UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

Title: MEETING WITH COMMONWEALTH EDISON

PUBLIC MEETING

Location: Rockville, Maryland

Date: Tuesday, November 4, 1997

Pages: 1 - 105

ANN RILEY & ASSOCIATES, LTD.
1250 I St., N.W., Suite 300
Washington, D.C. 20005
(202) 842-0034

CERTIFICATE

This is to certify that the attached description of a meeting of the U.S. Nuclear Regulatory Commission entitled:

TITLE OF MEETING: MEETING WITH COMMONWEALTH EDISON PUBLIC MEETING

PLACE OF MEETING: Rockville, Maryland

DATE OF MEETING: Tuesday, November 4, 1997

was held as herein appears, is a true and accurate record of the meeting, and that this is the original transcript thereof taken stenographically by me, thereafter reduced to typewriting by me or under the direction of the court reporting company

Transcriber: Jan Delmonte

Reporter: Jan Delmonte

DISCLAIMER

This is an unofficial transcript of a meeting of the United States Nuclear Regulatory Commission held on November 4, 1997 in the Commission's office at One White Flint North, Rockville, Maryland. The meeting was open to public attendance and observation. This transcript has not been reviewed, corrected or edited, and it may contain inaccuracies.

The transcript is intended solely for general informational purposes. As provided by 10 CFR 9.103, it is not part of the formal or informal record of decision of the matters discussed. Expressions of opinion in this transcript do not necessarily reflect final determination or beliefs. No pleading or other paper may be filed with the Commission in any proceeding as the result of, or addressed to, any statement or argument contained herein, except as the Commission may authorize.

1 UNITED STATES OF AMERICA

2 NUCLEAR REGULATORY COMMISSION

3 ***

4 MEETING WITH COMMONWEALTH EDISON

5 ***

6 PUBLIC MEETING

7 ***

8

9 Nuclear Regulatory Commission

10 Commission Hearing Room

11 11555 Rockville Pike

12 Rockville, Maryland

13

14 Tuesday, November 4, 1997

15

16 The Commission met in open session, pursuant to

17 notice, at 2:00 p.m., the Honorable SHIRLEY A. JACKSON,

18 Chairman of the Commission, presiding.

19

20 COMMISSIONERS PRESENT:

21 HON. SHIRLEY A. JACKSON, Chairman

22 EDWARD McGAFFIGAN, JR., Member of the Commission

23 GRETA DICUS, Member of the Commission

24 NILS DIAZ, Member of the Commission

25

1 STAFF AND PRESENTERS SEATED AT COMMISSION TABLE:

2 STEPHEN G. BURNS, Associate General Counsel

3 ANNETTE VIETTI-COOK, Assistant Secretary

4 BILL BEACH, Region III Administrator

5 L. JOSEPH CALLAN, EDO

6 ROY ZIMMERMAN, NRR

7 OLIVER KINGSLEY, CE

8 EDWARD KRAFT, CE

9 ROBERT MANNING, CE

10 JAMES J. O'CONNOR, CE

11 H. GENE STANLEY, CE

12

13

14

15

16

17

18

19

20

21

22

23

24

25

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

2 [2:00 p.m.]

3 CHAIRMAN JACKSON: Good afternoon, ladies and
4 gentlemen. The purpose of today's meeting between the
5 Commission and senior executives of the Commonwealth Edison
6 Company and the NRC staff is to discuss measures established
7 by Commonwealth Edison to track individual plant performance
8 and to gain an understanding of the efficacy of corrective
9 actions put into place to improve safety at all Commonwealth
10 Edison nuclear facilities.

11 In January of this year, the NRC issued a formal
12 request for information pursuant to 10 C.F.R. 50.54(f)
13 requiring Commonwealth Edison to explain why the NRC should
14 have confidence in the company's ability to operate its
15 nuclear stations safely while sustaining performance
16 improvements at each site.

17 The letter also required the company to describe
18 criteria which have been established or which would be
19 established to measure performance. The issuance of this
20 letter was the result of long-standing concerns on the part
21 of the NRC regarding the cyclic nature of safety performance
22 at Commonwealth's facilities.

23 Commonwealth Edison responded to that letter in
24 March of this year, describing a combination of actions
25 which it said would meet the challenges before the company.

1 The actions included increases in management oversight,
2 financial support, functional support, and information
3 sharing and the establishment and enforcement of rigorous
4 standards of performance.
5 The company also described plans to utilize a
6 combination of performance indicators applied uniformly to
7 the six Commonwealth Edison nuclear facilities, which would
8 allow each site to be evaluated against effective standards
9 and, importantly, to be measured against one another. I'm
10 giving your opening remarks, Mr. O'Connor.
11 At a Commission meeting held in April,
12 Commonwealth Edison explained these plans, and the NRC staff
13 provided its evaluation. The staff found that Commonwealth
14 Edison's proposed activities provided a broadly-based and
15 reasonable set of actions which, if effectively implemented,
16 should enhance the capability of the company to operate,
17 monitor and assess its nuclear facilities, while sustaining
18 performance improvements at each site.
19 Today's meeting will be the Commission's first
20 opportunity to review early results of the work performed to
21 date by the company and verified by the staff.
22 I want to stress the phrase, "early results," at
23 the outset of this meeting. The process of improvement on
24 the scale and breadth necessary at Commonwealth Edison is a
25 long one.

1 As the company's process is relatively new, and as
2 our interest is in sustained performance improvement at all
3 Commonwealth facilities, any enthusiasm we may feel as a
4 result of indicators presented today must be tempered by an
5 appreciation that indicated improvement must withstand the
6 test of time and must be shared among all of the company's
7 sites. To this degree, Commonwealth Edison's sites have a
8 shared fate.
9 The Commission looks forward to this performance
10 update by Commonwealth Edison executives and the staff, and
11 I understand that copies of the presentations are available
12 at the entrances to the meeting.
13 And so, unless my Commission colleagues have any
14 opening comments they would like to make, Mr. O'Connor,
15 welcome and please proceed.
16 MR. O'CONNOR: Thank you very much, Chairman
17 Jackson and Commissioners. We do appreciate the opportunity
18 to provide you with an update on the performance of our
19 nuclear program.
20 Joining me at the table today are our new chief
21 nuclear officer, Oliver Kingsley; Bob Manning, our executive
22 vice president, who served very briefly as our chief nuclear
23 officer and has been the principal liaison with our labor
24 representatives in the company; Ed Kraft, on my far left,
25 the vice president responsible for our boiling water

1 reactors at Dresden, Quad Cities, and LaSalle; Gene Stanley,
2 the vice president responsible for our pressurized water
3 reactors at Byron, Braidwood, and Zion.
4 Our purpose here today is threefold. First, I
5 will describe changes with regard to the organizational
6 structure of our nuclear program, including the principal
7 management changes.
8 Second, we'll discuss the actions that we have
9 taken to ensure that the necessary resources are available
10 to support a strong and successful nuclear program and to
11 achieve better relations and teamwork with our union
12 employees.
13 Third and finally, we'll provide you with an
14 assessment of the performance results at each of our six
15 stations, giving you our assessment on where we have made
16 progress, as well as our candid observations on those areas
17 where we have continuing performance challenges.
18 As we discussed with the Commission in April,
19 sustained performance throughout our nuclear program remains
20 our top corporate priority, to date, we have implemented
21 roughly one-half of commitments that we made in our 50.54(f)
22 response and continue to complete these commitments on
23 schedule.
24 I would like to say a brief few words about each
25 of these three topics that we're going to discuss today,

1 beginning with the organizational and management changes
2 that we've recently made.
3 I introduced Oliver Kingsley, who is our new chief
4 nuclear officer. Oliver was formerly in charge of the
5 nuclear program at the Tennessee Valley Authority. He has
6 demonstrated ability over the years in turnaround
7 situations, experience that we believe will be directly
8 relevant to the situations that we face at Zion and LaSalle.
9 He also has a very good record in sustaining
10 strong operating performance one a turnaround has been
11 achieved. In just a few moments, Oliver will say a few
12 words about his approach to our program.
13 At the time that he agreed to join us as our chief
14 nuclear officer, we also made some important organizational
15 changes related to his role as head of our nuclear program.
16 As we announced just a few weeks ago, we've established a
17 separate entity for our nuclear activities, which we call
18 the Nuclear Generation Group, and Mr. Kingsley will serve as
19 president of that operation.
20 The new Nuclear Generation Group is designed to
21 give our nuclear management team more flexibility and more
22 autonomy in running the nuclear program, including the
23 flexibility to create systems and obtain services different
24 from or even beyond those that are available in other parts
25 of the country, while retaining the option to draw on those

1 services from within the parent at any time they seem to
2 have that to be desirable.
3 The creation of this group and the additional
4 authority that is being provided to its leadership continues
5 and expands the corporate support effort for the nuclear
6 program that we described to you in our last meeting in the
7 spring and provides stronger, more focused attention on
8 nuclear.
9 In connection with the creation of this group,
10 we've also made changes in the structure reporting directly
11 to Mr. Kingsley. Among has direct reports are Ed Kraft and
12 Gene Stanley, whom you have just met.
13 In this regard, we believe that an experienced
14 chief nuclear officer, together with the role that Ed and
15 Gene will play in overseeing the BWRs and PWRs,
16 respectively, provides the needed focus on the requirements
17 of each of these two units, while still maintaining strong
18 central oversight and enforcement of standards.
19 Also reporting to Mr. Kingsley are Mike Wallace,
20 our senior vice president of nuclear services, which
21 includes engineering; Virginia Brown, our nuclear vice
22 president of human resources; Andrew Lynch, our vice
23 president and chief financial officer for Nuclear Generation
24 Group; and Lon Waldinger, who heads our nuclear oversight
25 organization.

1 I think the important point that we're making here
2 is that, as you add all of these support functions together,
3 you have the sort of organization that can function
4 relatively autonomously, which is what we've tried to
5 create.
6 With respect to the resources that we've made
7 available to our nuclear program, we have continued to
8 provide the program and each of our stations individually
9 with the resources necessary to achieve our goals.
10 When we met in April, we noted that our 1997
11 nuclear program budget was $1 billion 28 million, and that
12 was up from $926 million that we spent in 1996. For 1998,
13 we are budgeting a similar amount to that which we're
14 spending in 1997.
15 As you know, these figures represent significant
16 increases from our previous years, pre-1996, and reflect to
17 continuing commitment of the company and our board of
18 directors.
19 We've also made what we believe to be genuine
20 progress in the relationships that we have with our union.
21 In May of 1994, the 17 separate locals that represented our
22 union employees were consolidated into one local, which is
23 now called Local 15.
24 In the past, the global issues were negotiated by
25 a system council consisting of those 17 presidents, while

1 work practices at individual locals were bargained
2 separately. That created some differentiation in the way we
3 approached things and the practices that we had.
4 The consolidation of the 17 locals into one local
5 has also created stresses early on that were caused because
6 neither of us were used to negotiating all of the issues in
7 a way that addressed the needs of the entire union workforce
8 and the management.
9 We think most of those difficulties are now behind
10 us. Just recently, the rank and file in our organization
11 ratified by a 4-to-1 margin a new three-and-a-half year
12 contract with Local 15 which provides the foundation for
13 strong, positive relationships with our union membership.
14 This contract not only contains specific
15 agreements on many of the fundamental issues, but includes
16 commitments by both ComEd and our union to work
17 cooperatively on standardizing the work practices at all of
18 our six nuclear sites.
19 With us today, to the far left in the row right
20 behind me, is Bill Starr, who is the lead negotiator for the
21 union and the president of IBEW Local 15. Mr. Starr was
22 formerly a mechanic at our Byron station, so he understands
23 the special challenges and demands that nuclear power
24 generation places on both employees and management.
25 ComEd and Local 15 have been working hard to

1 ensure that a strong and cooperative relationship exists at
2 all of our sites. Bill was helpful and very instrumental in
3 getting us to reach agreement on several of the key issues
4 that arose at Zion just a few months ago.
5 We are working collaboratively with Bill and his
6 people to resolve a number of the remaining issues. Gene
7 Stanley will touch on this later in his presentation.
8 CHAIRMAN JACKSON: Mr. O'Connor.
9 MR. O'CONNOR: Yes.
10 CHAIRMAN JACKSON: Are there -- and either you can
11 respond or one of the other gentlemen -- are there specific
12 salient features -- I'm not interested in going into chapter
13 and verse of your contract with the union, but you mentioned
14 standardization of work practices, for instance. Are there
15 other specific salient aspects of the new contract that are
16 oriented specifically to improving nuclear safety
17 performance?
18 MR. O'CONNOR: Yes, and the key provision,
19 Chairman Jackson, is really contained in one sentence that
20 is a commitment by Local 15 to work collaboratively with us
21 in what is called continuous bargaining to address those
22 areas where there are presently differences in the way we
23 operate across all six of our sites.
24 That is really the key. It is a commitment
25 contained in the contract and supported publicly by both

1 Mr. Starr, as well as the people representing the management
2 of the company.
3 CHAIRMAN JACKSON: I may come back to that.
4 MR. O'CONNOR: Please. I would now like to
5 provide a brief overview of the performance results at each
6 of our six sites, recognizing that Ed Kraft and Gene Stanley
7 will discuss plant status in more detail following my brief
8 summary.
9 Byron and Braidwood remain good, strong
10 performers. We were recently gratified to receive SALP
11 scores at Braidwood of two 1's and two 2's, including an
12 improvement from 2 to 1 in operations. This, we believe,
13 reflects our strong focus on operations and the leadership
14 that Gene Stanley has given us there.
15 Dresden has sustained the improving trend that has
16 been apparent for the past two years with its performance
17 generally median industry levels. We are committed to
18 continuing that improvement.
19 Quad Cities has improved over the past two years,
20 although improvement has recently leveled off. We're
21 focussing our attention on concerns in the engineering area.
22 Ed Kraft will be describing the actions that we're taking to
23 regain positive momentum at Quad Cities.
24 While the pace may differ, all four of our sites
25 that are operating are showing improvement. When we review

1 the data, many indicators show improvement. Some show
2 static performance, and relatively few show signs of
3 decline.
4 In general, the objective indicators and the
5 evaluation tools show that each of these four sites is
6 experiencing sustained strong performance or measurable
7 improvement.
8 Zion and LaSalle are in a different category.
9 They remain shut down and in recovery. Plans are being
10 implemented and put in place to prepare them for restart,
11 assure their readiness, and lay the groundwork for
12 long-term, reliable, safe operations.
13 As I mentioned in April, we are going to take the
14 time necessary to address the problems at LaSalle and Zion
15 and ensure that they are fully ready. We will simply not
16 restart those units until we are confident that they can be
17 operated safely and reliably.
18 We would like to invite each of you to come to
19 Zion and LaSalle to see the progress that we are making and
20 to review our preparations for restart.
21 I would now like to introduce Oliver Kingsley, who
22 will share a few brief remarks.
23 MR. KINGSLEY: Thank you, Jim.
24 Chairman Jackson, Commissioners, good afternoon.
25 I am very pleased to meet with you today, wearing a new hat

1 -- new since only yesterday --

2 CHAIRMAN JACKSON: Can you pull the microphone?

3 MR. KINGSLEY: Can you hear me?

4 CHAIRMAN JACKSON: I think now, yes. Thank you.

5 MR. KINGSLEY: I talk pretty loud anyway -- as
6 president and chief nuclear officer of ComEd's newly formed
7 Nuclear Generation Group.

8 Because of the interactions among us over the
9 years, each of you knows my background and the way I do
10 business, so I will not dwell on where I've been or what I
11 have done.

12 As chief nuclear officer at ComEd, I have full
13 authority and accountability for the ComEd nuclear program.
14 I am responsible for the performance of the program, and my
15 objective is to assure improvement that is measurable and
16 sustained.

17 A separate Nuclear Generation Group, focused
18 solely on the nuclear program, is a concept which has been
19 successful at TVA and elsewhere in the industry, and I
20 believe it will be successful at ComEd, too.

21 I intend to proceed deliberately in this new job.
22 I intend to meet with and listen to a variety of people
23 whose input will be very valuable -- our management team,
24 our employees, our labor leadership, the Institute of
25 Nuclear Power Operations, NEI leaders, key NRC staff,

1 managers in Region III and at headquarters, and each of you,
2 of course.
3 I have no preconceived notions as to what specific
4 steps should be taken to achieve the improved nuclear
5 performance which is my goal. I do believe, however, that
6 there are certain principles which must apply and steps
7 which must be taken in order for any nuclear program to
8 perform well.
9 In listing these, I am not prejudging the
10 situation at ComEd. Having started only yesterday, I have
11 no basis upon which to make informed judgments.
12 These key principles actions are, one, we must
13 assure that our nuclear program has the right culture. Two,
14 we must be conservative in our decision-making, focusing
15 first on nuclear safety. Three, we must assure that our
16 workforce and management team share a common commitment and
17 are working together toward a common goal of safe, efficient
18 reactor operations.
19 Four, we must strive to achieve stability in our
20 management team. Five, we must diagnose and understand the
21 issues, develop proactive solutions, and focus our resources
22 on systematic corrective action. Six, we must assure that
23 sufficient resources are dedicated to this mission and are
24 utilized as efficiently as possible.
25 If we apply these principles, we will be able to

1 instill in NRC confidence in us so that we're able to say
2 what we mean, mean what we say, when we communicate with
3 you. Most important, you have my personal word that we will
4 do what we say. You know this is how I dealt with the NRC
5 in the past, and you can expect exactly the same from me at
6 ComEd.
7 Finally, let me say that you have my personal
8 commitment that I will devote my full time and effort,
9 whatever it takes to enhancement of this nuclear power
10 program. I'm a hands-on type manager, and there will be a
11 great deal of this here for me.
12 But I recognize that this program is far too large
13 for one individual to personally manage all the details, so
14 I intend to clearly articulate my expectations for each
15 nuclear station, to empower and hold accountable each
16 management team as it goes forward to meet these
17 expectations and to rigorously follow up to ensure that
18 these objectives are achieved.
19 We will focus on the underachievers in the program
20 while maintaining or improving the performance at the other
21 plants, and from there, my objective will be to ensure that
22 this program continuously improves until it is ranked among
23 the better performers in the industry.
24 My objective in taking this job is to do just
25 that. I am pleased to be here as ComEd's new chief nuclear

1 officer. The next time I visit with each of you, I expect
2 to be able to report more specifically on my impressions and
3 thoughts and to discuss more specifically some of the
4 actions we will have taken or intend to take to move this
5 program forward. Thank you very much.
6 CHAIRMAN JACKSON: If I may make a comment, we
7 appreciate your remarks, and you do come with a very
8 positive reputation relative to, in particular, the TVA
9 program. We're well aware of the work you've done at Watts
10 Bar and Brown's Ferry, in particular, but overall in the TVA
11 program. But I will say that -- because I know that this is
12 what your history suggests --
13 MR. KINGSLEY: Mm-hmm.
14 CHAIRMAN JACKSON: -- that you are a
15 results-focused person, and so am I, and so is the
16 Commission. And so, in the end, what's going to matter is
17 what you actually achieve.
18 MR. KINGSLEY: I fully understand that. My
19 reputation will not carry this, Chairman Jackson. I intend
20 to come in and produce positive results --
21 CHAIRMAN JACKSON: Good.
22 MR. KINGSLEY: -- building this team, supporting
23 this team, and moving this team forward.
24 CHAIRMAN JACKSON: Right. And that's very
25 important, because six months ago, Mr. O'Connor and, at that

1 point, Mr. Maiman sat here and discussed with the Commission
2 the "experienced" and "stable" management team that had been
3 put into place to oversee and to direct the improvement
4 efforts. And so, here we are, six months later, and we have
5 all new faces, except Mr. O'Connor. So I just leave it at
6 that.
7 MR. KINGSLEY: Well, unless there's some major
8 problem with my health, I'm not going to leave. I'm going
9 to be there until we get it fixed, exactly like I did at TVA
10 and exactly like we did at the other nuclear programs I've
11 been a part of.
12 CHAIRMAN JACKSON: So good. So we're both
13 calibrated with each other.
14 MR. KINGSLEY: Right.
15 CHAIRMAN JACKSON: Okay. Thank you.
16 MR. KINGSLEY: Thank you very much.
17 MR. O'CONNOR: Oliver, thank you. I would now
18 like to turn the program over, initially, to Ed Kraft, who
19 will comment on our operations and our three boiling water
20 reactors Dresden, Quad Cities and LaSalle. And then he'll
21 be followed immediately thereafter by Gene Stanley, who
22 oversees Zion and Braidwood. Ed.
23 MR. KRAFT: Slide 7, please. Thank you, Jim.
24 I'm Ed Kraft, responsible for ComEd's BWRs. Our
25 management team, like the Commission, is focused on results.

