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NUCLEAR REGULATORY COMMISSION

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

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BRIEFING ON STATUS OF CALVERT CLIFFS

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PUBLIC MEETING

Nuclear Regulatory Commission
One White Flint North
Rockville, Maryland

Wednesday, August 16, 1989

The Commission met in open session, pursuant to notice, at 10:00 a.m., Kenneth M. Carr, Chairman, presiding.

COMMISSIONERS PRESENT:

KENNETH M. CARR, Chairman of the Commission
THOMAS M. ROBERTS, Commissioner
KENNETH C. ROGERS, Commissioner
JAMES R. CURTISS, Commissioner

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STAFF AND PRESENTERS SEATED AT THE COMMISSION TABLE:

SAMUEL J. CHILK, Secretary

WILLIAM C. PARLER, General Counsel

GEORGE MCGOWAN, Chairman of the Board, BG&E

CHRISTIAN POINDEXTER, Vice Chairman of the Board, BG&E

GEORGE CREEL, Vice President, Nuclear Energy, BG&E

LEON RUSSELL, Manager, Calvert Cliffs, Nuclear Power Department, BG&E

ROBERT DENTON, Manager, Quality Assurance and Staff Services, BG&E

CHARLES CRUSE, Manager, Nuclear Engineering Services, BG&E

JAMES LEMONS, Manager, Nuclear Outage Management, BG&E

JAMES TAYLOR, Acting Executive Director of Operations

WILLIAM RUSSELL, Administrator, Region I

JAMES PARTLOW, Associate Director for Products, NRR

BRUCE BOGER, Assistant Director for Region I Reactors, NRR

SCOTT McNEIL, Project Manager, NRR

DAVID LIMROTH, Acting Senior Resident Inspector, Calvert Cliffs

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

10:00 a.m.

1
2
3 CHAIRMAN CARR: Good morning, ladies and
4 gentlemen. The purpose of this morning's meeting is
5 for the Baltimore Gas and Electric Company, licensee
6 for the Calvert Cliffs Nuclear Power Plant, and the
7 NRC staff to brief the Commission on the status of
8 Calvert Cliffs Units 1 and 2.

9 Both plants are currently shut down and will
10 start up only after resolution of a number of issues
11 identified in a confirmatory action letter dated May
12 25th, 1989.

13 We note that the staff placed Calvert Cliffs
14 on the Commission watch list in December of 1989.
15 This is of particular concern because the plant had
16 for a number of years been considered one of the
17 better performers.

18 Do any of my fellow Commissioners have any
19 opening remarks?

20 If not, Mr. McGowan, you may proceed.

21 MR. MCGOWAN: Thank you, Mr. Chairman.

22 Good morning. I'm George McGowan. I'm
23 Chairman of the Board and Chief Executive Officer for
24 Baltimore Gas and Electric Company. It is our
25 pleasure to be here this morning to brief you on the

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1 current status and our future plans for our Calvert
2 Cliffs Nuclear Power Plant.

3 I have with me today six other members of
4 our senior nuclear management staff. Chris
5 Poindexter, to my left, our Vice Chairman, with his
6 prime responsibility being Calvert Cliffs; George
7 Creel, Vice President of Nuclear Energy; Lee Russell,
8 the Plant Manager; Charlie Cruse, our Manager of
9 Nuclear Engineering Services; Bob Denton, Manager of
10 Quality Assurance and Staff Services; and Jim Lemons,
11 Manager of Nuclear Outage Management.

12 (Slide) Our briefing will cover the
13 followings areas:

14 Familiarization with some of us; our nuclear
15 management structure; where we feel we have been as a
16 member of the commercial nuclear industry; where we
17 believe we are now; where we intend to be, and most
18 importantly how we intend to get there; and lastly,
19 brief discussions on a few items that you have
20 expressed interest in, incentive programs by various
21 state public service commissions, Baltimore Gas and
22 Electric diversification efforts, and our OSART visit
23 of 1987.

24 I started working for BG&E in 1951 and I was
25 the original project manager for the Calvert Cliffs

1 plant. I became President and Chief Operating Office
2 in 1980. I have been very aware of the operations and
3 developments at Calvert Cliffs since then and
4 obviously the current state of affairs disturbs me
5 deeply.

6 (Slide) Calvert Cliffs is our most
7 important asset. Financially, of course, but more
8 importantly as an example of our progressive attitude
9 and dedication to move our company forward and remain
10 competitive.

11 We assured Marylanders in the early days of
12 the Calvert Cliffs project that nuclear generation
13 could be safe, clean and economical. We have kept
14 that promise for more than 14 years and we intend to
15 do whatever is necessary to continue to keep it.

16 We are proud that Calvert Cliffs was the
17 first U.S. PWR to go to a 24 month fuel cycle. We're
18 proud to volunteer to be the first U.S. plant to be
19 evaluated by the International Atomic Energy Agency's
20 Operational Safety Review Team. And we were proud to
21 welcome the Russian delegation that toured Calvert
22 Cliffs earlier this summer.

