him being there handling it?

8 [REDACTED] I think I would have
9 challenged the organization right up-front to explain
10 to me how the valve failed and what reassurance we
11 have that it's not going to fail if I bring the unit
12 back up. Because without knowing the failure mode and
13 without knowing whether it's going to fail again, it
14 needs to be fixed.

15 SPECIAL AGENT NEFF: Its reliability is in
16 question.

17 [REDACTED] Yes. And it's a very
18 important piece of equipment that needs to be operate
19 under fast reaction times under transient conditions,
20 and that needs to be there.

21 SPECIAL AGENT NEFF: So that may be where
22 he --

23 [REDACTED] So instead of --

24 SPECIAL AGENT NEFF: -- didn't question it
25 strongly enough?

1 [REDACTED] Yes. I think he probably
2 just left it open for the team to kick it around --

3 SPECIAL AGENT NEFF: Okay.

4 [REDACTED] -- and try to come to some
5 answer as opposed to focusing the discussion in a
6 different way.

7 SPECIAL AGENT NEFF: Okay. Where you
8 didn't see the debate, you just saw that you have an
9 unreliable valve.

10 [REDACTED] I wouldn't have debated it.

11 SPECIAL AGENT NEFF: Okay.

12 [REDACTED] I would have tasked the team
13 with proving to me why the valve is reliable and we
14 haven't found anything with it and it's now shut.

15 SPECIAL AGENT NEFF: Okay.

16 [REDACTED] Hindsight -- I mean that's
17 all speculation, I don't know. I mean I was out in
18 [REDACTED] --

19 SPECIAL AGENT NEFF: I know.

20 [REDACTED] -- and [REDACTED] was here.

21 SPECIAL AGENT NEFF: I'm just trying to
22 find out what you knew, not to cast any shadows over
23 him, but from what you knew and the decisions that get
24 made on the site, I would like your perspective on
25 what happened there. Do you have anything else you'd

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1 like to add to that?

2 [REDACTED] No. No, I don't. Nothing
3 else comes to mind.

4 SPECIAL AGENT NEFF: If the staff had any
5 further questions technically that I'm not asking --

6 [REDACTED]: Sure.

7 SPECIAL AGENT NEFF: -- you don't have a
8 problem with them contacting you to --

9 [REDACTED] No. No. Absolutely not.

10 SPECIAL AGENT NEFF: Okay. Let's talk
11 about the June incident.

12 [REDACTED] That's the diesel jacket
13 water pump leakage.

14 SPECIAL AGENT NEFF: Right, in the LCO
15 time. This is June 28. Now, are you on site for
16 this?

17 [REDACTED] Yes.

18 SPECIAL AGENT NEFF: Okay. You said
19 diesel jacket water leakage. I have EDG leakage.

20 [REDACTED] Yes.

21 SPECIAL AGENT NEFF: Same thing.

22 [REDACTED] EDG, emergency diesel
23 generator. 7C

24 SPECIAL AGENT NEFF: Emergency diesel
25 generator. Okay.

1 [REDACTED] Yes.

2 SPECIAL AGENT NEFF: So what happens here?

3 [REDACTED] What happened here was we
4 ended up in an unplanned LCO, limiting condition for
5 operation, for -- I can't remember what diesel it was
6 not -- one of our diesels. I think it was the alpha
7 diesel, but I can't remember. It was a 72-hour
8 limiting condition for operation, so we had 72 hours
9 to fix this leakage, which exceeded a preestablished
10 criteria for operability. It was seal leakage on an
11 engine-driven pump that had gotten worse. So the
12 shift declared it inoperable, we committed it to
13 maintenance, started a 72-hour clock. And, basically,
14 the LCO says, "You've got 72 hours to fix the diesel,
15 make it operable, or you'll be in hot shutdown in 12
16 hours and cold shutdown the following 24." So it's a
17 pretty tight window. A big challenge for the
18 organization to fix it.

19 So we got into the work, made an attempted
20 repair and restored the machine, made it ready for
21 service, retested it and it leaked bad. It leaked
22 perhaps worse than it did before we did the
23 maintenance on it, so we didn't do something right.

24 SPECIAL AGENT NEFF: Okay.

25 [REDACTED] So now we have -- we're

1 probably halfway through, maybe two-thirds of the way
2 through the 72 hours, so it's getting tight. And we
3 called overseas, we talked to the people that built
4 the seal, the manufacturer, the engine designer,
5 called a whole bunch of people to understand what it
6 is we weren't doing correctly, and got some good
7 insight and understood more about what we were not
8 doing correctly that was causing the leakage.
9 Meantime the clock for the LCO is still ticking down.

10 We made another repair, and this repair
11 helped the leakage. It reduced it but it didn't stop
12 the leakage, so there was still some residual leakage
13 that was occurring. And this was on the last day of
14 the LCO, and, actually, the retest was done right at
15 about the 72-hour point, and this was at about three
16 o'clock in the morning. We found some small leakage
17 that still existed, so the following -- and that
18 started the 12-hour close, so now we had to be in hot
19 shutdown, which is reactors secured, not critical, and
20 the plant is still hot, that's hot shutdown. We had
21 12 hours to be there. And we've had --

22 SPECIAL AGENT NEFF: Was this from 3 a.m.?

23 [REDACTED]: Yes. The LCO expired, I
24 don't exactly remember the times. I think the 72-hour
25 expired sometime around four o'clock in the morning.

1 SPECIAL AGENT NEFF: Okay.

2 [REDACTED] So that gave us until,
3 basically, four or five o'clock in the afternoon, give
4 or take a couple of hours.