1 Each month, we review and perform an analysis of our
2 performance indicators and other information, such as
3 events, inspections, and assessment results, to obtain a
4 picture of how our nuclear units are performing.
5 This review includes management review meetings
6 held at our plant sites, as well as the senior leadership
7 committee meetings at which our nuclear executives review
8 the performance of all sites.
9 In our response to the Commission's 50.54(f)
10 request, we set a goal of operating our plants at or better
11 than the industry average of our peers by the year 2000. To
12 measure our progress, we also established interim
13 performance targets. Next slide, please.
14 On this slide, we have attempted to show how we
15 are doing on our top seven indicators, the ones we use to
16 compare ourselves. This is a busy slide. I want to kind of
17 walk around it, starting in the upper righthand corner.
18 These two columns on the right represent, first,
19 the farthest right, the year 2000 performance targets.
20 These are the medians for the industry as we see them being
21 projected out for the year 2000.
22 The next column, the 1997 performance targets, are
23 the medians for the industry as they stand today with the
24 most recent data. These data are presented on a per-unit
25 basis.

1 As you move across the chart at the top, you see
2 LaSalle and Zion -- those are the two shutdown units -- and
3 the other operating units. Down the left margin, we see the
4 seven indicators. Six of these are WANO indicators; one of
5 them is an NRC indicator, safety system actuations.
6 The reports over here are on a per-site basis,
7 with the exception of exposure, which is on a per-unit
8 basis. As you go down through these, these targets, as I
9 said, were based on the latest benchmark data. The numbers
10 on the chart represent where each one of our plants are as
11 of the data of September.
12 While it's very detailed, you can see that, in
13 most cases, our results are in line with the 1997
14 performance targets. Those that are not are shown in red.
15 The four plants that are currently operating are generally
16 comparable with or approaching the industry standards or the
17 median. The outlyers, as you can see, are LaSalle and Zion.
18 They have shut down, and the performance data are not as
19 meaningful as they are for the operating plants.
20 CHAIRMAN JACKSON: Can you discuss the red
21 indicators in more detail for the operating plants, in
22 particular?
23 MR. KRAFT: I can, if I can continue on. I would
24 like to make a few things clear. First, the chart shows
25 data current through the end of September.

1 CHAIRMAN JACKSON: Excuse me. You are going to
2 come back and discuss the red indicators?
3 MR. KRAFT: Yes, I will. I will.
4 CHAIRMAN JACKSON: Okay.
5 MR. KRAFT: For instance, Byron shows 0 automatic
6 scrams. Byron has had an automatic scram in October,
7 however, and this will show up in the October data.
8 Second, unit capability and unplanned capability
9 loss factors are measures of production. Those represent
10 four of the red blocks under the operating units.
11 We expect these production numbers for Dresden and
12 Quad Cities to improve as our operations performance and
13 material conditions improve there. Our focus on operations
14 and safety usually brings the other indicators up first,
15 then production will follow that as the material condition
16 and the operations performance improves.
17 The other red indicator for Quad Cities is
18 collective radiation exposure, and although it has improved
19 -- and I talk about that a little bit later -- it does show
20 over the industry median currently.
21 Primarily that's because we have done some pretty
22 significant material condition items that have caused us to
23 acquire a high exposure. We have to address them. They're
24 done in ALARA fashion, but the exposure is still generated.
25 The other one is Byron under the industrial safety

1 accident rate, and that is based on a recent accident that
2 they had, a lost time accident, and that is over the goal.
3 That's expected that that will trend down as we move through
4 the year and into next year.
5 CHAIRMAN JACKSON: Actually, what I was asking
6 about is could you give us more specifics for Dresden and
7 Quad Cities as to what were the major issues that played
8 into the existing unit capability factors and unplanned
9 capability loss factor being in the red zone.
10 I mean that may have been spelled out in written
11 documentation, and I'm sure it has, but for the record, I
12 would like you to speak to that.
13 MR. KRAFT: Yeah. If I could, for Quad Cities, we
14 currently have one unit shut down, addressing Appendix R
15 issues, which clearly is going to affect both unplanned
16 capability loss factor and the unit capability factor, as
17 well.
18 Just over the weekend, Dresden took a unit off to
19 repair a material condition item in the drywell that
20 resulted in identified leakage in the drywell that caused us
21 to shut down and go in and look.
22 CHAIRMAN JACKSON: Had you identified that
23 leakage, by the way, the source of it?
24 MR. KRAFT: Yes, we did. It was on an instrument
25 line for a differential pressure gauge. The additional loss

1 of capability also has come from extended outages. For
2 instance, this year, both Dresden and Quad Cities had
3 extended outages from emergent issues that were identified
4 during the outage when we went in to repair other equipment.
5 So there was extent of condition that we
6 identified and then had to continue on with the outage to
7 complete those repairs. Both of those indicators, one kind
8 of reflects the other.
9 So if you don't have a unit on line, it usually
10 shows up as well in unplanned capability loss factor. So
11 they both have a tendency to move together. If capability
12 factor is up, unplanned capability loss factor goes down.
13 Does that answer the question?
14 CHAIRMAN JACKSON: I'll come back.
15 MR. KRAFT: Okay. What this chart tell us is that
16 we are succeeding in bringing Quad Cities and Dresden into
17 the mainstream of industry performance while maintaining
18 Byron and Braidwood at good levels. This is not to say
19 there are not problems and challenges -- we'll discuss a
20 number of those during our presentation -- but we believe
21 there is a pattern of general improvement. Next slide,
22 please,
23 Next, I would like to discuss performance results
24 site by site. For each unit, I will discuss several areas
25 that are particularly important and that have challenged us

1 in the past.

2 These will include, first, our ability to keep

3 pace with industry standards, safe operations -- this is our

4 primary focus and one that leads to improvement in other

5 areas; maintenance and engineering -- these will be

6 discussed together because they are closely related to plant

7 material condition and the ability to get work done;

8 corrective action; timely and effective problem

9 identification and corrective action that address root cause

10 are key to preventing cyclic performance.

11 I'll provide a fairly detailed discussion on

12 Dresden's performance so you can get a sense of how we

13 analyze issues at each station. Because of our limited

14 time, I will give you more of a summary overview of the

15 performance at the other stations.

16 CHAIRMAN JACKSON: Take your time.

17 MR. KINGSLEY: However, we are prepared to provide

18 additional data and detail as necessary. Next slide,

19 please.

20 Dresden -- material condition improvements made

21 during extended shutdowns in 1995 and 1996 have resulted in

22 an improved level of performance. The Dresden units were on

23 line for over 90 continuous days, the second best ever dual

24 unit run at the station before unit 3 was shut down a few

25 days ago to identify drywell leakage. We expect to start up

1 later this evening with that unit.

2 As noted in the chart that summarized our industry
3 indicators, we expect Dresden to meet five of seven 1997
4 performance targets. We have had automatic scrams and zero
5 safety system actuations.

6 Our industrial safety accident rate has
7 dramatically improved, an indication that human performance
8 is improving. Radiation exposure, a historically
9 significant problem at Dresden, also substantially reduced.

10 Finally, our capability factor is improving.
11 August and September of this year were among the best months
12 for Dresden capability factor in the station's history.
13 Again, we attribute this to improved material condition at
14 the station.

15 In general, Dresden is at or approaching industry
16 median. However, challenges remain. I will discuss several
17 of them, but there is a strong, clear trend towards overall
18 improvement. Next slide, please.

19 On this slide, you can see the progress we've made
20 in reducing collective radiation exposure. Exposure is down
21 nearly 50 percent from levels before 1996, and for 1997, it
22 is expected to be roughly equal to the industry average.
23 This is a result of a series of actions, including the
24 installation of shielding, worker training and procedural
25 changes.

1 There has been a shift in the culture, which is
2 very important. Radiation safety and ALARA practices go
3 hand in hand with personnel and nuclear safety. This is an
4 example of the effectiveness of corrective action taken in
5 response to a major historical problem. Next slide, please.
6 Operations at Dresden have shown continued
7 improvement as reflected in the sustained dual unit run.
8 Burdens on the operator, such as operator workarounds and
9 temporary modifications have been reduced or maintained at
10 acceptable levels. Out of service errors have been reduced
11 from 15 in 1996 to only 2 in 1997, with none since April.
12 WE have reached an all-time low in contaminated
13 floor space, although it is somewhat higher than at peer
14 stations. Control room performance at Dresden, as observed
15 in our own reviews and by outsiders, continues to be strong.
16 We are also focusing on human performance. In
17 July and August, we had several human performance problems
18 that caused us concern. In response, we took extensive
19 action, including crew stand-downs and training on lessons
20 learned to reinforce human performance standards.
21 CHAIRMAN JACKSON: What were some of those human
22 performance problems that you took the stand-down for?
23 MR. KRAFT: Would you put up back-up B-9, please.
24 Basically, we had an SOO leave the control room without a
25 proper turnover. That was also a repeat event. We had a

1 failure to enter an LCO while performing a surveillance on
2 our radiation monitor. And we had an inadvertent start of
3 the unit 2-3 -- it's a shared diesel -- and that was due to
4 an operator knowledge factor. So those events occurred over
5 July and August.
6 CHAIRMAN JACKSON: And what were the issues that
7 were uncovered as a consequence of the stand-down?
8 MR. KRAFT: Well, basically, what we found as we
9 went through there, it was a matter of following procedures,
10 and the first one, we had had a procedure in place that was
11 not adequately followed that resulted in a barrier was down
12 and a person left the control room.
13 Operator knowledge was the issue with the third
14 one, and failure to enter the LCO was just an attention to
15 detail issue with regard to conducting a surveillance. Back
16 to the main slide, please.
17 We also placed very strong emphasis on critical
18 self-assessments by both individuals and groups on their
19 roles in this event. A reduced number of human performance
20 events in September and October suggests that these and
21 earlier actions were effective, but we will continue to
22 focus on this area. Next slide, please.
23 We are seeing signs of stronger maintenance and
24 engineering support to the plant, as reflected in the unit's
25 improved capability factors and low numbers of temporary

1 modifications and operator workarounds.

2 In July 1997, we implemented a new work control

3 process called the 5-Week Schedule Process. Initiated at

4 Braidwood, it essentially does two things. First, it

5 ensures that we systematically plan, coordinate and execute

6 work activities so that work can be done on schedule.

7 Second, it assures the work control process

8 applied to the task, matches to the difficulty, complexity

9 and safety significance of the work. Next slide, please.

10 CHAIRMAN JACKSON: So you mentioned as implemented

11 at Braidwood, so you're implementing it the same way at

12 Dresden, you're saying.

13 MR. KRAFT: Yes, that's correct. It's implemented

14 the same way, with a team that goes from site to site to

15 site. It is implemented currently at three stations. We

16 have one more station to go. There is an assessment period

17 after it's implemented, and the two shut-down stations will

18 implement pieces of it with implementation fully as their

19 restart schedule allows. Next slide, please.

20 Since implementing the 5-week schedule at Dresden

21 in July, we have seen clear improvement in our ability to

22 get work done. The trend you see is continued. The number

23 of non-outage work requests at the end of October is already

24 below the year-end goal of 1,200.

25 This graphic represents non-outage corrective work

1 items. The numbers down the left side here show about 1,200
2 where that goal line is coming down. The solid line is the
3 goal, and then you can see that there has been -- we changed
4 the process, so you see a jump in the process indicator
5 there. Next slide, please.
6 Reductions in rework levels indicate that
7 personnel skills are improving at Dresden. We believe this
8 is a result of training we provided in the workforce over
9 the past two years. We also believe that the improved
10 scheduling and work processes associated with the 5-week
11 schedule process have helped reduce worker errors.
12 Turning to engineering, I would like to highlight
13 two issues. First, in response to last year's confirmatory
14 action letter, we have continued our design-basis
15 reconstitution efforts to ensure that our design-basis,
16 design and licensing documents and the physical plant are
17 all consistent.
18 Second, we created an engineering assurance group
19 -- we call it the EAG -- to ensure the quality of
20 engineering products. Dresden was the pilot for the EAG
21 that we have since established at all sites. It had some
22 problems early on, but is now generally functioning well.
23 CHAIRMAN JACKSON: To whom does that group report?
24 MR. KRAFT: That group reports to the site
25 engineering manager, but provides feedback to the site vice

1 president, as well. They have some indicators that they
2 measure the quality of each one of the given products.
3 CHAIRMAN JACKSON: What level of authority or
4 control over engineering activities does that group have?
5 MR. KRAFT: They're an oversight body only.
6 CHAIRMAN JACKSON: So what happens to their
7 findings or recommendations?
8 MR. KRAFT: Their findings are acted upon. I ;can
9 tell you, specifically at Quad Cities. as site vice
10 president, I received those reports and required my site
11 engineering manager to make response to those so that it was
12 like an audit finding or whatever. So he was required to
13 show me what action he took as a result of that feedback.
14 They also provide coaching and mentoring to the
15 individual producers of the product. So if we have an
16 engineer and a supervisor who have produced, say, a 5059,
17 and it doesn't meet the requirements, the engineering
18 assurance group would then meet with those two individuals
19 who had approved that product, developed it and approved it,
20 and they would provide a series of "Here's how it ought to
21 be done" kind of thing and go down through and indicate what
22 was wrong so that you have a corrective iteration there.
23 Next slide, please.
24 In the corrective action area, Dresden has
25 maintained one of the highest levels of problem

1 identification form generation in our nuclear program.
2 Despite the high number of issues being identified, the
3 corrective action backlog has been maintained at average
4 levels compared to other ComEd stations, with few overdue
5 items, none in the past five months.
6 Corrective action effectiveness also is evident in
7 the low number of repeat events, just one in the last five
8 months.
9 CHAIRMAN JACKSON: Do you prioritize that backlog
10 in terms of safety significance?
11 MR. KRAFT: Yes, we do. Those are screened at a
12 -- the name of it is Events Screening Committee. Other
13 sites may call it a different name, but there is a screening
14 committee that reviews each one, prioritizes it. They
15 determine whether or not there's an operability evaluation,
16 for instance, that's needed.
17 On the back end, there is a corrective action
18 review group that will look back to make sure that the
19 closure is good on the back end of it so that the problem
20 has actually been addressed and answered.
21 CHAIRMAN JACKSON: Do you assign a timeline for
22 the resolution that's linked to that safety ranking?
23 MR. KRAFT: There is a timeline in the process.
24 Depending upon the significance of the event, there may be
25 an operability screen that's required in 24 hours, 72 hours.

1 If there are any extensions on either one of
2 those, those have to be approved by the plant senior
3 management and then there is a 30-day requirement to answer
4 it, and those extensions, as well, have to be approved by
5 the senior managers. Next slide, please.
6 Review of corrective action is pivotal to the
7 turnaround we have achieved at Dresden. Beyond Dresden, we
8 have taken steps to ensure corrective action receives the
9 same level of focus at all of our sites.
10 As committed to in our 50.54(f) response in May,
11 we put in place our group-wide standardized corrective
12 action process developed by the corrective action peer
13 group. This was a major challenge, but that process is now
14 in place at all of our sites.
15 As part of this process, we measure more than a
16 dozen performance indicators that provide us with data both
17 on how well the corrective process is working and whether
18 corrective actions are effective.
19 For example, we measure process indicators such as
20 corrective action backlog, overdue items, days to complete
21 corrective actions. In terms of effectiveness, we measure
22 the percentage of problems which we self-identify, root
23 cause report approval rate, and repeat events.
24 The process also includes mechanisms for follow-up
25 and evaluation of the effectiveness of corrective actions in

1 response to significant conditions adverse to quality.

2 This slide shows the Dresden data on repeat

3 events. The improved trend confirms the effectiveness of

4 corrective action improvements. Corrective action is

5 important within the Nuclear Generation Group, and for this

6 reason, I'll talk more broadly.

7 We have similar indicators at each of our sites.

8 Each month, our corrective action department with the

9 nuclear oversight performs an analysis of the data to

10 provide an overview of corrective action performance at each

11 site and to identify areas for improvement. This is a new

12 process, and the data are limited, but it is beginning to

13 give us some feedback regarding the process.

14 In general, our corrective action program appears

15 strongest at Byron, Braidwood, and Dresden. Though not as

16 strong, improvement is also being shown at LaSalle and Quad

17 Cities. Zion appears weaker, though there are some signs of

18 improvement. Next slide, please.

19 Overall, Dresden has sustained an improved level

20 of performance and maintained dual unit operations. WE will

21 continue to keep a close watch on human performance. We

22 have improved performance in maintenance and engineering.

23 In particular, we are seeing the fruits of improved material

24 condition and are demonstrating an ability to get work done.

25 Dresden has demonstrated the ability to identify

1 and correct problems, as shown not only by indicators, but
2 also by success in addressing some historical problem area,
3 including radiation exposure levels, material condition and
4 out of service errors. Next slide, please.
5 I would like to move on to Quad Cities. As
6 previously mentioned, I will keep my remarks on the
7 remaining BWRs brief. Our overall view of Quad Cities's
8 performance is that Quad Cities's performance leveled off in
9 late spring, largely due to problems in engineering. In a
10 moment, I'll discuss the reasons for this and some of the
11 steps we are taking to regain momentum.
12 First, let's begin with unit status. Unit 1 is
13 operating at full power and has been on line for 18 days.
14 Unit 2 is shut down, and addressing issues associated with
15 safe shutdown procedures. Prior to this shutdown, both
16 units had been in continuous operation for 96 days.
17 Overall, Quad Cities's performance is generally
18 aligning with industry norms or median. It is projected to
19 meet four of seven performance targets for 1997 and is
20 closing the gap on the others. I'll note in particular that
21 collective radiation exposure has improved from previous
22 years, even though it has not met our performance target.
23 We talked of that earlier.
24 In addition, Quad Cities has significantly reduced
25 its industrial safety accident rate with only one lost time

1 accident in the past year.

2 Operations performance is generally improved at

3 the station, as reflected in good safety system performance,

4 the low number of safety system actuations, reduced human

5 error LERs and reduced number of operator burdens and

6 distractions, as reflected by lower numbers of operators

7 workarounds, temporary modifications, caution cards and

8 control room work items.

9 We have had some problems in ensuring that

10 surveillances support the requirements of the upgraded

11 technical specifications, and, as a result, we have missed

12 some surveillances. A multidisciplinary team is

13 investigating this problem and will define a comprehensive

14 set of responsive actions. Next slide, please.

15 CHAIRMAN JACKSON: Before you go to the next

16 slide, you mentioned, with unit 2 shut down, there were

17 issues with respect to safe shutdown procedures? What do yo

18 mean by that?

19 MR. KRAFT: Backup slide B-17, please. What we

20 found is, early in the year, we had a requirement that

21 caused us to generate and submit the IPEEE -- the

22 independent evaluation for external events. As a result of

23 that, that risk came out to be significantly higher than we

24 thought it would or should be.

25 AS we looked at that, we identified that there

1 were some issues with our safe shutdown procedures as part
2 of our Appendix R implementation. We ultimately found that
3 there were some commitments that we had made as part of the
4 implementation that were not fully implemented. In other
5 words, we had not followed up on them and, in fact, had not
6 implemented them.
7 There were also some differences between the
8 Appendix R procedures and the actual safe shutdown
9 procedures. Quad Cities relies on opposite unit equipment
10 as part of its safe shutdown practices, and it requires a
11 great deal of operator actions to bring a unit to safe
12 shutdown in a design-basis fire.
13 So those are the types of activities we found
14 there. I would call them old issues, if you will, but
15 nonetheless, they're very significant to us, as I'm sure
16 they're significant to you. We continue to work through
17 those, and having the one unit shutdown is a conservative
18 approach that greatly reduces the risk from the Appendix R
19 fire, the design-basis fire.
20 CHAIRMAN JACKSON: Since you brought up Appendix R
21 issues, you've had recent problems at Byron and Braidwood,
22 as well as Quad Cities. How have you assured yourself that
23 fire protection is not a corporate weakness and that there
24 aren't other issues lurking at your other facilities?
25 What have you done to gain that -- you can either

1 speak in the context of the BWRs or -- but I'm interested in
2 a broader-based answer.
3 MR. KRAFT: There's actually two pieces to this
4 thing. First of all, the issues that were found at Quad
5 Cities, we want to move those to the other sites to ensure
6 that we don't have the same issues there. So that's done
7 through the corrective action process.
8 But secondly, in engineering on a corporate level,
9 we have a periodic review of programs in the system of which
10 Appendix R would be one of those. Those are done on a
11 periodic basis so that, as we learn more about the programs
12 and we have industry knowledge, we continue to audit those
13 and overview them, and honestly, we didn't find this.
14 Now, there's a good thing here, because I think
15 what this really represents, from my perspective, is there's
16 a change in the culture in engineering that has them asking
17 very hard questions when they find something. So if they
18 have a loose string here, as this particular one showed us,
19 they're very aggressive at asking the penetrating questions
20 and getting to the bottom of it.
21 I can personally tell you, this was a difficult
22 one for us to get through and get our arms around. As we
23 continued to ask questions, to say, what's next? Why is
24 that? What's next? And that's not the type of culture we
25 had in our organization just a short time ago, as short a

1 time as three years ago.

2 CHAIRMAN JACKSON: This program that has this

3 review in it, how long has it been in existence?

4 MR. KRAFT: I guess what I would do here, I would

5 ask John Hosmer to come up and talk a little bit about that,

6 because he's our chief engineer, and he can give you some

7 background on that, I think.

8 MR. HOSMER: I'm John Hosmer. I'm vice president

9 of engineering. About three years ago, when I came to

10 ComEd, we put in place -- every year we pick six programs,

11 and my chiefs or senior technical leaders go out and audit.

12 Appendix R is on that we've done twice.

13 What we've seen is differences in plants. We

14 didn't find the issue at Quad Cities, which is a 1988 issue,

15 but we continue to look at those -- EQ, Appendix R, erosion,

16 corrosion, ISI, IST. We take the results and put them in

17 the corrective action program. We write PIPs and we follow

18 up on them. It's a continuing process on programs.

19 CHAIRMAN JACKSON: And that's how you uncovered

20 this particular problem, particularly vis-a-vis the 1988 --

21 MR. HOSMER: It was uncovered at Quad Cities by

22 the Quad Cities engineers. Asking hard questions is part of

23 the IPEEE review.

24 CHAIRMAN JACKSON: So how do you respond to the

25 issue of whether there's an overall weakness in this area?

1 MR. HOSMER: I don't see an overall weakness.
2 However, both Gene and Ed have come to me and asked me to
3 look at the overall structure of how we manage Appendix R.
4 For example, at LaSalle, all of the Appendix R people --
5 fire marshals, training, and engineers -- report to one
6 accountable person.
7 So that's what we need to look at, the
8 improvements that give us more accountability and authority
9 in Appendix R. I don't see any broad issue. I see mainly
10 the issue at Quad as shown by the IPEEE. But I do see some
11 opportunities to change the organizational focus of
12 Appendix R.
13 CHAIRMAN JACKSON: Are there any commonalities in
14 terms of what you've found in terms of fire protection
15 issues with Byron, Braidwood, and now Quad Cities?
16 MR. HOSMER: I see a couple of things. We have
17 some historical issues which I think are typical -- designs
18 done many years ago on cable separation where the attention
19 to detail wasn't there.
20 The main thing I've seen at ComEd is a very high
21 fire risk at Quad, the reliance on cross systems and 13 safe
22 shutdown tasks. For example, at Dresden we do not have that
23 complicated environment. We have a much simpler safe
24 shutdown path.
25 So I really do believe Quad is our error, and

1 we're dealing with that.

2 CHAIRMAN JACKSON: Okay.

3 MR. KRAFT: Slide 20, please. This slide shows

4 operator workaround workdown curve for Quad Cities. You can

5 see the progress we've made in reducing workarounds and how

6 we use the variance process. In June and July, Quad Cities

7 got above the workdown curve. In response, we heightened

8 the level of management attention.

9 The effect of this action can be seen in August

10 and September results which show performance is back on

11 track. Next slide, please.

12 CHAIRMAN JACKSON: Before you go --

13 MR. KRAFT: Yes.

14 CHAIRMAN JACKSON: What kind of generation rates

15 do you have in terms of identification of potential or

16 actual operator workarounds? And then, what do your workoff

17 rates look like if you fold that in?

18 MR. KRAFT: That's a good question. My

19 recollection here is that, in Quad Cities specifically, that

20 we're talking about a through-put of somewhere in the 75

21 range for the year.

22 Now, some of these have been very significant. I

23 can tell you, one was that the feedwater control system had

24 been operated in single element as opposed to three element

25 control for a long period of time. So these can be

1 relatively significant.

2 They can also be minor in that they could be a

3 recorder, so there's a wide range here. What we're

4 interested mostly in is that we look at this process, and it

5 does address operator workarounds.

6 We track the oldest one, for instance, and these

7 represent the ones that require plant outage, as well as

8 things you could work on line, and some of the more

9 difficult ones would be ones that you would have to take

10 care of with the unit off.

11 So we plan and schedule those, and they take

12 engineering resources, as well, and drive those things down.

13 So I think the important thing is having a process that will

14 take an identified item and work it off so the operator

15 feels, "All I've got to do is identify it and it gets done."

16 So I'm going to tell you, at Quad Cities, that

17 number is in the 60 to 70 range for so far this year. Next

18 slide, please.

19 Quad Cities is facing some major engineering

20 challenges. These include the maintenance rule

21 implementation, fire protection problems, and design-basis

22 knowledge. We have applied additional resources and are

23 taking actions to resolve these issues.

24 We are reviewing all safety systems to ensure

25 proper classification of systems under the maintenance rule

1 and implementation of necessary corrective actions. WE have
2 established teams to review the safe shutdown procedures for
3 compliance with Appendix R requirements and to complete any
4 safe shutdown system additions and modifications.
5 We also have placed greater management attention
6 on resolving fire protection impairments. To improve
7 knowledge and availability of design-basis information, we
8 are implementing a design-basis initiative similar to that
9 at Dresden. We have also brought in industry experts in
10 each of these areas to support us in our efforts.
11 We recognize the significance of these items and
12 will remain focused on them in the coming months. Our
13 efforts will be bolstered by the strong investment we are
14 making in engineering training, including lessons learned
15 training based on previous engineering problems, training on
16 the modification process, technical skills training, and
17 training on specific technical topics and management skills
18 training. We are evaluating the effectiveness of these
19 initiatives as we go forward.
20 Despite the challenges, there have been some
21 engineering accomplishments at Quad Cities. Both the
22 reduction in operator distractions and the general
23 improvement in safety system performance indicate progress
24 in some aspects of engineering support.
25 CHAIRMAN JACKSON: Now, what measures reduced

1 operator distractions?

2 MR. KRAFT: "Operator distractions" is a term that

3 our operations peer group uses. It covers operator

4 workarounds, temporary modifications, caution cards that

5 have been in the control room for an extended period of

6 time, and other control room workarounds.

7 So there's four or five items, and they look at

8 that total number of items to see what is the aggregate

9 effect of this on the operator if he were to perform in an

10 upset condition, EOP -- emergency operation procedure type

11 thing, or just an off-normal kind of a condition.

12 At the sites, there's a periodic review by -- I'll

13 say it's a collegial body in most cases that review the

14 aggregate of those items to ensure that there's not some

15 adverse effect that they represent in total, as opposed to

16 just looking at them individually.

17 CHAIRMAN JACKSON: Do you have some kind of

18 coherent risk assessment approach that allows you to look at

19 this aggregate effect?

20 MR. KRAFT: We have a PRA kind of a model that

21 we're able to look at and determine what are the most

22 risk-significant items.

23 But again, when you look at these things in total

24 and you look at all the beans together -- you know, what

25 equipments are they affecting and when are those equipments

1 brought to bear in either an upset condition or emergency
2 operating procedure? Because, for instance, they could be
3 on secondary systems or tertiary systems that you use for
4 core make-up and not necessarily on the safety systems, but
5 on the lower levels.
6 CHAIRMAN JACKSON: It has to be what a risk
7 assessment methodology allows you to get at.
8 MR. KRAFT: Exactly. That's what we do. Exactly.
9 CHAIRMAN JACKSON: And you use PRA to do that.
10 MR. KRAFT: Yes. That's correct. Next slide,
11 please.
12 Let me walk this one around here before we get
13 started here. First of all, this is safety system
14 performance, and this shows the years 1994, '95, and
15 '96-'97, and, basically, .02, which is 2 percent
16 unavailability as the top mark.
17 The industry goal is a little bit above that for
18 these systems that we have represented here. The industry
19 performance is about the middle of the curve or 1 percent --
20 .01 -- and you can see that Quad Cities has moved
21 performance over the years to be just about where the
22 industry is.
23 While we have not yet achieved the levels of
24 performance seen, for example, at Byron and Braidwood, we
25 are consistent in our year-to-year improvement. Next slide,

1 please.

2 IN addition, we see generally improved performance

3 in maintenance. Reduced backlogs of both non-outage

4 corrective work and operator distractions show that work is

5 getting done. A relatively low rework rate indicates that

6 work is of good quality.

7 I would like to share a recent example involving

8 good cooperation and communication between engineering

9 maintenance and operation. We had a failed fuel pin in unit

10 2, and we made a conservative decision to shut down to

11 address it. Basically, it was a refueling outage for one

12 bundle.

13 This demonstrated our ability to plan, coordinate

14 and execute a complex and demanding task on schedule. We

15 completed that task in 17 days, which was our schedule.

16 Corrective actions also are improved at Quad

17 Cities, although with some notable exceptions, such as a

18 failure to identify the maintenance rule issues. In

19 general, we have improved problem identification and reduced

20 overdue corrective action items. We had none for several

21 months and then had four in September.

22 The Quad Cities site vice president has personally

23 taken steps with his managers to ensure the resolution of

24 overdue items. Quad Cities has also focused on repeat

25 events, experiencing high numbers early in the year, but

1 reducing them to no more than one per month. Next slide,
2 please.
3 CHAIRMAN JACKSON: Was there a connection between
4 the reduced rework, the exceptions where you talk about the
5 corrective actions, and the repeat events? Was there any
6 linkage there?
7 MR. KRAFT: You're asking if there was a
8 connection between reduced rework as in maintenance work and
9 -- CHAIRMAN JACKSON: Well, what has happened, you
10 know, I've heard -- not here, but licensees in the past talk
11 about improvements in maintenance.
12 MR. KRAFT: Mm-hmm.
13 CHAIRMAN JACKSON: And they've even talked about
14 not having to rework issues. But they nonetheless have
15 repeat events. The question is whether repeat events are
16 not, in fact, a measure of the quality of your maintenance
17 and/or your corrective action.
18 MR. KRAFT: The repeat events, when we look at
19 those, those are more high-level events. They would be
20 problems that we have done a formal root cause investigation
21 for, either with a single or multidisciplinary team. We go
22 back for the previous two years to see if that event has
23 befallen us in the past.
24 In the case of rework, those are a little bit
25 lower level problems. We actually bend those and review

1 those to see if there's any kind of trends. Now, if there
2 was a significant turned out of the rework, that would
3 result in a root cause, as well as significant corrective
4 action and a root cause.
5 So you would have to hit the trend twice to have a
6 repeat event out of something like rework. I would also tel
7 you that we have been counting rework for about a year and a
8 half or two years, in some cases.
9 As with many things, that's difficult to recover
10 the data, so it's hard for us to tell what the rework was,
11 for instance, three years ago. We do know what it has been
12 for this year pretty good, because we've all been counting
13 it the same. But it's difficult to go back on that kind of
14 a repeat and see if there's an issue there.
15 CHAIRMAN JACKSON: I guess what I'm really trying
16 to get at is kind of a consistency of definition as you walk
17 through the categories. I've had licensees tell me how they
18 have an effective corrective action program, but they have
19 repeat events. Or they tell me that they've improved the
20 maintenance program, but they have repeat events. So it's a
21 real question of consistency of definition.
22 MR. KRAFT: Mm-hmm.
23 CHAIRMAN JACKSON: Because in the end, it's the
24 performance that you're interested in.
25 MR. KRAFT: That's correct.

1 CHAIRMAN JACKSON: And so, the issue is what does
2 repeat events mean, and what does that mean in the context
3 of corrective actions and maintenance issues.
4 MR. KINGSLEY: May I ask a question just to
5 clarify this?
6 CHAIRMAN JACKSON: Sure.
7 MR. KINGSLEY: Are any of the repeat events, Ed,
8 tied into repeat maintenance events where, say, the same
9 valve malfunctions, or the same controller doesn't work, and
10 that has caused repeat events?
11 MR. KRAFT: Again, by the definition, the repeat
12 event would be counted if it fell in the significance
13 category. If it was an item that went into the problem
14 identification process as a significant condition adverse to
15 quality, that would trigger it and tell us that we would
16 have repeat events. So you could have a weld flaw, several
17 of those, and you wouldn't see a repeat event until you
18 said, "There's a trend here. I'll make it significant," and
19 then it would show up.
20 MR. KINGSLEY: We'll follow up on this. I
21 understand.
22 CHAIRMAN JACKSON: Thank you very much.
23 MR. KINGSLEY: We'll look whether it's in
24 operations or it's in the maintenance area.
25 CHAIRMAN JACKSON: Thank you very much.

1 MR. KRAFT: Next slide, please. Overall, Quad
2 Cities's performance has improved, but improvement has
3 leveled off, mostly due to problems in the engineering area.
4 Right now, we are very focused on the situation and are
5 implementing actions to address it. Next slide, please.
6 We'll move on to LaSalle. Both LaSalle units are
7 shut down and in recovery. In April 1997, the staff issued
8 a supplementary confirmatory action letter documenting our
9 agreement to develop a restart plan to resolve material
10 condition, human performance, corrective action, engineering
11 support, and design-basis issues at the station.
12 We identified these issues during our independent
13 safety assessment in late 1996. We are implementing the
14 LaSalle restart that was docketed earlier this year. We are
15 currently looking at a spring restart date for LaSalle.
16 Key among our improvement actions is resolution of
17 material condition, engineering, and design-related issues
18 identified through extensive system functional performance
19 reviews.
20 These reviews, which are now complete, were
21 performed to establish confidence that systems important to
22 safe and reliable operations will perform consistent with
23 the design basis. The 42 systems reviewed were selected on
24 a basis of risk significance, potential for challenging
25 plant reliability and material condition.

1 The identification phase of these reviews was
2 completed over a period of approximately seven months with
3 an expenditure of tens of thousands of review and evaluation
4 hours. It identified about 600 items to be resolved prior
5 to restart.
6 As we resolve the identified issues, we are
7 putting margins back into the plan. Our approach has not
8 been to analyze identified problems away, but to go out in
9 the plant and fix them. We will be providing the staff with
10 more information regarding these issues and their resolution
11 in a supplemental LaSalle response to the staff's October
12 1996 50.54(f) request for design-basis information.
13 Another key restart initiative at LaSalle is the
14 completion of high intensity training for the operators.
15 Although the number of human performance LERs is about
16 average, we had a high number of out of service errors early
17 in the year.
18 As a result of the high intensity training and
19 other actions, we have reduced the high level of out of
20 service errors since July. We are continuing to monitor the
21 effectiveness of these corrective actions.
22 Another positive human performance trend is that
23 we have not had a lost time accident at LaSalle in the last
24 two years. In May, LaSalle implemented the new corrective
25 action program, and it is beginning to yield improvement.