5 SPECIAL AGENT NEFF: To be in the hot
6 shutdown mode.

7 [REDACTED] Yes, be in hot shutdown. I
8 think it was -- I seem to remember seven o'clock at
9 night we had to be in hot shutdown, so it must have
10 expired at seven o'clock in the morning. So the day
11 started off -- this is when I came back to the site.
12 I had been on the phone for most of the night. Came
13 back in and it was clear that we would not be able to
14 go back into the seal and fix it right because we
15 didn't have all the parts. 7C

16 So we began to assess whether or not the
17 leakage that we had still existing on the machine was
18 acceptable for operability, and that would require --
19 in order for that to be acceptable, it would require
20 operators to take compensatory actions to collect the
21 leakage, and we'd have to have additional barrels of
22 water. There was a lot of compensatory actions that
23 needed to be put into place in order to make the
24 machine operable and still be able to reasonably
25 ensure that it would perform its intended safety

1 function if needed.

2 And the engineers worked on that for most
3 of the morning. And the original deliverable that
4 they gave to me to support operability -- I got that
5 at about probably 11 o'clock in the morning -- was
6 inadequate. It did not have enough basis for my
7 needs. It didn't fully identify the actions that were
8 needed, and it was not acceptable, so I sent them away
9 to go back and continue working on it.

10 Meanwhile, our administrative guidance had
11 been if you're in a 12-hour LCO, like be in hot
12 shutdown in 12 hours, if you have reasonable assurance
13 that you will be able to clear the LCO, fix the
14 condition, within the first six hours of that 12
15 hours, you don't have to move the unit.

16 SPECIAL AGENT NEFF: Okay.

17 [REDACTED] You can keep the unit where
18 it's at, and we're at full power. However, if you
19 should exceed that six hours and the LCO is not
20 cleared, our practice had been to begin backing the u
21 nit down because I can safely get to from full power
22 to hot shutdown in six hours without --

23 SPECIAL AGENT NEFF: Is that something
24 that's been done before?

25 [REDACTED] Yes.

1 SPECIAL AGENT NEFF: Okay.

2 [REDACTED] I've done it before on shift
3 as a licensed operator.

4 SPECIAL AGENT NEFF: Okay.

5 [REDACTED] It's a very controlled
6 shutdown. I mean I can always safely shut the reactor
7 down by scrambling it, but this is a controlled
8 shutdown that minimizes the transient on the Plant.

9 So the six-hour window, assuming our time
10 is correct, would actually open at about one o'clock
11 in the afternoon.

12 SPECIAL AGENT NEFF: Okay.

13 [REDACTED] Which is about right. So we
14 began to have discussions, myself and [REDACTED]
15 (phonetic), who was the [REDACTED] that
16 day, and [REDACTED] I don't recall if [REDACTED] was
17 there or not. [REDACTED] was not there. [REDACTED] was off-site.
18 He was at a professional development seminar, so he
19 was not there. We began to talk about when to back
20 the unit down, whether or not we had talked with the
21 system operator preparing to shut down, and [REDACTED] --
22 I provided [REDACTED] direction that morning as soon as he
23 relieved the shift to prepare for the shutdown, to get
24 his guys briefed, to review the procedures, to get the
25 reactor engineering up there, to get the shutdown

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1 guidance -- make the unit ready for shutdown.

2 SPECIAL AGENT NEFF: Which would start at
3 about 1 p.m.

4 [REDACTED] Which would start, yes,
5 about one.

6 SPECIAL AGENT NEFF: That's what you're
7 anticipating.

8 [REDACTED] Yes. And as we got closer
9 to one, we began to get some feedback that, "Well, we
10 should hold off on downpowering the unit because the
11 engineers are going to have this revised position
12 paper soon, and I actually tied a an off-shift shift
13 manager in with the engineers to make sure that what
14 they delivered this next time was going to be
15 adequate.

16 SPECIAL AGENT NEFF: This is what they're
17 coming back to you with after the first go-round.

18 [REDACTED] Yes. So instead of playing,
19 "Bring me a rock. No, not that rock. Bring me
20 another rock," after the first rock they brought me it
21 was not even close to being acceptable. I put an SRO
22 on the team to make sure that they would deliver
23 something that we would need to support operability.

24 SPECIAL AGENT NEFF: Okay. Now, when you
25 say it was coming soon, when it was supposed to be

1 delivered.

2 [REDACTED] It was hard to get a fine
3 point. Initially, they said they would have it around
4 11:30 or noontime, and then it was, "Well, no, we need
5 a little bit more time. It will be 12:30," and then
6 it was one o'clock. So it was pushing out. And I was
7 being questioned whether or not we could hold off on
8 backing the unit down pending the review of the
9 engineering position paper that was expected to
10 support operability and clear the LCO.

11 SPECIAL AGENT NEFF: Okay. Now, who were
12 you being questioned by?

13 [REDACTED] Primarily, [REDACTED]
14 [REDACTED] was --

15 SPECIAL AGENT NEFF: [REDACTED]
16 [REDACTED]

17 [REDACTED] Yes. He was wanting to
18 avoid reducing power if we didn't need to. And there
19 was a primary reason for that. We had a recent pump
20 seal, the one that we fixed before the outage, was
21 beginning to show degraded performance, and the
22 performance of that pump seal -- the level of
23 degradation accelerated whenever we moved the unit, so
24 [REDACTED] wasn't -- he wasn't overly concerned about
25 maintaining full power, his concern was not moving the

1 unit unnecessarily and purtebating the seal. That's
2 the way that he couched his discussions with me. And
3 I explained to him that we've already taken the first
4 six hours of this 12-hour window, and I'm now into the
5 final six hours, and I need to be in hot shutdown and
6 we will be in hot shutdown by the time this LCO
7 expires, and I would prefer to get there through a
8 controlled shutdown versus --

9 SPECIAL AGENT NEFF: A scram?

10 [REDACTED] -- a scram.