1 In recent months, site personnel have identified more
2 problems, and the number of repeat events has been reduced.
3 We remain focused on the effective of our
4 corrective action processes to ensure sustained improvement.
5 Next slide, please.
6 CHAIRMAN JACKSON: Before you go, let me just walk
7 you through a couple of questions here. I notice that
8 LaSalle is struggling with engineering request workdown.
9 Can you say why that is and what is being implemented to
10 address that?
11 MR. KRAFT: The engineering request backlog at
12 LaSalle -- first of all, what they have done there is they
13 have segregated the backlog into priorities. We have A, B,
14 C. Those basically tell you which needs to be done first,
15 second, and third.
16 In addition to that, the engineering backlog, we
17 are focused on unit 1 and do not, basically, work off items
18 on unit 2 that are not significant to the conditions of that
19 particular unit.
20 So there will be, if you split the backlog out --
21 and we typically don't do that. If you look at the backlog
22 for unit 1, it might show different indications than the
23 total backlog, because we're only working right now
24 primarily on unit 1.
25 We have applied resources to address the

1 engineering requests. We review them primarily on a daily
2 basis as they're generated to ensure that they're properly
3 categorized and that they get addressed with the right
4 priority, either if they're restart issues or if they're
5 items that affect the operation of the units in their
6 current condition.
7 CHAIRMAN JACKSON: Let me ask you another
8 question. I notice that there are a high number of TMODs at
9 LaSalle.
10 MR. KRAFT: That's correct.
11 CHAIRMAN JACKSON: Can you elaborate those? And
12 programmatically, are they identified or considered to be
13 operator workarounds?
14 MR. KRAFT: At LaSalle currently, there are a
15 number of -- first of all, there were a number of TMODs that
16 are in place that require some significant engineering work
17 to correct them. So that's why the number, as they were
18 identified, they go out and they are part of the restart to
19 get it completed.
20 There's another situation at LaSalle with regard
21 to heating the station. The station requires or has been
22 designed to have a unit on line to actually heat the
23 buildings.
24 What we have to do is install temporary
25 modifications for the winter. In fact, when you look at the

1 number, you see that we open up in the fall, because we have
2 to install that equipment to, in fact, heat the plant. So
3 there's two reasons. The subset for the heating -- I won't
4 tell you that that's the whole picture. There's only 10 or
5 15 of those. But it does make the number go up.
6 As we get through with the design initiatives that
7 we're doing -- we have about 300 design packages that will
8 be installed during this preparation for restart, if you
9 will. About 100 of those are already installed; 200 are
10 engineered, and we have about another 100 to go from
11 engineering, and with the subsequent installation, we expect
12 to see those numbers at the goal before we restart.
13 CHAIRMAN JACKSON: I notice that LaSalle and
14 Dresden had examples of a single month of high operator work
15 around documentation, and then you had months of relative
16 inactivity. Is management having to encourage the
17 identification of workarounds.
18 MR. KINGSLEY: We interview at the senior
19 leadership council meeting on a monthly basis, we go through
20 each of these indicators. One of the things we do look at
21 is the number that are being generated. I mean you think
22 workdown occurred if you don't generate any.
23 CHAIRMAN JACKSON: That's right.
24 MR. KINGSLEY: So we do on occasion encourage our
25 operators to identify workarounds. Yes, ma'am.

1 CHAIRMAN JACKSON: Okay.

2 MR. KRAFT: The main indicator, also, although it
3 shows the graphic on the top, when you look at the table on
4 the bottom, it shows the goes-ins and goes-outs so that we
5 know how many are generated and how many are taken out, and
6 we do challenge each other with that.

7 Again, it's a matter of peeling the onion. As you
8 get off the top layer, you start going down, and you begin
9 to realize there are yet more operator workarounds under
10 that.

11 CHAIRMAN JACKSON: I have a request to make of
12 you. We've of course pushed you to produce various
13 performance indicators, and I think it's important, as these
14 questions about LaSalle have shown, that if we are looking
15 at things like engineering request workdown, and there's a
16 differential or significant differential treatment in terms
17 of how that's being addressed with one unit versus another,
18 we ought to see that.

19 Secondly, it's important if we're looking at these
20 different things, whether you're talking engineering
21 requests or TMODs, that there's some sense of what the
22 categorization is in terms of risk and safety significance
23 or whether it's in a restart category so that we have some
24 sense of your own look at and ability to address things in a
25 risk-informed manner and how that plays into what has been

1 identified, what you've identified as restart issues.

2 MR. KRAFT: Okay.

3 MR. KINGSLEY: In other words, what does it mean?

4 What is this number 60, or what is this number 80? Or 300?

5 CHAIRMAN JACKSON: Right. If it's 60 trivias,

6 then we ought to know that.

7 MR. KINGSLEY: Right.

8 CHAIRMAN JACKSON: If it's 60 significant ones, we

9 ought to know that.

10 MR. KINGSLEY: Mm-hmm.

11 MR. KRAFT: In May, LaSalle implemented a new

12 corrective action program -- I've already talked about that.

13 Next slide.

14 Overall, we have completed many of the key actions

15 needed to support restart of LaSalle Station. However, some

16 significant challenges remain. We must reduce our backlogs

17 and resolve engineering and design-basis issues. Continued

18 effort is underway to improve human performance.

19 As noted by Mr. O'Connor, we will not start

20 LaSalle until we are confident that it will operate safely

21 and reliably. Currently, although we have identified the

22 tasks we must complete prior to restart, we are still

23 developing the details of how we will close those actions

24 out and complete our readiness reviews.

25 We are also developing and will be conducting a

1 formal corporate readiness review to ensure that our
2 readiness decision is sound. This concludes my discussion
3 of --
4 CHAIRMAN JACKSON: What does that entail?
5 MR. KRAFT: At the site, it actually entails a
6 couple of pieces. Just in a brief overview, at the site,
7 there is ia system-by-system review to determine the
8 readiness, and that's reviewed at some senior level at the
9 station. Basically, the line managers have to indicate that
10 they are ready for restart, and then there's the
11 department-by-department view to ensure that the
12 organization is ready for restart.
13 Along with that, there's a corporate oversight
14 that comes in and looks at two things. They come in and
15 they look at our preparation for restart to see what we have
16 done, and then they, as well, assess our ability.
17 And then, once we go through that, we make a
18 presentation to the NOC or the board to let them know what
19 we have done and have them give us a look or a wave to say
20 that we're okay, and then we proceed through the line.
21 Gene, I don't know if I've covered all that or
22 not.
23 MR. STANLEY: Back-up slide 41, please. Really,
24 the corporate oversight are pretty much the same for Zion
25 and LaSalle Station. They include a review of the

1 categories relative to material condition and recovery plan
2 operational readiness.
3 There is an independent nuclear oversight which we
4 introduced Lon Waldinger, his organization out of the
5 corporate headquarters, that does an assessment for the
6 restart plan. This is a senior management evaluation and
7 restart decision which will be made by Oliver and the
8 particular either PWR or BWR vice president, and then the
9 unit will restart after we make a presentation to the
10 Nuclear Oversight Committee and the board of directors.
11 CHAIRMAN JACKSON: Okay. Thanks.
12 MR. STANLEY: Thank you, Ed. I'm Gene Stanley,
13 responsible for the PWRs. I will describe the performance
14 of Zion, Braidwood and Byron stations. Next slide, please.
15 Zion is shut down and their activities are
16 governed by recovery plan which focuses on unit 2 startup.
17 To date, we have completed approximately 85 percent of our
18 restart plan items, but that statistic is not the whole
19 picture, particularly when many of our issues deal with
20 human performance and the work environment.
21 We have been providing detailed updates to the NRC
22 staff on our progress in implementing the recovery plan, so
23 today I will stick to the high points.
24 Like LaSalle, Zion is under a confirmatory action
25 letter. The primary issues at Zion relate to human

1 performance and teamwork, so the recovery effort focuses on
2 operations performance, engineering and technical support,
3 corrective action, restart readiness, and the working
4 environment, including our safety culture.
5 Today, I would like to focus on the two areas I
6 think are now of most significance -- operations performance
7 and the working environment. I will also describe the
8 readiness reviews and a demonstration period we plan to
9 complete before restart.
10 In operations, the real need was to bring our
11 operators up to a higher standard of performance than was
12 demonstrated by events early in the year. We have had two
13 goals.
14 First, to upgrade the professionalism with which
15 operations are conducted in terms of communications,
16 operator practices, and panel monitoring. Second, to
17 improve the technical knowledge level of our operators on
18 reactivity changes and other specific information about the
19 reactor and how it needs to be operated.
20 We have done several things in each area. As you
21 know, we conducted a series of reviews to ensure that the
22 personnel who operate the plant have the right professional
23 attitude and focus on safe plant operations.
24 We had to remove some people from the ranks of
25 operators and have replaced them with senior reactor

1 operators from elsewhere in the Zion organization. These
2 were very controversial steps, but ones we felt we had to
3 take to have strong confidence in our operator corps.
4 We have implemented new operating standards based
5 upon those which have proven successful for Dresden and Quad
6 Cities. We have conducted observations of control room
7 performance and have provided additional management coverage
8 to ensure that those standards are implemented. We are
9 providing feedback to the operators on the results of these
10 evaluations.
11 Our operators have participated in extensive
12 training, both in the classroom and in the simulator, to
13 ensure they have the knowledge and skills to support a safe,
14 reliable restart.
15 Overall, we believe there has been substantial
16 progress, though I cannot tell you that operations
17 performance is now strong. We will be conducting extensive
18 evaluations, including several demonstration evolutions,
19 prior to restart.
20 Our operations human performance indicators show
21 improvement, and out of service errors are low. We have had
22 four human performance LERs this year, but none in the last
23 four months.
24 I would now like to discuss the working
25 environment, which has been our biggest challenge. This has

1 two components. First, cooperation and working together as
2 a time, and second, safety culture and how our employees
3 feel about raising safety concerns.
4 With respect to teamwork, Mr. O'Connor already
5 described the overall labor agreement reached with IBEW
6 Local 15. We also have reached agreement on a number of
7 Zion-specific issues. But beyond these specific agreements,
8 we are working hard to engage management and bargaining unit
9 people to come together and to work as a team to solve
10 problems and improve performance.
11 We have seen some substantial results on this
12 effort. Historically, we have only been able to complete
13 between 200 and 250 work activities per week at Zion
14 Station. To test the success for the teamwork initiative,
15 we set a target of completing 350 activities per week.
16 I am pleased to report that, owing to real
17 dialogue and cooperation among all the departments and among
18 bargaining unit and management people, we have been
19 consistently completing between 370 and 418 activities per
20 week. This is strong evidence that we have made real
21 progress on teamwork in the past two months.
22 With respect to safety culture, the challenge has
23 arisen in part as a result of the steps we took to assure
24 the quality of our operators, as well as other changes to
25 instill more accountability for personnel performance at the

1 site.

2 But whatever the causes, we must be sure that our
3 people know enough to raise issues when they see them and
4 are comfortable doing so. They need to know that they can
5 do this without any repercussions. This is a hard issue,
6 because you can talk about it all you want to, but it takes
7 time and a few good experiences to make people really feel
8 comfortable.

9 We've done a lot of work in this area. We've
10 conducted extensive surveys to understand the issues that
11 might cause any reluctance to report safety concerns. We've
12 held all-hands meetings and distributed memoranda to all
13 site personnel to reemphasize management's expectations that
14 employees should report their concerns and that
15 discrimination against those who raise concerns will not be
16 tolerated.

17 We established a quality hotline for people to use
18 to report concerns about quality issues and publicized the
19 existence of this hotline. We have expedited investigations
20 of concerns by retaining additional investigators.

21 These are but a few of the steps we have taken.
22 This is a continuing issue that we are working very hard to
23 resolve. We are engaged in an ongoing effort to evaluate
24 and measure our progress to provide confidence that we have
25 sufficiently addressed this issue prior to restart.

1 Steps we were taking include conduct of our
2 demonstration period in which we will have the opportunity
3 to observe teamwork and cooperation and how people react to
4 problems and concerns.
5 Second, we will be performing another employee
6 survey to give us a measurable indication of whether we have
7 made progress in resolving issues found in our earlier
8 culture surveys. Each department will be self-assessing its
9 restart readiness, and these self-assessments will include
10 review of teamwork and safety culture issues.
11 And, finally, our nuclear oversight organization
12 will be performing an independent review of our safety
13 culture and whether people are raising concerns. We will
14 use the results of all of these activities as input to
15 making the executive management decision on restart. Next
16 slide, please.
17 So, overall, has made progress in implementing a
18 recovery plan that provides the basis for restart. People
19 are working together. Teamwork issues still come up, but
20 there is a common desire to succeed. We have demonstrated
21 an improved ability to get work done.
22 While overall operations performance is not where
23 we want it to be, control room conduct is much better than
24 it was early in the year. Training to improve our operator
25 knowledge level has been completed

1 Our remaining challenges are completion of work
2 need to ensure system readiness for restart; implementation
3 of the improved technical specifications; and, finally,
4 assuring ourselves that the safety culture is where it needs
5 to be, including some measurement of that culture.
6 We are conducting an operations demonstration
7 period prior to restart to test the improvements we have
8 made, which will include several demonstration evolutions to
9 test teamwork and conservative decision-making.
10 We also intend to conduct a formal corporate
11 readiness review before deciding we are ready for restart.
12 We will coordinate all of this with Region III to ensure
13 that the NRC is fully informed and can review all of these
14 activities.
15 We have a schedule which presently calls for a
16 restart in mid-December. That keeps our organization
17 focused and motivated, but I want to assure that ComEd will
18 not start up until we are fully ready.
19 Also, as Mc. O'Connor noted, I encourage each of
20 you to come and visit the site and form your own
21 impressions.
22 CHAIRMAN JACKSON: Let me ask you this question.
23 In the last six months, how many managers have you
24 transferred from operating units to LaSalle land Zion to
25 assist in restart?

1 MR. STANLEY: To my knowledge, from LaSalle and
2 Zion, one.
3 CHAIRMAN JACKSON: To them.
4 MR. O'CONNOR: No, to them.
5 MR. STANLEY: Oh, to them. From Zion?
6 MR. KINGSLEY: No, from other sites.
7 CHAIRMAN JACKSON: From the other sites.
8 MR. STANLEY: Tim O'Connor from Dresden Station.
9 MR. O'CONNOR: Jack Brontz.
10 CHAIRMAN JACKSON: Well, if you could get that
11 information.
12 MR. STANLEY: Jack Brontz from corporate.
13 CHAIRMAN JACKSON: And I'm interested on what the
14 effect is on the operating units in terms of where they've
15 come from.
16 MR. STANLEY: Okay.
17 MR. O'CONNOR: We'll provide that.
18 MR. STANLEY: We'll provide that. Next slide,
19 please.
20 Braidwood, like Dresden, has significantly
21 improved performance. Unit 2 is in a scheduled refueling
22 outage and recovering from that outage. Unit 1 is currently
23 operating at full power in the 162nd day of its run.
24 By industry measures, Braidwood has continued to
25 improve. All seven industry indicators are expected to meet

1 their 1997 performance targets with zero automatic scrams,
2 zero safety system actuation, and a high unit capability
3 factor for '97.
4 We were very pleased to receive the latest NRC
5 SALP report, which assigned Braidwood an improved grade of
6 one in operations and noted improvement in all four
7 functional areas.
8 Let me discuss some of our own views of
9 performance. We have shown general improvement in
10 operations and human performance as a result of a
11 comprehensive human performance initiative begun in mid-96.
12 Since this initiative began, we have achieved a declining
13 number of human performance LERs and reduced our number of
14 out of service errors from 12 in 1996 to 1 to date this
15 year, with none since March.
16 Though I'm pleased with our progress, we do have
17 some remaining human performance challenges in the area of
18 lower-level out of service errors and figuration control and
19 procedural adherence.
20 On the procedural adherence issue, we think the
21 main cause of the problem is the complexity of many of our
22 administrative procedures. We will be putting together a
23 simplified set of these administrative requirements in a
24 convenient booklet that will be easier to use. Next slide,
25 please.

1 CHAIRMAN JACKSON: Before you go --

2 MR. STANLEY: Mm-hmm.

3 CHAIRMAN JACKSON: I note that in giving you the

4 SALP 1, the staff did note the issues with respect to

5 configuration control.

6 MR. STANLEY: Yes.

7 CHAIRMAN JACKSON: And these out of service

8 errors. And yet your own performance indicator wouldn't

9 have suggested an issue or a challenge in that error. Can

10 you kind of -- is it a challenge because it was identified

11 in the SALP, or is it a challenge because you identified it

12 yourself through your own performance assessment?

13 MR. STANLEY: Could I have backup slide B-38,

14 please.

15 CHAIRMAN JACKSON: You guys are pretty well

16 prepared. You knew what I was going to ask.

17 MR. STANLEY: This is Braidwood as part of the

18 operations peer group. This is what we track at the

19 station, and each operating group throughout the six

20 stations tracks the same thing.

21 You can see these are the lower-level out of

22 service events that we have had, one in January, two in

23 March, et cetera. We track each one of these things and try

24 to prevent their reoccurrence. However, What we're talking

25 about in the performance indicator are the higher level.

1 CHAIRMAN JACKSON: Higher level? Mm-hmm.

2 MR. STANLEY: Next slide, please. On this slide,
3 you can see the improvement in human performance licensee
4 event reports that we attribute to the human performance
5 improvement initiative. While we are very pleased with this
6 progress, we do recognize the other human performance issues
7 I mentioned a moment ago. Next slide, please.

8 In maintenance and engineering, Braidwood has
9 continued to experience good performance. On this slide,
10 you can see the impact on the non-outage corrective work
11 request backlog that has been achieved by implementation of
12 the 5-week scheduling process.

13 In fact, the results we were getting led us to
14 make our goals more aggressive. We reduced it from 1,400 to
15 1,000 and believe it will meet this more aggressive goal by
16 year end. This slide indicates 800, and it has subsequently
17 been changed to 1,000 for the year end.

18 We also have had improvement in our ability to
19 complete maintenance and surveillance test activities.
20 However, as I noted previously, we have procedural adherence
21 problems that we are focused on resolving. Next slide,
22 please.

23 CHAIRMAN JACKSON: Now, you said something about
24 the graph showing 800, but it has been -- renormalized? Or
25 it's gone -- the curve gone back up?

1 MR. STANLEY: When we reestablished the new target
2 from 1,400 at year end, we initially submitted a change to
3 go to 800 in error. We have subsequently, in October,
4 changed that to 1,000 by year end, and our intentions are to
5 take it to 800 by mid-year '98. Slide 33, please.
6 Braidwood's engineering performance has also
7 remained good, with good support for the plant, as evidenced
8 by reductions in operator workarounds and reasonable levels
9 of temporary modifications and engineering requests.
10 We have had errors due to inattention to detail in
11 a few cases. In response, we've provided training on
12 self-check and error reduction techniques to the engineering
13 personnel and a follow-up assessment indicates that this has
14 been effective.
15 Corrective action performance has continued to be
16 good. There is strong line management ownership of the
17 corrective action program. Like the other stations,
18 Braidwood is using the new corrective action program.
19 Problem identification forms are being generated
20 at a higher rate, and repeat events remain within the
21 standard. We did have an increase in overdue corrective
22 actions at Braidwood during the third quarter of '97, and
23 the site vice president is holding his people personally
24 accountable to bring those back into line. Next slide,
25 please.

1 Overall, Braidwood's performance remains strong
2 and improving. Plant performance compares well with the
3 industry. The units have run continuously, reflecting
4 strong material condition and operations performance. Human
5 performance and our ability to get work done are improving
6 as a result of the human performance improvement initiative
7 and the 5-week schedule process.
8 Engineering is supporting the plant, and
9 corrective action remains good. We do, however, recognize
10 the challenges we face. Action is underway to reduce
11 procedure compliance problems, lower level of out of service
12 areas, and attention to detailed problems in engineering.
13 Next slide, please.
14 Byron Station. Like Braidwood, Byron has
15 historically been one of our stronger performers and
16 generally remains so. Both units are currently on line.
17 Unit 1 will begin an outage to replace the steam generators
18 this week.
19 Byron continues to compare well with the industry.
20 Six of seven industry indicators are projected to meet their
21 performance targets for '97. WE have had one automatic
22 scram, which occurred on October the 10th, as well as some
23 industrial safety accidents during the summer.
24 Operations performance remains generally strong.
25 We have low numbers of human performance LERs and out of

1 service errors. The percentage of contaminated floor space
2 is low. We have made good progress in reducing operator
3 workarounds, though in September we fell slightly behind our
4 workdown curve.
5 Temporary modifications have increased, and we are
6 applying additional management focus on them. Some increase
7 is expected due to preparation for steam generator
8 replacement. Next slide, please.
9 This slide slows our progress in reducing operator
10 workarounds at Byron. As you can see, we exceeded our
11 workdown curve in September, but I'm pleased to report that,
12 in October, we brought the number back down within the
13 curve. Next slide, please.
14 Maintenance and engineering also generally remain
15 strong. As at Braidwood and Dresden, the impact of the
16 5-week schedule process can be seen in a reduced outage
17 corrective work backlog. Engineering remains heavily
18 focused on the upcoming steam generator replacement outage.
19 There is a relatively low engineering request backlog, and
20 results of reviews by the engineering assurance group at
21 Byron indicates good quality engineering work.
22 Corrective action also remains good. Byron
23 piloted the common corrective active program that is now in
24 place at all six stations. There is a relatively high
25 corrective action backlog, due in part to corrective actions

1 in response to an essential service water problem we had
2 earlier this year. We are working off this backload.
3 There is a low number of repeat events and few
4 overdue corrective actions. Problem resolution continues to
5 be generally effective. Next slide, please.
6 The graph on this slide shows a fairly high
7 corrective action backlog at Byron. This backlog would be
8 of more concern were it not attributable to a large number
9 of corrective actions associated with the ESW problem or if
10 overdue corrective actions or repeat events were increasing.
11 As it is, we understand and are working down this backlog.
12 CHAIRMAN JACKSON: How much of that 200 action
13 item difference is essentially associated with the essential
14 service water?
15 MR. STANLEY: 300 of those corrective actions are
16 from the ESW.
17 CHAIRMAN JACKSON: And if you resource loaded
18 them, what kind of timeline or man-loading would you be
19 talking about for that increase, as opposed to the balance
20 of the 600 or so?
21 MR. KRAFT: That would be hard to say. And the
22 other thing that we would say about the action items, when
23 you put these in, they are to coincide with other
24 activities.
25 For instance, if there was an action item in here

1 to change a preventive maintenance procedure that was going
2 to be done six months down the road, you would put that
3 corrective action out to support that activity in the plan.
4 So again, they look at it from a perspective of
5 supporting the plant. There's risk if that's involved. So
6 they're scheduled out so as to address all those issues.
7 Again, I don't think that it's perhaps appropriate in all
8 cases to do all corrective actions immediately.
9 CHAIRMAN JACKSON: Right. Well, that's what I
10 meant when I was asking you earlier about how you end up
11 categorizing these things, because just to show us the curve
12 doesn't tell us anything if there are all these hidden
13 issues buried underneath the bars.
14 MR. STANLEY: They do go through our -- at some
15 stations, and it gives us this leadway in the procedure. We
16 call it the corrective action review group. That gets
17 prioritization of the corrective actions. Next slide,
18 please.
19 Byron conclusions. While there are some specific
20 issues to address, Byron remains overall a strong performer
21 and compares well with the industry. Operations,
22 maintenance and engineering, and corrective action all
23 remain generally good. Like Braidwood, Byron demonstrates
24 that we can maintain strong performance while working to
25 improve at our other stations.

1 That concludes our review of individual site
2 performance. Mr. O'Connor will now summarize overall
3 Nuclear Generation Group performance and provide closing
4 remarks.
5 MR. O'CONNOR: Thank you very much, Gene. I'll
6 try to make this very brief. You've heard our detailed
7 evaluation of each of our plant sites. I would like to
8 briefly sum up how we view our nuclear program as we step
9 back and take a look at our overall performance.
10 First, we are closely watching performance using
11 many, measurements, and today, at a level of detail that
12 permits us not only to identify problems, but to address
13 them, as well. Since we last briefed you, we have made
14 significant progress in developing the quantitative
15 measurement tools that we are now employing.
16 We believe that these tools, along with the
17 managerial and organizational changes that we've made in
18 concert with our continued commitment to provide the
19 resources for our program, will give us the added momentum
20 that we need in our efforts to further improve our nuclear
21 program.
22 Indeed, compared to our track record of a year or
23 two ago, I believe we are beginning to see evidence that we
24 are making progress in addressing the fundamental cyclic
25 performance concerns that were the focus of the 50.54(f)

1 letter.

2 We are sustaining improved performance at Dresden
3 and Braidwood, while maintaining strong performance at
4 Byron. Very candidly, the recent leveling off of
5 performance at Quad Cities in the area of engineering is of
6 concern to us, but it is perhaps a very good example of
7 where we have detected and are acting to address a
8 potentially negative trend.

9 Second, we've implemented many of the key
10 initiatives that we described to the Commission in April.
11 They are having a positive impact and are helping us address
12 the issue of cyclic performance.

13 Foremost among our accomplishments are our focus
14 on operations and the elimination of operator burdens and
15 distractions, the common corrective action program that is
16 now in place at all six of our sites, and the 5-week work
17 schedule process that you've heard so much about that has
18 already had an impact at Braidwood, Byron and Dresden and is
19 soon slated for implementation at our other three sites.

20 That concludes our presentation, and we would be
21 glad to answer any questions that you might have.

22 CHAIRMAN JACKSON: Commissioner Dicus.

23 COMMISSIONER DICUS: No, I don't have a question.
24 I just simply would like to make a comment. In the
25 relatively short time that I have served on the Commission,

1 I'm aware that you've come forward with a variety of
2 management teams or programs to improve and to a mixed bag
3 of success, generally leading us, again, to have a new
4 management team and to have issues that still are serious
5 and still need to be resolved.
6 I think I can say, certainly, from my perspective
7 -- I think, probably, the Commission's perspective -- what
8 you might call there have been false starts, and I don't
9 think we can tolerate any more false starts. I think we're
10 in a position now that definitely this program needs to
11 work, and we will be looking at the results to show that it
12 is.
13 So I suppose you'll probably be back in six months
14 or so, and I'm hopeful that we will see some very positive
15 trends.
16 MR. O'CONNOR: We appreciate those comments.
17 Thank you, Commissioner.
18 CHAIRMAN JACKSON: Commissioner Diaz.
19 COMMISSIONER DIAZ: No comments.
20 CHAIRMAN JACKSON: Commissioner McGaffigan.
21 COMMISSIONER McGAFFIGAN: No.
22 CHAIRMAN JACKSON: Performance is as performance
23 does.
24 COMMISSIONER DICUS: See, I let her say that.
25 MR. O'CONNOR: Thank you. We understand that what

1 you want is results, and we hope that we can continue to
2 demonstrate those.
3 MR. KINGSLEY: I get the message.
4 CHAIRMAN JACKSON: We'll now hear from the NRC
5 staff. Thank you.
6 We'll just start right in, Mr. Callan.
7 MR. CALLAN: Chairman, we're running late. Just
8 so that the Commission, as well as the observers, aren't too
9 dismayed, the staff presentation is considerably shorter. I
10 think it's on the order of 20 minutes or so. -- without
11 questions, but --
12 CHAIRMAN JACKSON: We can't guarantee that.
13 MR. CALLAN: Questions are encouraged.
14 CHAIRMAN JACKSON: We can't guarantee that. So
15 maybe you better make it 15 minutes.
16 MR. CALLAN: I have with me the regional
17 administrator from our Region III office, Mr. Bill Beach.
18 The Region III office is located right outside of Chicago.
19 And then, to my left, Mr. Roy Zimmerman, who is
20 the associate director for reactor projects in the Office of
21 Nuclear Reactor Regulation, NRR. He's also the senior NRR
22 manager on the Commonwealth Edison oversight panel.
23 I want to make two points. First is a point you
24 made, Chairman, in your opening remarks, and it's more of a
25 caution, and that is that we're talking about an assessment

1 period of six months here, which, in the historical
2 perspective of 15 years that we looked at when we generated
3 the 50.54(f) letter that you addressed, is hardly enough
4 time to credibly draw conclusions about the cyclic
5 performance.
6 If you look at the historical pattern, the cycles
7 frequently would take a couple of years, sometimes, to
8 develop. So we're hard-pressed to make too many conclusive
9 comments today.
10 The second point is that we are expending a lot of
11 resources from an agency-wide perspective. We are expending
12 regional resources on an average of about a third more than
13 we would normally be expending, averaging the resources over
14 the six stations, the 12 units, and slightly more than a
15 third more NRR resources than we would otherwise spend for
16 average performing sites.
17 That translates to about 13 or 14 full-time
18 equivalent staff that we are expending above and beyond what
19 we would budget for average performing plants. I don't have
20 to tell you that in today's budget climate, we can hardly
21 expend those kinds of resources indefinitely, and so we're
22 anxious, from that standpoint alone, to restore normalcy
23 here.
24 Bill Beach will be the primary presenter, and I'm
25 going to turn the discussion over to Bill.

1 MR. BEACH: Thank you, Joe. Good afternoon,
2 Chairman and Commissioners. We are here today to discuss
3 our assessment of the safety performance of Commonwealth
4 Edison Company's nuclear facilities and Commonwealth's
5 implementation of its commitments made in response to our
6 January 27, 1997, 50.54(f) letter. Slide 2, please.
7 As you recall, after the January senior management
8 meeting, the NRC issued a 50.54(f) letter because of our
9 concern with the historic cyclic performance of Commonwealth
10 Edison's facilities.
11 As I stated at the Commission meeting in April,
12 Commonwealth Edison typically developed many programs to
13 address emergent problems, rather than relying on effective
14 implementation of existing programs to resolve identified
15 problems.
16 On May 27, 1997, the staff issued our assessment
17 of Commonwealth Edison's response to the 50.54(f) letter.
18 In its assessment, the staff concluded that Commonwealth
19 Edison's response described a reasonable set of actions
20 which, if effectively implemented, would enhance
21 Commonwealth Edison's capability to operate, monitor, and
22 assess its six nuclear stations while sustaining performance
23 improvement at each.
24 The staff concluded that Commonwealth Edison
25 satisfied the NRC's request for information pursuant to

1 10 C.F.R. 50.54(f). Slide 3, please.

2 Since our last meeting, as Joe said, we have
3 implemented a Commonwealth Edison performance oversight
4 panel. The oversight panel is an agency panel composed of
5 managers and staff from Region III, NRR and other offices as
6 appropriate. As regional administrator, I chair that panel.

7 The oversight panel's charter identifies simply
8 that the goal of the panel is to provide an integrated NRC
9 assessment of Commonwealth Edison's nuclear safety
10 performance, particularly focusing on whether sustained
11 performance improvement is being accomplished at each site.

12 In order to accomplish this assessment, an action
13 plan was developed by the oversight panel which specifies a
14 number of tasks that the NRC is in the process of
15 performing.

16 Some of these include, first, verifying that
17 selected commitments identified in Commonwealth Edison's
18 50.54(f) response are, in fact, being implemented; second,
19 comparing the NRC's and Commonwealth Edison's performance
20 conclusions for each station. The oversight panel is
21 particularly looking to identify differences between
22 Commonwealth Edison's assessment of its performance and our
23 assessment of Commonwealth Edison's performance.

24 Third, assessing whether lessons learned from one
25 site are effectively being applied at the other Commonwealth

1 Edison sites; fourth, assessing allegations in the aggregate
2 to determine if there are any broad-cased performance
3 concerns being identified through the allegation process.
4 Fifth, evaluating the effectiveness of
5 Commonwealth Edison's oversight functions; and, finally,
6 assessing the impact of organizational changes at the site
7 and at the corporate level.
8 CHAIRMAN JACKSON: Let me ask you a couple of
9 quick questions, Mr. Beach. Is the panel's charter changing
10 as insights are gained, or is it a fairly fixed charter
11 whose breadth is sufficient to cover what you've been
12 finding?
13 MR. BEACH: We intend that to be a changing
14 document. It's still relatively new. I can't remember when
15 -- I think it was May or June -- that we issued the charter.
16 MR. ZIMMERMAN: I think, to your point, we have
17 talked about the fact that it is a living document. In
18 fact, during the month of October during one of the
19 meetings, there was discussion about whether we needed to
20 make any changes.
21 I think at that point it was felt that there is
22 none yet that need to be made, but the panel is not going to
23 hesitate if it feels that the existing issues either didn't
24 hit the mark directly or, as we get smarter, we add
25 something additional to it.

1 CHAIRMAN JACKSON: And a number of these items, if
2 you look at them, and so the question is, are they being
3 treated in a punch list fashion, or are they handled as
4 continuing items? Or do they have punch list pieces
5 associated with them, but you're continuing a long-term
6 look? Can you elaborate a little bit about that.
7 MR. BEACH: I'm going to get into part of that in
8 a minute. Like, for the commitments that we're looking at,
9 we have a matrix that we're trying to incorporate the review
10 of as many of those as we can through the normal inspection
11 processes.
12 We're not actually punch-listing, but we do have a
13 tracking mechanism and are documenting them individually in
14 each inspection report so we can appropriately close them
15 and assure that we looked at them.
16 CHAIRMAN JACKSON: Now, how do you go about
17 verifying selected commitments that you mentioned here?
18 MR. ZIMMERMAN: We have a backup slide that might
19 be good to put up at this point.
20 CHAIRMAN JACKSON: While we're waiting for it,
21 have you been finding it difficult to keep up with the
22 organizational changes.
23 MR. ZIMMERMAN: In the last week or so.
24 CHAIRMAN JACKSON: Okay.
25 MR. ZIMMERMAN: I believe this is to your point,

1 Madame Chairman. This slide provides the criteria for
2 commitment follow-up. What was done is the panel went
3 through and identified the commitments that existed,
4 basically numbered all the commitments, came up with a
5 number around 350 or so commitments that were made by the
6 utility, and married it up against these items.
7 One of our goals has been to try to use our
8 existing inspection program to the maximum extent possible,
9 also to focus on those issues of safety significance using
10 risk-informed insights to help us with our sample.
11 Recognizing that there have been problems in the human
12 performance area, there's an item that covers that aspect.
13 In order for long-term corrective actions, we
14 wanted to ensure that we look at the self-assessment process
15 as the strength of the self-assessment group, and then the
16 new senior management oversight groups that were mentioned
17 -- the senior leadership group, the Nuclear Oversight
18 Committee -- wanted to attend some of those meetings to be
19 able to see how they discuss the actual experiences from the
20 site. So there are certain targets that have been chosen
21 using this thought process.
22 CHAIRMAN JACKSON: As you know, commitment
23 management has been an issue with not only this company, but
24 in certain cases, some others. How does Commonwealth Edison
25 stack up in terms of commitment management vis-a-vis any

1 benchmarks you might have in the industry?

2 MR. ZIMMERMAN: I don't recall historically

3 benchmarks. We do know that -- setting aside the term,

4 "commitment" for a moment -- we know that their processes

5 for improvement haven't carried through to this point that

6 resulted in 50.54(f) letter. Also, Mr. Kraft mentioned

7 problems with commitments in Appendix R when he was talking

8 a few minute earlier.

9 This is an effort to make sure that we do the

10 second part of trust but verify to ensure that we take a

11 healthy sample to go forward and be able to speak with

12 confidence that these commitments have actually been

13 completed and those that are more than a one-time commitment

14 are carried on.

15 CHAIRMAN JACKSON: And you mentioned that one of

16 the charter items is to compare NRC's and ComEd's

17 performance conclusions. Are you going to talk as we go

18 along as to where there may be variances between us and --

19 MR. BEACH: We'll get to that slide.

20 CHAIRMAN JACKSON: Okay. Fine.

21 MR. BEACH: Slide 4, please. This sort of leads

22 in. What this slide is intended to show is basically the

23 status of those issues that I just talked about, and we

24 discussed some of them.

25 To highlight a couple of points, though, there

1 were approximately 360 commitments in the response to the
2 50.54(f) letter, and the oversight panel established a
3 subcommittee to review those and establish criteria to
4 determine which ones we would verify.
5 That committee selected about 50 percent, of which
6 we have tried to integrate them, as I said, into the normal
7 inspection processes. Approximately 30 percent of those
8 selected commitments have been inspected or are in the
9 process of being validated.
10 CHAIRMAN JACKSON: So it's 30 percent of the 50
11 percent.
12 MR. BEACH: Fifty percent of the 360 is --
13 CHAIRMAN JACKSON: Right.
14 MR. BEACH: -- what we selected, and we have
15 completed the process of 30 percent.
16 CHAIRMAN JACKSON: Verification of 30 percent of
17 that 50 percent.
18 MR. BEACH: Of that --
19 CHAIRMAN JACKSON: No? 30 percent net.
20 MR. ZIMMERMAN: That are either completed or are
21 in the process of. It's not 30 percent are completed.
22 MR. BEACH: Or in process.
23 CHAIRMAN JACKSON: No, I understand that.
24 MR. CALLAN: No, Chairman, 30 percent of the
25 sample.

1 CHAIRMAN JACKSON: It's 30 percent of the sample.
2 MR. BEACH: Right.
3 CHAIRMAN JACKSON: It was a 50 percent sample.
4 MR. BEACH: Right.
5 CHAIRMAN JACKSON: So it's basically 15 percent of
6 the total. 30 percent of 50 percent is 15 percent.
7 MR. BEACH: Right. You're right.
8 CHAIRMAN JACKSON: Okay.
9 MR. ZIMMERMAN: I don't want to make this more
10 complicated, but an extra minute.
11 MR. CALLAN: Maybe it's worth being complicated a
12 little bit.
13 MR. ZIMMERMAN: Some of those commitments are
14 going to be looked at at more than one site.
15 CHAIRMAN JACKSON: Okay.
16 MR. ZIMMERMAN: So if you say we have 370 -- I may
17 not have the numbers exactly right, but 370 commitments, and
18 we're going to be reviewing about half of those. So we have
19 about 170 individual commitments, but we're going to look at
20 that at all six sites and add that number up. That number
21 comes up --
22 CHAIRMAN JACKSON: Gotcha.
23 MR. ZIMMERMAN: -- coincidentally to about 370,
24 also. So we're going to go out and look at approximately
25 370 individual commitments.