11 SPECIAL AGENT NEFF: Okay.

12 [REDACTED] And he concurred with that,
13 but he still wanted to hold off because he thought
14 that the engineers would be delivering their
15 deliverable soon.

16 SPECIAL AGENT NEFF: Now, let me just ask
17 you this: The problem with the degraded seal you're
18 talking about, when did that become apparent?

19 [REDACTED] Shortly after the refueling
20 outage.

21 SPECIAL AGENT NEFF: So in the time frame
22 for June 28, when to when? The outage in March?

23 [REDACTED] The refueling outage --
24 well, we replaced the seal in March.

25 SPECIAL AGENT NEFF: Okay.

1 [REDACTED] And, actually, before the
2 outage started a month later, it actually began to
3 show signs of degradation. And coming out of the
4 outage it continued to show the same level of
5 degradation that it had shown before. It's a slow
6 trend in performance.

7 SPECIAL AGENT NEFF: Okay. And not to get
8 too far off track on either one incident and another,
9 but what was the plan for repairing this degraded seal
10 then? At what point was that going to be addressed?

11 [REDACTED] The seal is actually being
12 degraded by a bent shaft on the pump, and that shaft
13 replacement is scheduled for -- I don't know if it's
14 next outage or the following outage.

15 SPECIAL AGENT NEFF: Okay. So it has the
16 ability to be postponed for that length of time.

17 [REDACTED] Yes.

18 SPECIAL AGENT NEFF: So while there is
19 concern regarding the seal and the perturbations on
20 the seal by changes in the reactor, is this legitimate
21 to you? I mean you said -- the way you indicated it
22 was this is what he's telling you is that he doesn't
23 want to move it.

24 [REDACTED] Yes. I thought it was a
25 legitimate concern, but it wasn't, from my

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1 perspective, as big of a concern as placing my
2 operating shift into a tight box and having them get
3 from full power to hot shutdown in a very limited
4 amount of time.

5 SPECIAL AGENT NEFF: It was a concern, but
6 he wasn't prioritizing it the way you would have?

7 [REDACTED]: It was a concern but from my
8 perspective it wasn't the driving concern.

9 SPECIAL AGENT NEFF: Okay.

10 [REDACTED]: So this was about 11:30, 12
11 o'clock. I had told [REDACTED] that, you know, "At one
12 o'clock, I intend to start backing the unit down." He
13 goes, "Well, let's hold off because we're going to be
14 getting the engineering paperwork."

15 SPECIAL AGENT NEFF: Okay. What happens
16 then?

17 [REDACTED]: And I said, "Okay." So
18 about 12:30, 12:45 I don't have the engineering
19 paperwork. So [REDACTED] talking to me, he says, "I just
20 spoke with the engineers, they're going to be wrapped
21 up with it soon," and I said, "Let's look at the
22 timeline here." I said, "Even if I get this paperwork
23 now, I'm not going to review it in five minutes and
24 have them provide" -- because I was going to review it
25 and then have them provide it to the operating shift,

1 and the operating shift ultimately makes the
2 operability call. [REDACTED]

3 [REDACTED] so I can't make
4 that determination. X

5 SPECIAL AGENT NEFF: So how much time are
6 you talking about here for an adequate review?

7 [REDACTED] Well, that's what I began to
8 lay out for [REDACTED] I said, "It's going to take me a
9 half hour to go through this. I mean I'm very
10 familiar with it, but I'm going to make sure it's
11 right before it goes to the control room. And then
12 it's going to take them some time to review it and
13 make their decision. It's not going to be a five-
14 minute flurry of review and signatures to stop the
15 clock." I said, "It's going to take a few hours."

16 SPECIAL AGENT NEFF: Okay. So you're
17 looking at pushing two o'clock, two-thirty, three
18 o'clock --

19 [REDACTED] Yes.

20 SPECIAL AGENT NEFF: -- before you have a
21 good review done.

22 [REDACTED] Right.

23 SPECIAL AGENT NEFF: And he knows that.

24 [REDACTED] Yes, he did then. And so I
25 told him, "Look, we need to start backing the unit

1 down now."

2 SPECIAL AGENT NEFF: What did he say then?

3 [REDACTED]: "We need to start backing
4 the unit down now." He finally agreed that we needed
5 to start the down power, and we commenced shortly
6 thereafter. I forget the exact time, but it was
7 probably one-thirty or so, 1:45 when we started
8 shutting down. And so the operating shift commenced
9 the shutdown, and they were on track to be in hot
10 shutdown. We wouldn't have a problem meeting that
11 clock. In the meantime, the engineers produced their
12 deliverable around -- I guess it was about two o'clock
13 or two-thirty.

14 SPECIAL AGENT NEFF: Which is now no
15 longer relevant at this point in time, not until
16 you've gone through to your hot shutdown phase anyway,
17 right?

18 [REDACTED]: Well, it was relevant
19 because we can -- if the engineering paperwork
20 supports operability and it's been given the review
21 and we're set to implement the compensatory actions,
22 then we would be able to clear the LCO and stop the
23 shutdown.

24 SPECIAL AGENT NEFF: And go back to power.

25 [REDACTED]: And, ultimately, restore the

1 unit back to full power.

2 SPECIAL AGENT NEFF: Okay. So now what
3 direction do you go?

4 [REDACTED] Well, we got the paperwork
5 and I reviewed it. It looked pretty good. We had not
6 yet put in place all of our compensatory actions. We
7 had to stage some barrels of water, we had to stage
8 some pumps, some hoses. My staff had to revise some
9 operating procedures to account for the compensatory
10 actions that we were going to assume to make the
11 machine operable, and the operating crew had to review
12 the write-up. So all that was taking place. That
13 took a few hours, and I think we declared the machine
14 operable, I don't remember the exact time, maybe 1800,
15 about an hour before we had to be in hot shutdown.
16 And at that point in time, the unit was at about 40
17 percent power, 35 or 40 percent power.

18 SPECIAL AGENT NEFF: Okay.

19 [REDACTED] And that was pretty much the
20 end of that saga.

21 SPECIAL AGENT NEFF: So with it declared
22 operable, with the machine operable, you can go back
23 up?

24 [REDACTED] Yes.

25 SPECIAL AGENT NEFF: Okay. And this is

1 satisfactory to you that everybody met -- the
2 requirements that needed to be in place were in place
3 at the time you made the --

4 [REDACTED]: Yes.

5 SPECIAL AGENT NEFF: -- power ascension?

6 [REDACTED]: Yes. I think everything was
7 in place. We had the procedures changed. I
8 personally verified that all the equipment was staged,
9 and I read the paperwork. I had at least two other
10 senior SROs review the paperwork plus the additional
11 review by the operating shift. It looked like it was
12 all in order. I was not happy about or willing to
13 operate for a long period of time with the
14 compensatory actions that I had in place and agreed
15 that I would take those compensatory actions given
16 that the organization would stay focused on this
17 particular issue and drive it to be fixed within a
18 month, within the next channelized work window for
19 that diesel. It wasn't a condition I was willing to
20 operate the unit under for an extended period of time
21 but a window that would provide the organization time
22 to really plan to do the maintenance work and to get
23 it fixed right. I thought those were reasonable
24 compensatory actions for a short period of time, and
25 I accepted those.

TC

1 SPECIAL AGENT NEFF: Okay. And did that
2 get realized?

3 [REDACTED] Yes.

4 SPECIAL AGENT NEFF: The compensatory
5 actions were removed and it was repaired?

6 [REDACTED]: Yes. The machine was fixed
7 within a month, and the compensatory actions were
8 removed.

9 SPECIAL AGENT NEFF: Okay. Do you see any
10 concerns in that situation? You, personally, do you
11 see anything regarding the safe operation of that
12 plant?

13 [REDACTED] No. I didn't see any
14 concerns with the safe operation of the Plant. I was
15 becoming frustrated by the pushback I was getting on
16 reducing the unit's output to comply with the tech
17 specs. I mean I was going to comply with the license
18 one way or another. I didn't feel like my ability to
19 comply with the license was being challenged, but what
20 I thought was being challenged was the, I don't want
21 to call it operating margin, but I wanted my operating
22 shift to have six hours to bring the unit down and put
23 it in hot shutdown, not try to scurry down in the last
24 hour and scram it.

25 SPECIAL AGENT NEFF: Seems like you had to

1 fight for that.

2 [REDACTED] No. I didn't have to fight
3 for it. I had to articulate my position several
4 times.

5 SPECIAL AGENT NEFF: Okay.

6 [REDACTED] There really wasn't a fight.

7 SPECIAL AGENT NEFF: Okay.

8 [REDACTED] I mean at first I -- this
9 was several hours before the downpower. I explained
10 to [REDACTED], "We need six hours to bring the unit down in
11 hot shutdown." He says, "Well, how do you know you
12 need six and not four?" I said, "Because I've tried
13 to do it in four. I can do it in four; it's hard."

14 SPECIAL AGENT NEFF: Was that accepted
15 when you gave it to him the first time?

16 [REDACTED] Yes.

17 SPECIAL AGENT NEFF: That you needed the
18 six hours?

19 [REDACTED] Yes.

20 SPECIAL AGENT NEFF: Okay.

21 [REDACTED] He didn't really -- he asked
22 me the basis for the six hours, and we had previously
23 had site-wide administrative guidance that supported
24 that six hours, but that had no longer -- that had
25 been removed from the procedures, but that was still

1 accepted practice. And I also told him that given
2 that on March 17 we had the Plant upset and
3 significant reactivity problem and given that
4 ironically it was the same operating shift on then as
5 it was on today to do the shutdown, I really wanted
6 them to have as much window to ensure their success as
7 possible. And he understood that. He was trying to
8 balance that need with, "Hey, the engineers are going
9 to be coming. They just told me they'll be here in a
10 half hour, 45 minutes, and we'll be done with this."
11 I don't think he fully understood what it was going to
12 take from the engineers walking over with their
13 revised assessment to having licensed operators --

14 (END TAPE 1, SIDE B)

15 (BEGIN TAPE 2, SIDE A)

16 SPECIAL AGENT NEFF: Okay. We're on Side
17 A of Tape 2. It's approximately 9:52 a.m. The
18 pushback that you were experiencing regarding your
19 concerns about complying with the license and getting
20 into the hot shutdown in that six-hour time frame,
21 where was the pushback coming from?

22 [REDACTED] Well, the pushback was
23 coming from [REDACTED]

24 SPECIAL AGENT NEFF: Why, do you think?

25 [REDACTED] Well, [REDACTED] was concerned

1 about unnecessarily moving the unit.

2 SPECIAL AGENT NEFF: And do you think
3 that's what the concern was? Did it have anything to
4 do with financial cost considerations and staying
5 where you were as opposed to --

6 [REDACTED] Yes.

7 SPECIAL AGENT NEFF: -- this degrading --

8 [REDACTED] I'm sure that was an aspect
9 of his concern also.

10 SPECIAL AGENT NEFF: But what he
11 articulated to you was that he didn't want to move the
12 unit with this degraded valve.

13 [REDACTED] Degraded seal on the pump.

14 SPECIAL AGENT NEFF: I'm sorry, degraded
15 seal, yes.

16 [REDACTED] Yes. He indicated that he
17 was concerned about -- because there would actually be
18 two maneuvers: One to come down in power, and
19 assuming we got the LCO cleared on diesel, another
20 maneuver to come back up. And our past performance on
21 the seal had been pretty predictable in that when we
22 did routine downpowers to do turbine valve testing,
23 for example, or to do a rod pattern exchange, we would
24 see changes in seal performance. It was well known.