1 CHAIRMAN JACKSON: Okay. I got your point.
2 COMMISSIONER DICUS: But the 360 commitments, it's
3 not a total of all sites. The total number of commitments,
4 and there may be tree sites that those would --
5 CHAIRMAN JACKSON: So if you had 360, and it was a
6 commitment at each site, that would be 1,080 commitments;
7 right?
8 MR. ZIMMERMAN: Right.
9 COMMISSIONER DICUS: Right.
10 CHAIRMAN JACKSON: So that's what we want to --
11 COMMISSIONER DICUS: How did you pick the 50
12 percent you're going to verify? I mean what sort of
13 criteria were you --
14 MR. ZIMMERMAN: Just considered what we felt was
15 reasonable and doable, but we also built into the process
16 that we need to go back and look at results. If the results
17 are positive, with a living document, it may be appropriate
18 to not verify the particular item at all plants.
19 If we have an item we say we're going to look at
20 at six facilities, we look at it at four, we make a
21 conscious decision to say we'll call success on that
22 particular item. There may be another one where we're only
23 going to look at it in one or two plants, and if it goes
24 south, we may choose to look at that at the other facilities
25 if it applies.

1 CHAIRMAN JACKSON: Is that referenced to the
2 performance at those particular sites that you've chosen to
3 do the -- I mean, when you choose two sites, is it because
4 you've focused on how, in that particular area, those two
5 sites have been performing historically?
6 MR. ZIMMERMAN: We tried to look at it from a
7 target of opportunity to tailor it to the facilities.
8 CHAIRMAN JACKSON: And you do fold in the risk
9 and --
10 COMMISSIONER DICUS: Right.
11 CHAIRMAN JACKSON: -- safety significance as part
12 of that?
13 MR. ZIMMERMAN: Yes.
14 CHAIRMAN JACKSON: Okay.
15 MR. BEACH: Regarding the issue of how
16 Commonwealth is effectively applying lessons learned from
17 one site to the other, the staff is reviewing selected
18 enforcement actions and significant events that occur at one
19 site.
20 The three that we have picked were the June 1996
21 event at LaSalle, the February '97 shutdown at Zion, and
22 also one that you discussed earlier, the fire protection
23 issues that was identified at Quad Cities and I'll discuss
24 later.
25 Regarding the assessment of allegations, we've

1 looked at all the allegations over the past six months and
2 looked for trends. We only identified one trend, which was
3 related to allegations of discrimination. The majority of
4 those were involving Zion, and those are currently under
5 review by our Office of Investigation.
6 CHAIRMAN JACKSON: Is that an area where you and
7 the utility have different perspective in terms of the
8 conclusions reached
9 MR. BEACH: Not at this time, Chairman. Prior to
10 restart, they will be coming in to a meeting to address the
11 results of their assessment of the chilling effect issues
12 and any other issues that --
13 MR. CALLAN: But until our Office of
14 Investigations reports out, we really don't have
15 conclusions.
16 CHAIRMAN JACKSON: You can't conclude.
17 MR. CALLAN: Yes.
18 MR. BEACH: From the standpoint -- right -- of our
19 conclusions.
20 CHAIRMAN JACKSON: Okay. Thank you.
21 MR. BEACH: In assessing the effectiveness of
22 Commonwealth Edison's actions to improve corporate-wide
23 engineering, the staff is going to develop those results of
24 the design-basis commitment verification effort, the
25 significant engineering inspections that we perform like the

1 system operational performance and the architect engineering
2 inspections and the plant performance review process.
3 Based on the early results of our activities
4 conducted in the past six months, Commonwealth Edison is
5 making some progress in improving engineering across the
6 site, with the exception of Quad Cities.
7 In assessing the effectiveness of the oversight
8 functions, we will be observing selected oversight meetings,
9 but at the corporate office and at individual sites. These
10 include meetings of the Nuclear Operating Committee, senior
11 leadership committee, and peer groups, as well as management
12 review meetings
13 While we have observed a Nuclear Operating
14 Committee meeting and several management review and peer
15 group meetings, we have not yet observed a sufficient number
16 of these meetings to make a valid judgment on their
17 effectiveness.
18 Regarding our assessment of the impact of the
19 organizational changes at and between individual sites in
20 corporate office, we have not yet, at this point, identified
21 any adverse trends in performance that we can equate to
22 management changes.
23 However, it is too early to tell the impact of a
24 number of recent management changes such as the promotion of
25 the two site vice president and what that impact would be to

1 the site organizations they are leaving.

2 In addition, we believe a root cause of the cyclic

3 performance involved moving one manager from a good

4 performer to one of poor performance. Therefore, we're

5 closely monitoring the potential impact on performance of

6 those changes.

7 I would note -- and one that was discussed -- that

8 it does appear that the movement of the operations manager

9 from Dresden to Zion is having a positive impact on

10 performance at Zion with no noticeable change in the

11 improved operations performance at Dresden.

12 Since the formation of the oversight panel, we

13 have held four public meetings with Commonwealth Edison to

14 discuss safety performance. We plan to continue to hold our

15 panel meetings every six to eight weeks to recognize areas

16 where there may be differences in performance assessments

17 between our staff and Commonwealth Edison.

18 These meetings, along with our normal inspection

19 activities, the inspection and review activities being

20 conducted to verify Commonwealth Edison's implementation of

21 its performance improvement initiatives, the review of

22 allegations and our observations of Commonwealth Edison's

23 oversight meetings, have formed the basis for our assessment

24 of Commonwealth Edison's initiatives to prevent future

25 cyclic performance.

1 I would now like to briefly discuss our
2 performance assessment of each site. Slide 5, please.
3 Our view of overall performance at Byron is that
4 the license has been able to maintain a consistently good
5 level of performance for an extended period of time. With
6 few exceptions, plant material condition and surveillance
7 testing have been at a good level.
8 I recently completed systematic assessment of
9 licensee performance at Braidwood, as you heard, recognized
10 improvement across the functional areas with the greatest
11 improvement in operations. Of particular note over the last
12 year has been the effort at improving the material condition
13 of the plant. The effort has been effective and has
14 resulted in material condition improvement.
15 Performance at Dresden continues to improve.
16 Operators have performed well during major evolutions such
17 as reactor startups and surveillance tests. As you heard,
18 there has been some attention to detail errors that have
19 occurred in this period, and some concerns were identified
20 when an operator failed to monitor plant parameters during
21 the swampover of a feedwater pump.
22 Material condition has improved, as evidenced by
23 both units having operated for almost 90 days. A number of
24 long-standing problems have been fixed, and the maintenance
25 work backlog was reduced.

1 Engineering management has taken a number of
2 actions to improve engineering performance and response to
3 the independent safety inspection conducted in the fall of
4 1996 in a confirmatory action letter that was subsequently
5 issued. It appears that these actions have been effective.
6 Until recently, Quad Cities has been improving,
7 but to use the words of Mr. Kraft, "Performance may now be
8 levelling off." Performance and maintenance has been good,
9 with significant effort spent improving the performance of
10 the maintenance craft and plant material condition.
11 The maintenance work backlog has been reduced.
12 Currently, much engineering attention has been diverted to
13 address fire protection issues.
14 Fire protection was recognized as a significant
15 issue based on the licensee's IPEEE report, which identified
16 a high core damage frequency due to a fire. Although Quad
17 Cities's management and staff have recently begun taking
18 appropriate actions, past resolution of fire protection
19 issues was not timely.
20 Safe shutdown procedures were found to be
21 inadequate in the course of several reviews. Presently unit
22 2 is shut down because procedures to support two-unit
23 operation were inadequate. Significant engineering
24 resources are now being expended in resolving these issues.
25 In addition, the results of a recent maintenance

1 rule inspection indicates that the maintenance rule program
2 at Quad Cities was poorly implemented and that engineering
3 efforts in support of the maintenance rule were weak.
4 These problems may have an impact on overall
5 performance, as problems with emergency diesel air start
6 motors, battery testing criteria, and other challenges in
7 the area of engineering need attention. Station management
8 has taken recent actions to address these problem areas,
9 including changes in engineering management.
10 While both units at LaSalle remain shut down,
11 overall performance has shown some signs of improvement.
12 However, this improvement is commensurate with the current
13 status of the restart plan implementation.
14 Our manual chapter 0350 oversight panel is
15 monitoring activities for restart. In summary, the
16 challenges facing LaSalle are improving the conduct of
17 operations and resolving a high number of design and
18 equipment material condition deficiencies.
19 I think I would agree that most of the issues have
20 been identified with respect to what's needed to restart the
21 units at LaSalle, but much work remains in correcting the
22 deficiencies for restart, which is sometime in June or July,
23 I believe, of next year.
24 Finally, Zion is also starting to show some signs
25 of progress. However, several challenges remain prior to

1 restart of unit 2. The licensee must implement a successful
2 operational readiness demonstration program.
3 Sufficient progress must be evidenced for
4 resolving corrective action program deficiencies
5 sufficiently to preclude recurrence of events -- that's a
6 historical problem at Zion. And, finally, the actions to
7 ensure a safety-conscious work environment exists at Zion
8 Station must be completed.
9 CHAIRMAN JACKSON: Zion -- the Commonwealth Edison
10 managers said that they had a restart target for the Zion
11 Station of mid-December. Do you have any comment on that?
12 MR. BEACH: I would only comment that Zion is not
13 ready to restart today and that the three issues I just have
14 discussed must be resolved prior to restart.
15 CHAIRMAN JACKSON: And have you satisfied
16 yourselves that the Quad Cities fire protection issues are
17 not programmatic weaknesses or generic, even though they the
18 particular IPEEE high core damage frequency number? Have
19 you satisfied yourselves that there aren't programmatic or
20 generic weaknesses in these areas?
21 MR. BEACH: Yes. We've looked at what Dresden has
22 done in response to the same issue. The engineering
23 inspector at Zion has also reviewed those issues, and we
24 found some problems, but nothing to the extent --
25 CHAIRMAN JACKSON: Nothing like at Quad Cities.

1 MR. BEACH: -- of significance like Quad Cities.
2 CHAIRMAN JACKSON: Okay.
3 MR. BEACH: I would just also mention, with Zion,
4 that we also have a manual chapter 0350 oversight panel in
5 place there, which is monitoring the progress of these
6 issues for restart. Slide 6, please.
7 After discussing the performance at each of the
8 sites, I would like to now discuss how we now see
9 Commonwealth Edison performance overall. Let me try to put
10 this slide into some context.
11 The slide you see was developed after we had
12 completed the Region III individual plant performance
13 reviews earlier this month. We then subsequently performed
14 an overall integrated assessment.
15 Using this integrated plant performance approach,
16 we looked at performance from both an individual plant basis
17 and overall corporate perspective for the last six months
18 and determined a trend. The slide is a visual presentation
19 of that trend.
20 The process behind developing this integrated view
21 is not an exact science, and one cannot mathematically add
22 areas to come to an overall conclusion. It's also important
23 that the various colors -- to note that they do not
24 represent SALP ratings.
25 MR. CALLAN: Let me just -- I'm sorry to

1 interrupt, Bill. Blue does not mean good performance, nor
2 does yellow necessarily mean poor performance. Blue
3 means --
4 CHAIRMAN JACKSON: Improvement relative to where
5 they were.
6 Where they were. A classic example of that is
7 LaSalle, which is shut down. We show blue in operations,
8 which doesn't mean that we're saying they have good
9 operations. Clearly, we're not in a position to say that.
10 Ii the means that they are making progress in getting
11 operations in shape to support restart, is what it means.
12 MR. BEACH: The areas that show improvement are
13 also relative only to our view of performance in that
14 particular area at that plant in this period.
15 CHAIRMAN JACKSON: Not relative to other plants,
16 not relative to the industry over a longer time period.
17 MR. BEACH: Exactly.
18 CHAIRMAN JACKSON: Is the decline in Quad Cities's
19 performance in engineering an actual decline, or does it
20 indicate some discovery of old issues or that the
21 performance was poor at some previous date? Or do you
22 actually see some increase in engineering issues?
23 MR. BEACH: We had seen some increase in
24 improvement in performance over the past year or so in Quad
25 Cities's engineering, and I think that the trend there is

1 not so much a decline, but the number of resources that
2 they're diverting to handle the fire protection issues and
3 the other challenges.
4 As I said, it may impact the overall performance
5 of the station because of the challenges that they have.
6 MR. ZIMMERMAN: I would add that I think the
7 maintenance rule performance at Quad Cities is a part of the
8 reason for why it's -- you know, that's a recent indication.
9 MR. BEACH: Probably the most important area on
10 the slide is the last row. As you can see in the aggregate,
11 we believe performance at Commonwealth Edison has been
12 sustained in this period, while some improvement has been
13 made.
14 Again, though, this slide only shows trends where
15 some measured improvement was noted. Really, it is too
16 early. It's only based on six months' experience and does
17 not in any way eliminate the skepticism associated with the
18 years of cyclic performance.
19 MR. CALLAN: Bill, again, I would like to add just
20 one perspective, and that is, the issue before the staff
21 when the letter was issued to Commonwealth in January -- the
22 50.54(f) letter -- was the concern that has been stated
23 several times this afternoon, which is the utility's ability
24 to focus on plants needing attention without syphoning
25 resources away from the better performing plants and then

1 causing the historical cyclic performance syndrome.

2 To that extent, the Quad Cities data is

3 troublesome, because Quad Cities was one of those plants

4 back in the January time frame that was not viewed as being

5 a plant of particular concern. So, to the extent that there

6 is a significant storm cloud, that would be it from our

7 perspective. Would you agree with that, Bill?

8 MR. BEACH: Yes.

9 MR. CALLAN: And I thin, as Mr. Kraft said, the

10 positive is that at least this is an early way to get at it

11 if it represents a decline before the decline actually

12 occurs.

13 CHAIRMAN JACKSON: You were going to make a

14 comment?

15 MR. ZIMMERMAN: This is the first time that I'm

16 aware where the PPR was done with this extra facet of an

17 integrated look, and it spills -- it comes from the 50.54(f)

18 letter, trying to come up with a mechanism that's useful to

19 the staff to look for cyclical performance over time.

20 This is the first of potentially many of these

21 that, over time, you can see that one area has gotten

22 better. If we see another area that has gotten worse, and

23 we try to connect the dots about did this affect that? So

24 it's just an aid, and it's really nothing more than that?

25 CHAIRMAN JACKSON: Commissioner?

1 COMMISSIONER McGAFFIGAN: Did you try to go back
2 and do a December to May for the first six months of this
3 year?
4 MR. ZIMMERMAN: I don't believe so, but -- Bill?
5 MR. BEACH: No. We did not. What we were trying
6 to look for was a way to visually put up in front of
7 everyone some method to say, is performance being sustained,
8 and, in fact, is there improvement? And then, are there any
9 areas where there an actual decline or a potential decline?
10 COMMISSIONER McGAFFIGAN: I think this chart may
11 hold the record for the number of caveats that the staff has
12 given. Let me just try to explore, why can't I go down --
13 why, for instance, when I'm trying to get a comment overall,
14 in operations, we have improvement at Braidwood and LaSalle,
15 holding at the other four, and a judgment made that it's
16 overall improving.
17 Engineering, I have four pluses, one minus, one
18 holding -- that's the plus 3. You said I can't do this out
19 of their stuff, but why?
20 MR. ZIMMERMAN: We can't look at it as if it were
21 covering a SALP period where there are a certain amount of
22 core inputs that we know that we will have, sprinkled in
23 with appropriate regional initiatives. We don't have that
24 base.
25 During this period of time, there may be items

1 here where we have a lot of points on the curve. There may
2 be others where we have very few. So we take what we have
3 during that particular block in time. But there's less
4 regiment to it than what you would have when you do a SALP.
5 You know you have certain core modules, inspection
6 procedures that were done that you can rely on.
7 So there's a significant difference between this
8 effort and a SALP.
9 COMMISSIONER McGAFFIGAN: Does that mean that,
10 when you don't have a lot of data points, you err on the
11 side of not staying at weight overall, in the overall
12 performance? I'm trying to -- and if you have a lot of data
13 points, and you're pretty sure of yourself, you'll go to
14 blue? Or --
15 MR. ZIMMERMAN: It would argue that the more data
16 points you have, the more confidence you can move forward
17 into a blue or yellow category.
18 MR. BEACH: Let me try to give you just a
19 perspective on operations. In fact, that's one of the
20 initiatives we see. A lot of things have been done in
21 operations across the system.
22 But Braidwood had obvious measured improvement, as
23 demonstrated by the SALP and the number of things they had
24 done over the last six-month period. LaSalle has put a lot
25 of effort into high-intensity training of its operators and

1 tested the operators outside the normal processes of the way
2 they're usually tested, testing abnormal operating
3 procedures in addition to EOPs in the normal way that we do
4 testing.
5 So in our view --
6 CHAIRMAN JACKSON: But they're shut down; right?
7 MR. BEACH: But they're shut down. But relative
8 to where they are --
9 CHAIRMAN JACKSON: Well, I think that your real
10 issue here, too, aside from the commissioner's comments,
11 which I second.
12 MR. CALLAN: We've got two more caveats.
13 CHAIRMAN JACKSON: Which I second. There's the
14 issue of delta-X/delta-T. and then there's delta-X. Do you
15 know the difference?
16 MR. CALLAN: Say no, Bill.
17 MR. BEACH: Good way to find out.
18 CHAIRMAN JACKSON: Well, the issue is where you
19 start and where you finish. So there's the issue of -- you
20 know, there's improvement, and you can look like you have a
21 steep slope. But it really is a question of where you
22 started from.
23 MR. CALLAN: Absolutely.
24 CHAIRMAN JACKSON: And where you really ultimately
25 end up and what constitutes acceptable.