25 SPECIAL AGENT NEFF: Okay. So there's a

1 legitimate concern there that he has.

2 [REDACTED] Sure. Yes.

3 SPECIAL AGENT NEFF: When you went through
4 it, did you have problems with the seal? I mean you
5 brought the unit down. I think you had it down to,
6 what, 40 percent?

7 [REDACTED] Yes. We came down to about
8 40 percent. The seal performed as we would have
9 expected it to. It did show some signs of degradation
10 but nothing that was unexpected.

11 SPECIAL AGENT NEFF: Okay. The incident
12 before that we talked about that occurred in March
13 when you had indicated there was some surprise on your
14 part in the length of debate in shutting the unit down
15 to fix the valve, you had indicated that was kind of
16 the first time -- that was the first time, and then
17 you said there's another incident but it came later
18 that you were surprised -- I was asking you about the
19 decision making process that was involved.

20 [REDACTED] Right.

21 SPECIAL AGENT NEFF: And did that surprise
22 you that there was this length of debate. You didn't
23 have anything to relate to before March of 2003, but
24 you have two incidents in March and June of 2003 that
25 show some concern or some input over maintaining

1 operability over what you're saying was a concern. I
2 mean in your case it was, "I have six hours, I have to
3 get there." It really wasn't debatable. At one
4 o'clock you needed to start to get into the hot
5 shutdown mode in June. And in March, you and your
6 [REDACTED] didn't believe that it was --
7 there was any question on what direction you needed to
8 go. Is there anything that you attribute that to,
9 these two incidents in 2003? Are you seeing new
10 pressure in maintaining the Plant status, being at
11 full power in 2003 that you hadn't seen before? Is
12 there something that that goes to? Are these totally
13 unrelated and not part of any type of change there?

14 [REDACTED] Yes. I don't know if I
15 would attribute them to any single thing. I mean
16 there's more challenge in the organization now I think
17 than there was previously.

18 SPECIAL AGENT NEFF: More challenge.

19 [REDACTED] More questions, more
20 questions to understand the basis of decisions and
21 more dialogue. That was certainly the case for the
22 bypass valve. I mean a question was raised, does the
23 bypass valve being closed change our decisions?
24 Should it change our plans? Why it took the team five
25 hours to debate that, I don't know. I don't know.

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1 [REDACTED] might be able to highlight some details
2 there around the discussions that he had.

3 And as far as the downpower for the
4 diesel, the debate there was really weighing the risk
5 that we assumed by moving the unit prematurely, if you
6 will, on degrading the seal and how that compared to
7 the risk that the operating shift assumed by being
8 given a very narrow window to bring the unit down and
9 place it in a hot shutdown condition.

10 SPECIAL AGENT NEFF: You said that you had
11 a difference of opinion there with [REDACTED] with
12 what the driving concern should have been.

13 [REDACTED] Yes. I certainly
14 acknowledged and recognized that maneuvering the unit
15 would likely cause the seal to change performance,
16 because I had seen it happen several times in the
17 past. That was not foreign to me when [REDACTED] mentioned
18 that as a concern that he had because it was a concern
19 that I had, and it was one that [REDACTED] had
20 already briefed and were prepared to provide
21 heightened awareness on. But I didn't -- I don't
22 think [REDACTED] appreciated the amount on review time that
23 would be required in order for us to bring closure to
24 the LCO and how that review time would ultimately
25 impact the window available to bring the unit down and

1 place it in hot shutdown. And when I got him to see
2 that the decision was very clear to begin the
3 downpower.

4 SPECIAL AGENT NEFF: Okay.

5 [REDACTED] It was very clear.

6 SPECIAL AGENT NEFF: Did you experience
7 any adverse effects towards yourself, personally, for
8 having to explain that, having to make that clear and
9 having to go in the direction that you needed to go to
10 meet your license requirements and get into the hot
11 shutdown?

12 [REDACTED] Any adverse? No, no, no,
13 no.

14 SPECIAL AGENT NEFF: Did you have any
15 problems whatsoever from your management for doing
16 what you had to do?

17 [REDACTED] No. No. I had not --

18 SPECIAL AGENT NEFF: Were you criticized
19 in any way?

20 [REDACTED] I was criticized not for
21 that. I was criticized for the initial decision
22 making that put us in the LCO in the first place,
23 which was -- it was good coaching, because we had
24 initially identified the seal leakage on this pump on
25 the diesel back in the refueling outage, back in April

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1 to May. Mid-April to Mid-May was our refueling
2 outage, and we found the leakage during the outage and
3 we had Engineering perform an evaluation while we were
4 in the outage whether or not we needed to fix the seal
5 during the outage or whether we could fix it online
6 during a scheduled maintenance window. And they
7 established some criteria for acceptable leakage.

8 And at the time, during the outage, the
9 leak rate was somewhere around ten drops per minute,
10 so it was a very small leak; one drop every six
11 seconds. Then they had established a maximum leak
12 rate of something around 150 drops per minute. And
13 based on that we instituted monitoring, so [REDACTED]
14 [REDACTED] when they went into the room they would look
15 at the leakage to make sure it was less than 150. And
16 it was for a long time until Sunday night when the
17 operator went in and found that it was more than 150,
18 and so the criticism came into play and was around our
19 decision to accept the 150 as a black and white line,
20 which I had done and what [REDACTED] had done, and
21 when we saw the leakage above 150 it was like, "Okay,
22 Diesel's inoperable," period.

23 SPECIAL AGENT NEFF: Okay.

24 [REDACTED]: The shortfall that we had
25 was we accepted that 150 from Engineering without

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1 really understanding the basis, so they gave us a
2 very, very tight box to operate in, and we didn't
3 recognize that we had more operating margin available
4 to us through the use of compensatory actions, which
5 I ultimately ended up doing later in the week, that
6 would have allowed us to plan the maintenance window
7 in a way that didn't cause so much turmoil and upset
8 in the organization. Because when the diesel was
9 declared inoperable on Sunday night at -- or Monday
10 morning at three or four o'clock, whatever time it
11 was, that really changed the whole course of direction
12 for the organization.

13 And in hindsight, I could have had a plan
14 that would have said, "Okay, if you exceed 150 drops
15 per minute, you need to implement the following
16 contingency plans and have the organization plan and
17 execute a scheduled maintenance window soon," which is
18 what -- I mean after we went through three days of
19 heroic efforts to repair the seal and we brought the
20 unit down to 40 percent, that's ultimately where I
21 ended up anyhow. So the criticism I had was how do
22 you get the clarity of the thinking that you had at
23 one o'clock in the afternoon -- when you were getting
24 ready to back the unit down, how do you get that
25 clarity of thinking up-front so the decision-making

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1 process flows more smoothly and not so disruptive?

2 SPECIAL AGENT NEFF: It wouldn't have been
3 time-pressured, 72 hours leading into 12 hours --

4 [REDACTED] Right. Right.

5 SPECIAL AGENT NEFF: -- and you must get
6 there, and everybody's scrambling for a review.

7 [REDACTED] I mean at 12:30 on the
8 afternoon we're shutting down, Engineering had a very
9 clear perspective of what the design basis of that
10 system was, very, very clear.

11 SPECIAL AGENT NEFF: Okay.

12 [REDACTED] So why didn't we have that
13 clarity back in the outage when we made the original
14 assessment and put it into place there, so it would
15 have avoided all of the disruption that occurred?
16 That was the criticism that I got.

17 SPECIAL AGENT NEFF: I see. And you don't
18 disagree with that.

19 [REDACTED] No, no. It was good
20 coaching.

21 SPECIAL AGENT NEFF: Okay.

22 [REDACTED] I thought it was good
23 coaching.

24 SPECIAL AGENT NEFF: Do you have anything
25 else to add to that incident that either I haven't

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1 asked or we haven't covered?

2 [REDACTED] I don't think so. I think
3 we covered that pretty good.

4 SPECIAL AGENT NEFF: Do you think -- [REDACTED]
5 [REDACTED] (phonetic) announced he was leaving, I
6 think it was at some point in March of 2003. In your
7 view, did this have any effect on operations at the
8 site in terms of decision making?

9 [REDACTED] Any effect on operations.
10 Can you be more specific?

11 SPECIAL AGENT NEFF: Yes. I'll narrow it
12 down for you. Did his leaving have an effect that
13 people who were from a non-nuclear background making
14 decisions over people with the nuclear background,
15 such as in these incidents with the March incident and
16 the June incident, do you think that that had any play
17 in the situations there? The change in power
18 affecting these two --

19 [REDACTED] No, I don't think so. I
20 mean I'm not sure what changes occurred in [REDACTED]
21 [REDACTED] working relationship with the [REDACTED] or
22 how [REDACTED] world changed as a result of [REDACTED] leaving.
23 I mean [REDACTED] he's a nuclear professional, he
24 has a lot of nuclear background, so it's not like he's
25 a non-nuclear guy. He's run a lot of power plants.

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1 But I'm not sure what relationship [REDACTED] established
2 with [REDACTED]

3 SPECIAL AGENT NEFF: And prior to that,
4 was [REDACTED] involved?

5 [REDACTED] Prior to [REDACTED] leaving?

6 SPECIAL AGENT NEFF: No. In between in
7 any way on the decision making there, before [REDACTED]
8 [REDACTED]

9 [REDACTED]: I'm not sure. I mean I can
10 speculate on what I've heard.

11 SPECIAL AGENT NEFF: Let me ask you this:
12 Is it something that you've even considered before,
13 that this move in [REDACTED] part had any effect on how
14 Hope Creek was being run?

15 [REDACTED]: I haven't, no. From my
16 perspective, it really didn't impact or change the
17 decision making.

18 SPECIAL AGENT NEFF: Okay.

19 [REDACTED]: I know there was some
20 speculation who was really running the site, whether
21 it was [REDACTED] but from my
22 perspective it was [REDACTED] I didn't see anything that
23 caused me to believe otherwise.

24 SPECIAL AGENT NEFF: Okay.

25 [REDACTED] Some people had told me that

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1 [REDACTED] was not able to make decisions unless [REDACTED] said
2 okay, but that's my speculation and what people have
3 told me.

4 SPECIAL AGENT NEFF: What people told you.

5 [REDACTED] Yes. That's just what
6 people have told me. I didn't see any evidence of
7 that.

8 SPECIAL AGENT NEFF: How long did you work
9 with [REDACTED]

10 [REDACTED] Since he came to the site.
11 He came to the site when I was the [REDACTED]
12 [REDACTED] and he came as the [REDACTED]
13 [REDACTED] which meant that Outage is rolled up under
14 his responsibility, so I worked directly for him for
15 I guess about a year before I became the [REDACTED]

16 [REDACTED]
17 SPECIAL AGENT NEFF: Okay. So are you
18 aware of any changes in -- this is only what you've
19 heard, that he couldn't make any decisions unless
20 [REDACTED] approved them. Did anything happen for
21 him differently from what you observed, did he behave
22 differently, did he make decisions differently after
23 [REDACTED] left?

24 [REDACTED] I didn't see any change. I
25 did not see any change. His engagement -- he's always

1 been one to challenge and ask questions and that
2 didn't change.