1 MR. CALLAN: By the way, Bill and Roy tried to
2 talk me out of including this slide, and I insisted we
3 include it. But I think this graphical display does provide
4 a perspective.
5 I actually -- this slide and the remarks made
6 earlier by the ComEd team, there's a tremendous amount of
7 congruence. And so, if there's good news, there don't seem
8 to be many variances. They identified the LaSalle
9 engineering problem. But still, it would be nice to have
10 some backup slides for this that had SALP numbers in them or
11 whatever.
12 CHAIRMAN JACKSON: Right. And it had
13 delta-X/delta-The and delta-X.
14 COMMISSIONER McGAFFIGAN: Yes.
15 CHAIRMAN JACKSON: Okay.
16 MR. BEACH: Okay. Slide 7. Lastly, in summary,
17 since the last Commission meeting, we have seen Commonwealth
18 Edison implement some positive improvement initiatives.
19 Just let me briefly go over a couple.
20 In the operations area, we have noticed increased
21 management focus as demonstrated by increased senior
22 management site visits, increased utilization of peer groups
23 and the communication of common standards in the control
24 room across the system.
25 Also, as I said, in engineering, although it is

1 too early to make final conclusions on sustained performance
2 improvement, engineering across Commonwealth Edison's system
3 has shown some short-term improvement. Staffing at both the
4 sites and corporate has been strengthened, and the use of
5 the Engineering Assurance Group that was piloted at Dresden
6 is now institute at all six of the sites.
7 With regard to work control, implementation of a
8 5-week rolling schedule at some sits and implementation of
9 computerized work scheduling systems has resulted in an
10 increase in maintenance being performed successfully.
11 Commonwealth Edison has also implemented work
12 control centers at each of the sites to take many of the
13 distractions outside of the control room associated with
14 that process.
15 Increased use of peer groups to address
16 programmatic issues at the Commonwealth Edison sites has
17 also been observed and is certainly a contributor to some of
18 the improvements that we've seen.
19 And finally, the use of performance indicators to
20 measure performance and identify variances from expectations
21 should facilitate earlier performance problem
22 identification, as long as the performance indicators are
23 based on accurate data.
24 This concludes my discussion on safety performance
25 of Commonwealth Edison Company's nuclear facilities and

1 Commonwealth Edison's implementation of the commitments in
2 response to our January 27th letter.
3 CHAIRMAN JACKSON: Commissioner Dicus, any further
4 questions?
5 COMMISSIONER DICUS: No.
6 CHAIRMAN JACKSON: Well, I would like to think the
7 Commonwealth Edison representatives for briefing the
8 Commission regarding ongoing efforts to improve safety
9 performance at Commonwealth Edison's nuclear facilities.
10 I would also like to thank the NRC staff for
11 providing their assessment of those activities. While the
12 staff has concluded that performance is improving
13 company-wide, I will reiterate my opening comment. it is
14 early in the process, particularly from an historical
15 perspective. Improvements have been seen in the past which
16 have not borne out long-term.
17 Moreover -- and again reiterating -- significant
18 weaknesses at one or more Commonwealth Edison sites brings
19 into question the ability for the company to effectively
20 manage nuclear operations at a corporate level.
21 Our approach, as described in the January request
22 for information has to be to consider the performance of any
23 one facility as a reflection of the whole, the company -- or
24 at least the Nuclear Generation Group. The performance of
25 the group is linked to the performance at any one site and

1 is illustrative of the company's ability to safely operate
2 all of its nuclear facilities.
3 And, finally, as we consider the trends that you
4 have presented, many of them in a promising direction, we
5 should keep in mind that positive trends do not necessarily
6 connote a level of performance which is acceptable. That's
7 the delta-X versus the delta-X/delta-T.
8 But they are a start. And so, notwithstanding my
9 cautionary tone, I would like to congratulate Commonwealth
10 Edison on pulling together a broad set of indicators which
11 appear a comprehensive module of some of the further
12 delineation that I've asked for here in their scope at
13 application. I'm not sure what I'm going to say about the
14 blue and the white and the yellow.
15 So the Commission looks forward to measuring the
16 results -- the results -- the results -- that these
17 indicators track at a future meeting six months hence.
18 Unless there are any further comments, we're
19 adjourned.
20 [Whereupon, at 4:25 p.m., the meeting was
21 concluded.]
22
23
24
25

NRC STAFF'S ASSESSMENT OF COMMONWEALTH EDISON'S PERFORMANCE

A. Bill Beach
Region III
November 4, 1997

CHRONOLOGY

• NRC issued 50.54(f) letter	01/27/97
• ComEd Issued response	03/28/97
• Commission meeting	04/25/97
• NRC issued response to ComEd	05/27/97
• NRC established ComEd performance oversight panel	06/03/97
• Oversight panel meetings with ComEd	06/03/97
	08/05/97
	10/09/97
	10/24/97

COMED PERFORMANCE OVERSIGHT PANEL

- Joint R-III/NRR team established to provide integrated assessment of ComEd's performance
- Charter items:
  - Verify selected commitments being implemented
  - Compare NRC's & ComEd's performance conclusions
  - Assess ComEd's application of lessons learned from events and enforcement
  - Assess allegations for broad based concerns
  - Assess ComEd's engineering initiatives
  - Assess ComEd's oversight functions
  - Assess impact of organizational changes

COMED PERFORMANCE OVERSIGHT PANEL ACTION PLAN STATUS

- Developed and issued oversight panel charter.
- Developed criteria for follow-up of ComEd 50.54(f) commitments.
- Developed a resource utilization approach for follow-up activities.
- To date, approximately 30% of selected commitments have been or are in the process of being reviewed.
- Developed and issued an oversight panel action plan.
- Reviewed allegations for 6 month period for trends.
- Observed ComEd oversight meetings, both at corporate and sites.
- Held four public meetings with ComEd.

COMED PLANT PERFORMANCE

- Overall performance at Byron has remained consistently good for an extended period of time.
- Braidwood has shown significant overall improvement in all areas, including plant material condition.
- Progress in improving overall performance has continued at Dresden.
- Quad Cities currently has a number of fire protection safe shutdown issues that require compensatory measures to be taken.
- Overall performance is progressing commensurate with the restart plan at LaSalle.
- Zion's operations performance has shown some signs of improvement recently. However, the licensee must demonstrate effective corrective action implementation and resolve the "chilled" work environment issues.

COMED PERFORMANCE ASSESSMENT (MAY - NOVEMBER 1997)

	Operations	Maintenance	Engineering	Plant Support
Braidwood				
Byron				
Zion				
Dresden				
Quad Cities				
LaSalle				
ComEd Overall				

BLUE = IMPROVED PERFORMANCE
WHITE = SUSTAINED PERFORMANCE

COMED IMPROVEMENT INITIATIVES

- Operations
- Engineering
- Work Control
- Peer Groups
- Measuring Performance/Variances
- Organizational Changes

STATUS MEETING ON COMED NUCLEAR PROGRAM PERFORMANCE

November 4, 1997

AGENDA

• Introductory Remarks	J. J. O'Connor
• Performance Results	
– Boiling Water Reactors	E. S. Kraft
– Pressurized Water Reactors	H. G. Stanley
• Nuclear Performance Summary	J. J. O'Connor

INTRODUCTORY REMARKS

James J. O'Connor

Chairman and Chief Executive Officer

INTRODUCTORY REMARKS

- Nuclear Generation Group
- Resources/Human Relations
- Performance Update

COMMITMENT TO RESULTS

- Organizational and Management Changes

Providing Necessary Resources

1996 - $926 Million

1997 - $1.028 Billion (Projected)

1998 - $1.025 Billion (Target)

- Human Relations
  - Agreement on Key Issues
  - New Multi-Year Contract
  - Commitment to Collaboration
- Results Overview

TOP TIER INDICATOR OVERVIEW AND BOILING WATER REACTORS PERFORMANCE RESULTS

Edward S. Kraft, Jr.

Vice President - BWR

OVERSIGHT PROCESS

- Management Team Focused on Results
- Oversight Not Just Indicators
- Senior Leadership Committee Meetings

SUMMARY OF COMED PERFORMANCE (YEAR-TO-DATE THROUGH SEPTEMBER)

	Braidwood	Byron	Dresden	Quad Cities	Zion	LaSalle	ComEd 1997 Performance Target(3)	ComEd 2000 Performance Target(3)
Automatic Scrams While Critical	0	0(2)	0	0	0(1)	0(1)	~ 0.7	0
Safety System Actuations	0	0	0	1	3	0	~ 0.5	0
Collective Radiation Exposure	96	20.6	205.6	294.9	54.5(1)	90.2(1)	P-118 B-235	P-110 B-215
Unit Capability Factor	85.9%	90.7%	66.7%	66.6%	8.0%(1)	0%(1)	81.8%	87%
Unplanned Capability Loss Factor	1.9%	4.3%	17.1%	18.0%	17.6%(1)	0%(1)	6.5%	3%
Safety System Performance	.0030	.0044	.0110	.0090	.0046(1)	.0008(1)	.02	.02
ISAR	.10	.49	.13	0	.31	0	.48	.4

(1) Data does not provide meaningful comparison to industry performance while the site is in an extended shutdown.
(2) An automatic scram while critical occurred at Byron October 10, 1997, after the close of the data period.
(3) ComEd Performance Targets are on a per unit basis.

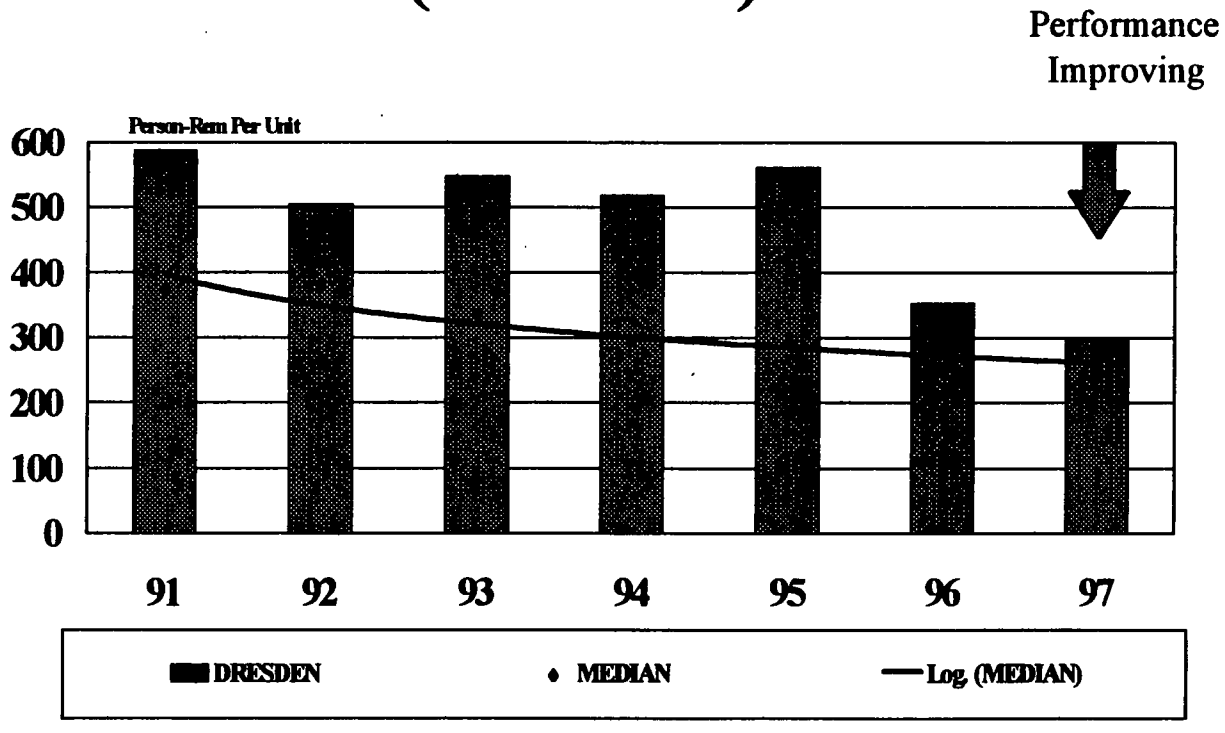
PLANT PERFORMANCE AREAS OF FOCUS

- Keeping Pace with Industry Standards
- Safe Operations
- Maintenance and Engineering
- Corrective Action

DRESDEN

- Unit Status
  - Sustained Dual Unit Operation in 1997
- Industry Comparison
  - 5 of 7 Indicators Meet 1997 Performance Targets
    - Zero Auto Scrams
    - Zero Safety System Actuations
    - ISAR Improved
    - Radiation Exposure Improved
  - Capability Factor Improving
- Dresden Approaching Industry Norms

DRESDEN
Person-Rem 3 Year Rolling Average (Per Unit)



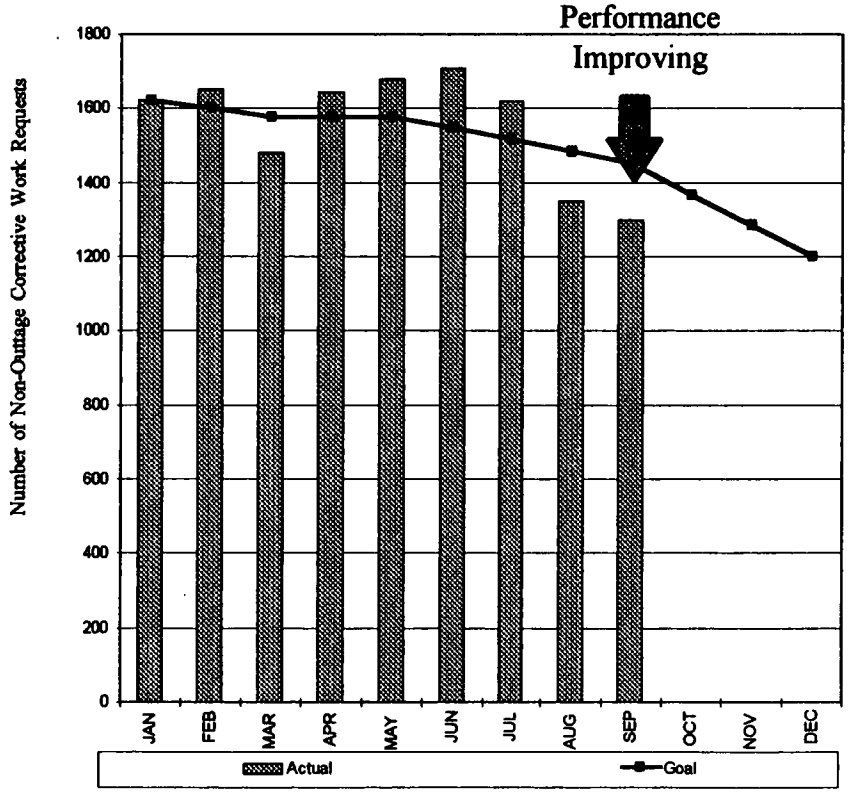
DRESDEN - OPERATIONS

- Sustained Improvement
  - Dual Unit Operations
  - Reduced OOS Errors
  - Reduced Operator Workarounds
  - All Time Low Contaminated Floor Space
  - Control Room Performance Strong
- Focus on Improving Human Performance

DRESDEN - MAINTENANCE AND ENGINEERING

- Stronger Maintenance and Engineering Support to Plant
  - Unit Capability Improved
  - Temporary Modifications Reduced
  - Operator Workarounds Reduced
- Impact of 5 Week Planning Process
  - Getting Work Done
  - Low Safety Related Backlog

DRESDEN
C8: NON-OUTAGE CORRECTIVE WORK REQUESTS WORKDOWN



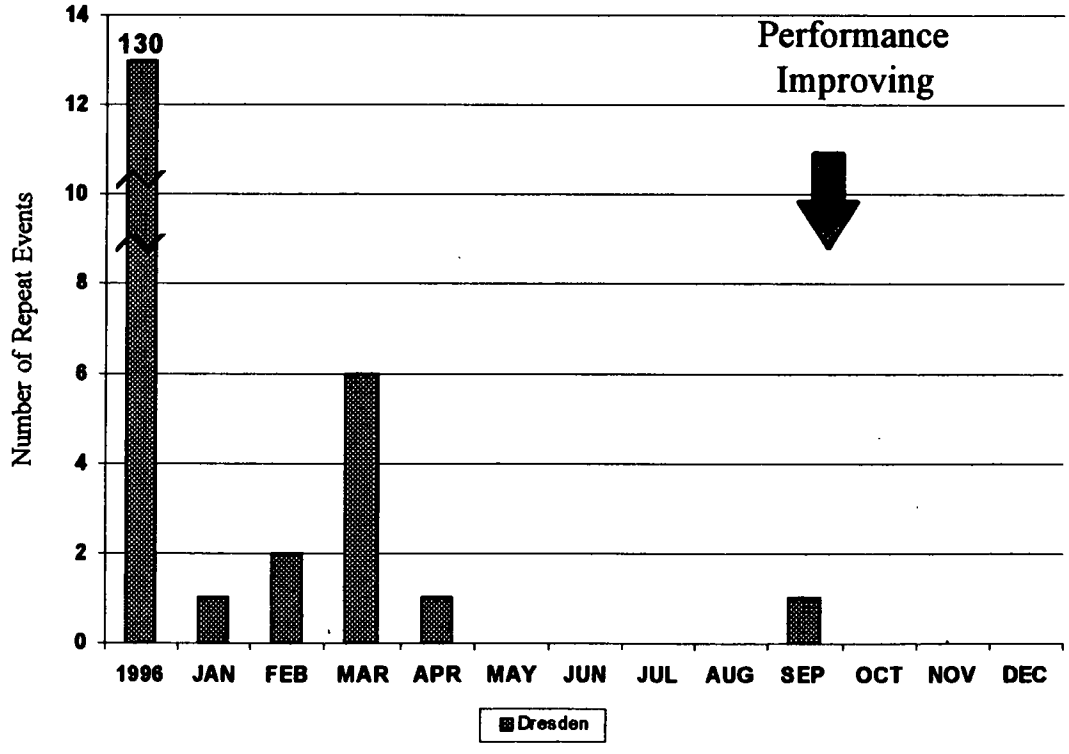
DRESDEN - MAINTENANCE AND ENGINEERING

- Skill of Workforce Improving
  - Rework Reduced
- Actions Taken to Address Engineering CAL Issues
- Pilot Engineering Assurance Group in Response to ISI
  - Additional Confidence in Engineering Products/Quality

DRESDEN - CORRECTIVE ACTION

- Self-Identification of Problems
- Corrective Action Backlog Average
- No Corrective Action Overdue for Five Months
- One Repeat Event in Past Five Months