3 SPECIAL AGENT NEFF: Okay. I don't have
4 any further questions along this line, but it's
5 possible somebody else may have them. I've already
6 kind of covered that with you --

7 [REDACTED] Sure.

8 SPECIAL AGENT NEFF: -- that you may be
9 contacted again. So at this point, we'll go off the
10 record. It's 10:07 a.m., and I thank you for your
11 time on that.

12 [REDACTED] Sure thing.

13 (Whereupon, the foregoing matter went off
14 the record at 10:07 a.m. and went back on
15 the record at 11:54 a.m.)

16 SPECIAL AGENT NEFF: Okay. It's 11:54 on
17 September 25. Having just discussed another issue, it
18 led us back to this work environment issue that was
19 discussed earlier today, so we're adding some more
20 information to the record. What I wanted to ask you
21 about was during the [REDACTED]

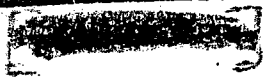
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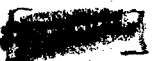
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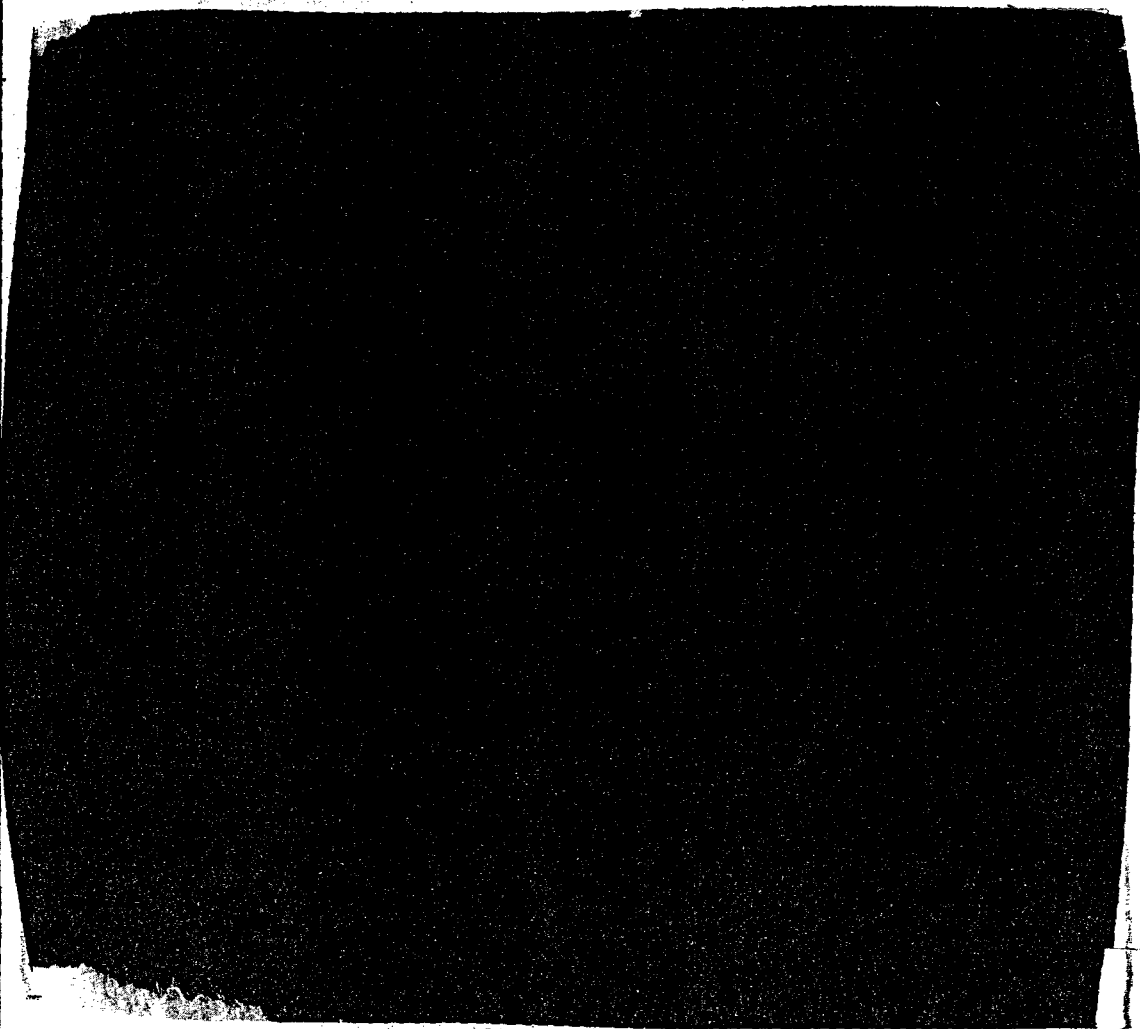
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Yes, very well.

SPECIAL AGENT NEFF: Can you describe what
your concerns were centered around here? It's briefly
about an 

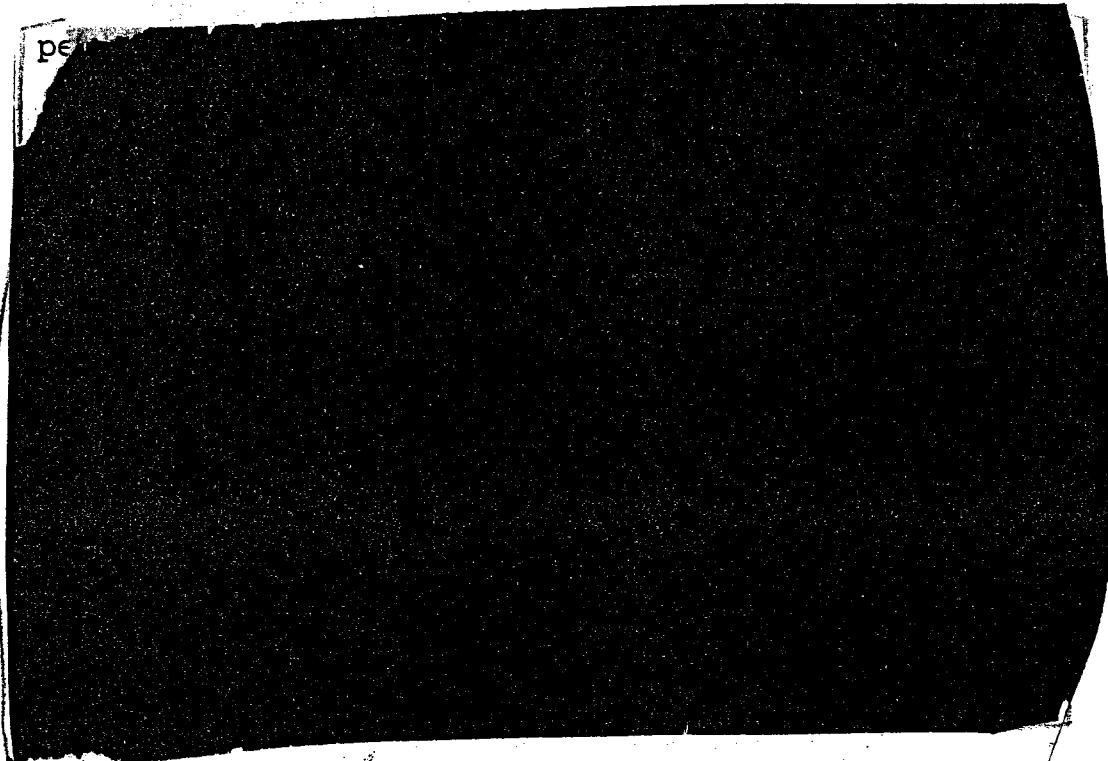


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SPECIAL AGENT NEFF: Sure.

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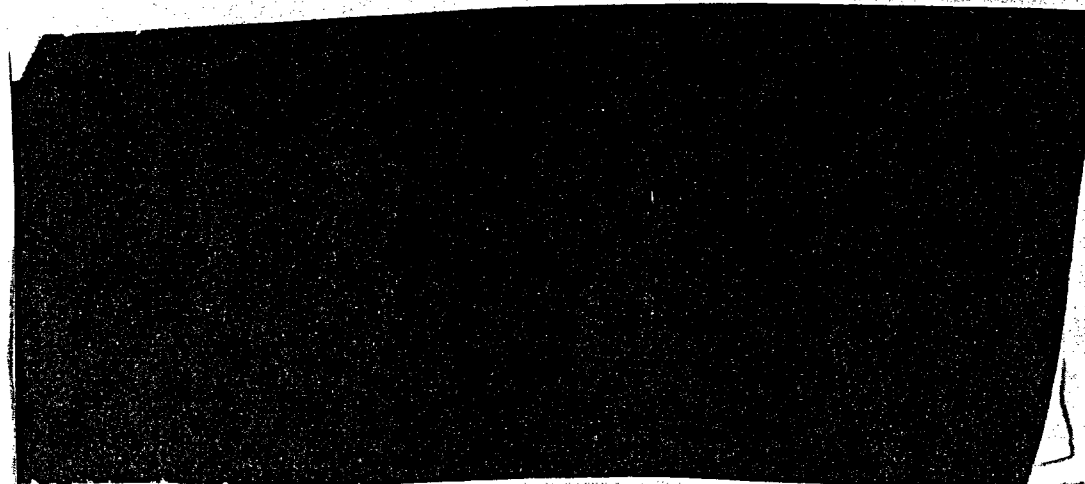
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SPECIAL AGENT NEFF: Why do you think that was? Was it determined by your investigation why they weren't willing to say, "Hey, you've got a piece of malfunctioning equipment here that's dangerous."



SPECIAL AGENT NEFF: They worked around it.



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1 [REDACTED]
2 [REDACTED]
3 [REDACTED]
4 [REDACTED]
5 SPECIAL AGENT NEFF: When you agreed to
6 conduct the survey --

7 [REDACTED] Yes.

8 SPECIAL AGENT NEFF: -- what did you find
9 there when you participated in the survey to find out
10 if there was more action necessary?
11 [REDACTED]
12 [REDACTED]
13 [REDACTED]
14 [REDACTED]
15 [REDACTED]
16 [REDACTED]
17 [REDACTED]
18 [REDACTED]
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[REDACTED]

SPECIAL AGENT NEFF: When you talk about

[REDACTED] concerns, did you get that from [REDACTED]

[REDACTED] or did you learn that from --

[REDACTED]

SPECIAL AGENT NEFF: And when you say that
it was mended, was it effective, what you went through
to find out what was causing the reluctance?

[REDACTED]

SPECIAL AGENT NEFF: Did anything improve
there in terms of from what you knew about reporting

[REDACTED]

1
2
3
4 SPECIAL AGENT NEFF: Okay. And when we
5 talked earlier about people raising concerns, we
6 talked a lot about the notifications that are written
7 and your analysis of the notifications. If not going
8 to ECP, do you think that they were raising their
9 concerns when they had to? If there was this distrust
10 with ECP, would people raise their concerns in other
11 avenues?

12 [REDACTED] Oh, I think so, yes. Yes.
13 I think so.

14 SPECIAL AGENT NEFF: Do you have anything
15 further to add to this at this point?

16 [REDACTED] No.

17 SPECIAL AGENT NEFF: All right. We'll go
18 off the record. It's 12:03 p.m.

19 (Whereupon, at 12:03 p.m., the Interview
20 of [REDACTED] was concluded.)
21
22
23
24
25