DRESDEN
C15: REPEAT EVENTS



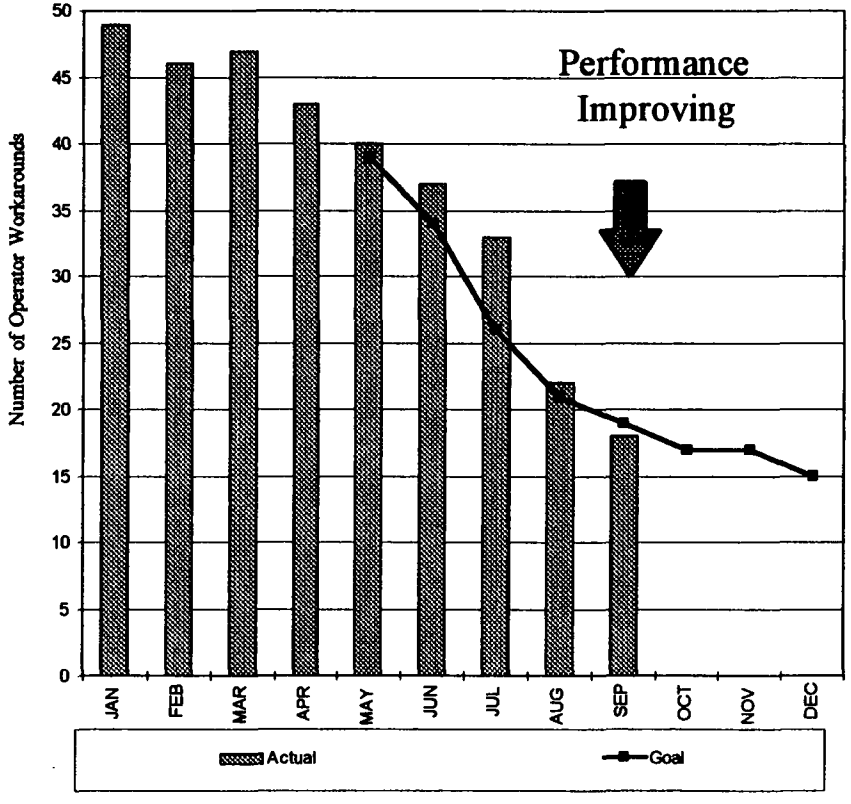
DRESDEN - OVERALL CONCLUSIONS

- Continued Improvement Overall
  - Sustained Dual Unit Operations
- Continued Focus on Human Performance
- Improved Maintenance and Engineering
- Ability to Identify and Correct Problems
  - Radiation Exposure Reduced
  - Out of Service Errors Reduced

QUAD CITIES

- Unit Status
  - Addressing Appendix R Issues
- Industry Comparison
  - Generally Near Industry Average
- Improved Operations Performance
  - Reduced Human Error LERs
  - Reduced Operator Burdens/Distraction
  - Missed Tech Spec Surveillances
- Performance Leveled Off

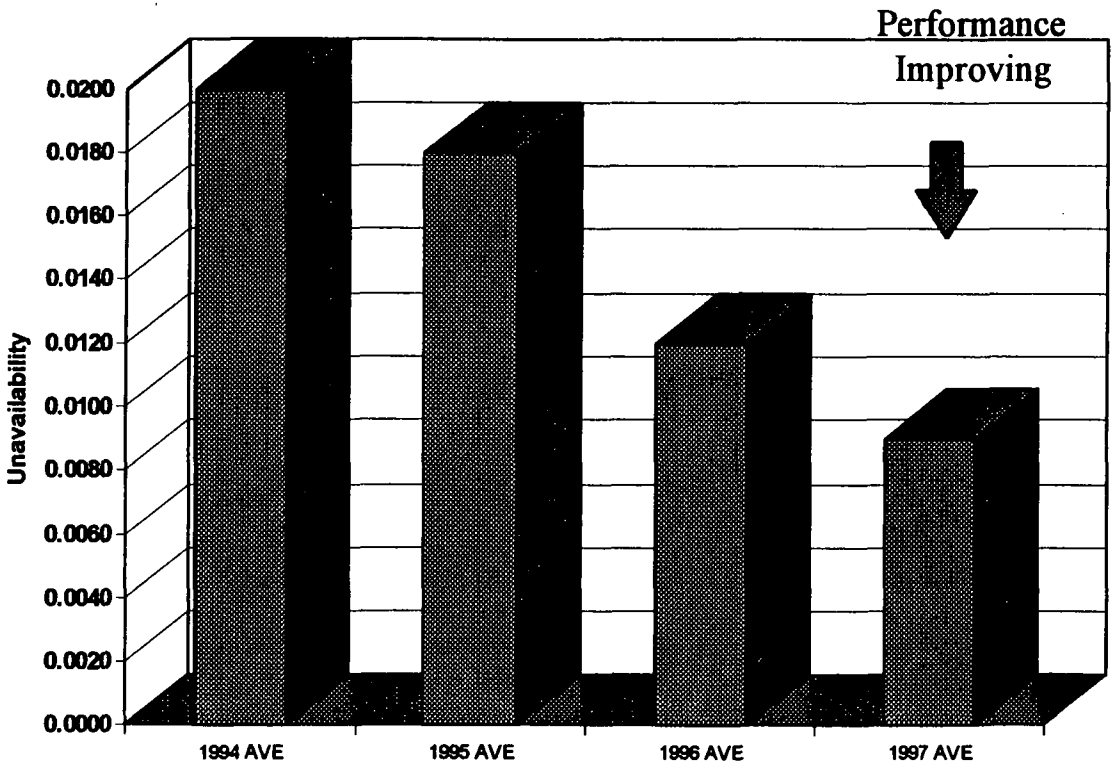
QUAD CITIES
C1: OPERATOR WORKAROUNDS WORKDOWN CURVE



QUAD CITIES

- Major Engineering Challenges Remain
  - Maintenance Rule
  - Fire Protection
  - Design Basis Knowledge
  - Action to Address Challenges
- Investment in Engineering Training
- Engineering Accomplishments
  - Reduced Operator Distractions
  - Improved Safety System Performance

QUAD CITIES
I 6: SAFETY SYSTEM PERFORMANCE



QUAD CITIES

- Maintenance Improved
  - Reduced Backlogs
  - Reduced Rework
- Resolution of Unit 2 Failed Fuel Issues
- Corrective Action Generally Improved
  - Stronger Problem Identification
  - Some Exceptions
  - Focused on Overdue Corrective Actions
- Further Improvement Needed - Repeat Events

QUAD CITIES - OVERALL CONCLUSIONS

- Engineering Challenges Affecting Performance
- Performance Compared to Industry Improved
- Operations Generally Improved
- Maintenance Improved
  - Low Backlogs and Low Rework
- Corrective Action Improved With Exceptions
- Overall - Improved but Progress Has Leveled Off
- Action to Resume Progress

LASALLE

- Unit Status - Shutdown and In Recovery
- Implementing Restart Plan -- Continuing Challenge
- Material Condition/Engineering Actions
  - System Functional Performance Reviews Complete
  - Reviewed 42 Plant Systems
  - 600 SFPR Restart Items
  - Restoring Safety Margins
- Operations
  - High Intensity Training
- Corrective Action
  - Implemented New Program
  - Positive Results

LASALLE - OVERALL CONCLUSIONS

- Many Key Actions Completed
  - System Functional Performance Reviews
  - High Intensity Training
  - Corrective Action Program Improvements
- Remaining Key Challenges
  - Reduce Backlogs
  - Complete Work to Resolve SFPR Issues
  - Further Improve Human Performance
- Corporate Readiness Review Prior to Restart

PRESSURIZED WATER REACTORS PERFORMANCE RESULTS

H. Gene Stanley

Vice President - PWR

ZION

- Unit Status - Shutdown and in Recovery
  - Human Performance/Teamwork are Key
- Recovery Plan Being Implemented
  - Operations Performance
  - Engineering and Technical Support
  - Corrective Actions
  - Working Environment/Restart Readiness

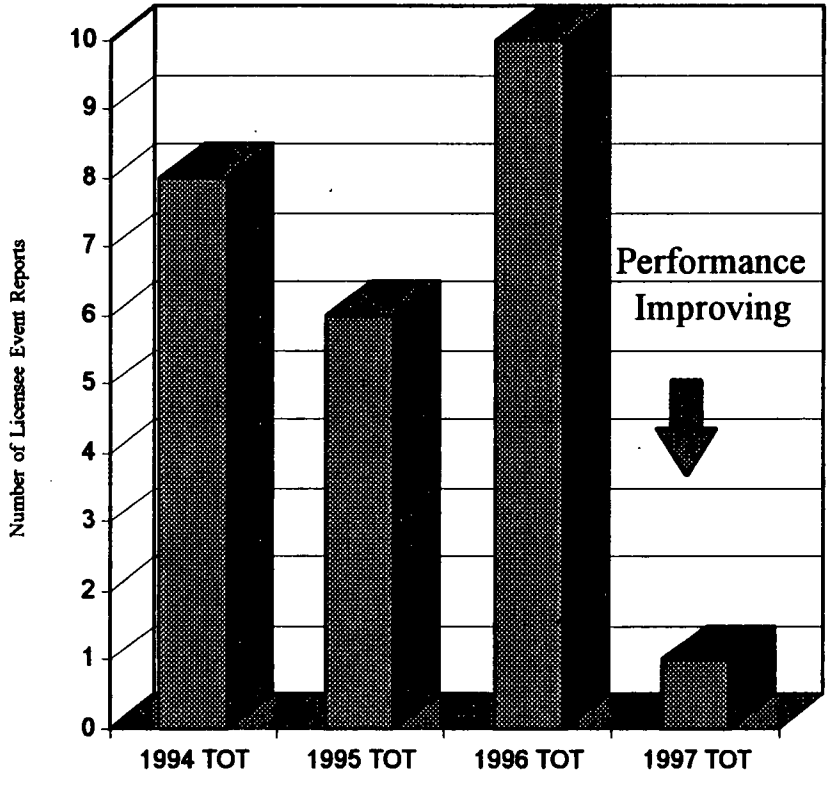
ZION - OVERALL CONCLUSIONS

- Zion Recovery Plan Provides Basis for Restart
- Resolving Performance Issues
  - Improved Ability to Get Work Done
  - Improved Operations Performance
- Remaining Challenges
  - Completing Workdown Curves
  - Improved Technical Specifications
  - Safety Culture
  - Operations Demonstration Period
- Corporate Readiness Review Prior to Restart

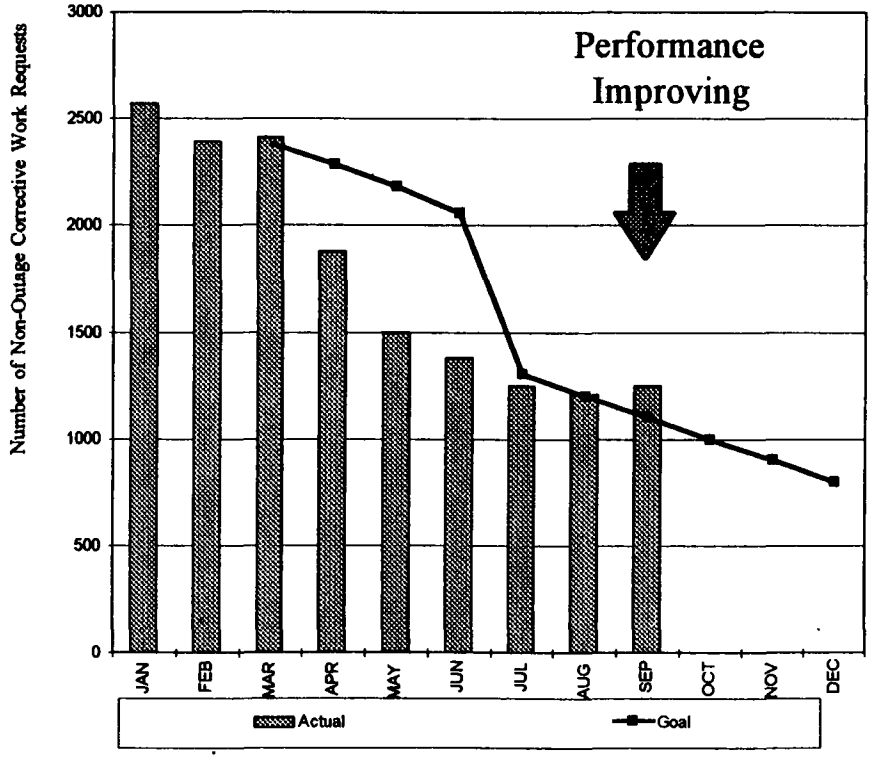
BRAIDWOOD

- Unit Status
  - Sustained Operations
- Industry Comparison Strong
- Operations and Human Performance Improved
  - Human Performance Improvement Initiative
  - Declining Human Performance LERs
- Remaining Challenges
  - Focus on Configuration Control
  - Focus on Lower Level OOS
  - Procedure Adherence

BRAIDWOOD
C 3: LICENSEE EVENT REPORTS
HUMAN PERFORMANCE ERRORS



BRAIDWOOD
C 8: NON-OUTAGE CORRECTIVE WORK REQUESTS WORKDOWN CURVE



BRAIDWOOD

- Engineering Performance Good
  - Reduction in Operator Distractions
  - Reduction in Engineering Requests
- Corrective Action Performance Good
  - Strong Line Management Ownership

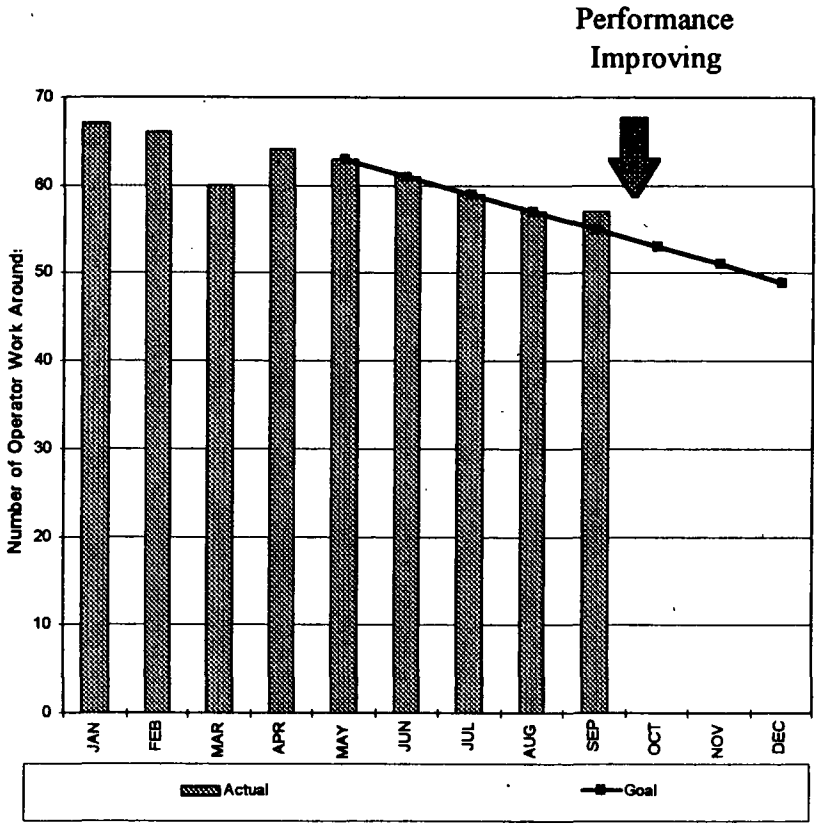
BRAIDWOOD - OVERALL CONCLUSIONS

- Braidwood Performance Strong and Improving
- Compares Well With Industry
- Operations Good
  - Human Performance Strong
  - Lower Level OOS Errors Require Attention
- Five Week Schedule Improving Maintenance
- Engineering Supporting Plant
- Corrective Action Good
- Further Human Performance Enhancements

BYRON

- Unit Status
  - Steam Generator Replacement
- Industry Comparison Remains Good
- Recent Automatic Scram
- Operations Performance Remains Strong
  - Human Performance LERs
  - OOS Errors
  - Contaminated Floor Space
  - Reducing Operator Workarounds

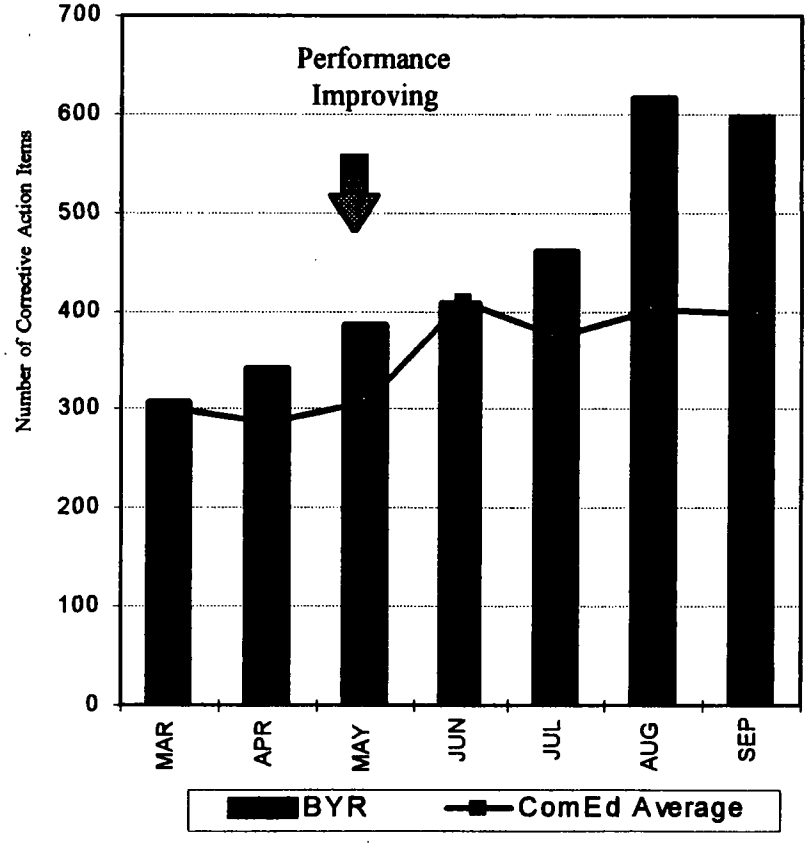
BYRON
C 1: OPERATOR WORKAROUNDS WORKDOWN CURVE



BYRON

- Maintenance and Engineering
  - Five Week Schedule Process Reduced Backlog
  - Focused on Steam Generator Replacement
  - Low Engineering Request Backlog
  - Engineering Assurance Group Results
- Corrective Action
  - Piloted Standardized Program
  - Low Repeat Events
  - Low Overdue Actions
  - Effective Problem Resolution

BYRON
C 13: CORRECTIVE ACTION ITEMS



BYRON - OVERALL CONCLUSIONS

- Compares Well with Industry
- Operations Remains Strong
  - Recent Automatic Scram
- Maintenance and Engineering Good
  - Some Challenges Remain
- Corrective Action Good
- Challenges
  - Collective Radiation Exposure; Steam Generator Replacement
  - ISAR Rate
- Overall Performance Remains Strong

NUCLEAR PERFORMANCE SUMMARY AND CONCLUDING REMARKS

James J. O'Connor

Chairman and Chief Executive Officer

NUCLEAR PERFORMANCE SUMMARY

- Management Oversight/Processes in Place
  - Actions Underway at Quad Cities
- Group-Wide Initiatives Having an Impact
- 4 of 6 Sites Now at or Approaching Industry Norms
  - Byron and Braidwood Remain Strong
  - Dresden Continues Improvement
    - Sustained Dual-Unit Operations
  - Quad Cities Improved but Leveled Off
- LaSalle and Zion in Recovery
  - Activities Governed by Restart Plans