23 (Slide) But we recognize that we have
24 problems, major problems. The biggest problem is that
25 we have fallen below the expected level of performance

1 in the area of strict, absolute adherence to standards
2 and requirements. A change in our attitude and a
3 change in our culture must occur to achieve the
4 desired level of excellence.

5 We did have many years of very successful
6 operations. The plants were ranked among the top in
7 the country. We did not have significant safety
8 issues other than occasional violations of various
9 regulations along with several other licensees. I
10 believe that at some point, going back several years,
11 the industry started to increase their margin of
12 safety and how they looked at their plants.

13 The NRC and the industry in general started
14 to raise their standards from what was reasonably
15 acceptable and I don't think we kept pace with that
16 process, particularly with respect to operations. We
17 were aware of what was going on. We had people
18 participating in various industry organizations, but
19 we just did not keep up with the expectations.

20 I want to assure you that Baltimore Gas and
21 Electric Company will continue to support the
22 restoration of Calvert Cliffs with the necessary
23 personnel and financial resources.

24 (Slide) An example of that is a recent
25 change in our nuclear management line of

1 responsibility. On July 21, 1989, the Board of
2 Directors created a new position of Vice Chairman,
3 whose primary responsibility for the foreseeable
4 future will be Calvert Cliffs. That new position
5 became effective on August 1 of 1989. The Vice
6 President Nuclear Energy reports directly to the Vice
7 Chairman who reports directly to me. The creation of
8 the new Vice Chairman position and the decision as to
9 who should fill it were directly related to the
10 problems at Calvert Cliffs.

11 Nuclear Energy division managers and the
12 Vice President Nuclear Energy are all located at the
13 plant site. We were one of the earliest companies to
14 place all of our nuclear resources at the site.

15 Incidentally, our philosophy is a bit
16 different than many other utilities in that we find we
17 have far fewer elected officers compared to other
18 companies of a comparable size. This is a philosophy
19 that we've had for many years and therefore I'd
20 mention this because many of our managers would find
21 themselves as Vice Presidents in comparable positions
22 in other utilities.

23 I would now like to turn the briefing over
24 to that new Vice Chairman, Chris Poindexter.

25 MR. POINDEXTER: Thank you, George.

1 Good morning. I began work 16 days ago as
2 the Vice Chairman of Baltimore Gas and Electric.
3 Prior to that I was the President and Chief Executive
4 Officer of Constellation Holdings, which is a
5 management company managing a group of diversified
6 companies for BG&E. I've held that position since
7 October of 1985.

8 I started work for Baltimore Gas and
9 Electric in 1967 and had significant responsibilities
10 on the Calvert Cliffs project from that time until
11 1976. That was through the design, construction and
12 licensing phases. In 1976, when I was reassigned from
13 that role, I was the Chief Nuclear Engineer. I came
14 back to engineering in Calvert Cliffs in 1979. I was
15 Treasurer of the company at that time and I was
16 elected Vice President of Engineering and
17 Construction. For that period, I had responsibilities
18 for the construction and engineering of all the
19 company's electric facilities generating plants, bulk
20 transmission substations. All of the major
21 modification work as a result of the TMI accident that
22 we did was under the time that I headed up that
23 division.

24 In 1985, I left that position to become
25 President and CEO of Constellation Holdings.

1 I know the plant very well. I have a broad
2 background in nuclear regulatory matters. Some of the
3 things I've been doing now for the last 16 days is to
4 participate in the August 4 meeting with the
5 assessment panel concerning our performance
6 improvement plan. I've established an office at the
7 site where I spend the majority of my time and I've
8 been involved in a series of briefings by key
9 personnel to try to get up to speed, with a lot of
10 midnight reading along the way. I'm in the process of
11 scheduling meetings with all of you Commissioners and
12 with some of the key managers in the NRC staff.

13 I think the creation of the Vice Chairman
14 position does reflect BG&E's commitment of attention
15 and resources to our nuclear operations. My sole
16 responsibility is our nuclear program and my single
17 objective is to achieve the excellence that we want
18 down there.

19 I'm on a fast track to try to familiarize
20 myself with the events of the last two years. George
21 Creel, sitting to my left, is our Vice President of
22 Nuclear Energy. He is the most experienced power
23 plant executive in our company. I have the broadest
24 regulatory background. I'm confident we'll make a
25 powerful team to lead BG&E's efforts to achieve the

1 long-range excellence of Calvert Cliffs that we will
2 demand.

3 I think by my being directly involved with
4 no other responsibilities allows us to move very
5 rapidly. An example of that was last week we
6 announced plans to strengthen our management team and
7 created a new Nuclear Outage Management Department and
8 have named Jim Lemons, to my far right, as the
9 manager.

10 I'd like now to turn things over the George
11 Creel, our Vice President of Nuclear Energy.

12 MR. CREEL: Good morning, and thanks, Chris.

13 I've been managing the Nuclear Energy
14 Division since February 1st of this year. Before that
15 I was Vice President of the Fossil Energy Division.

16 Some background on myself. I started
17 working for BG&E in 1955 and was one of the four
18 members of the original design and evaluation team
19 that lead to the building of Calvert Cliffs. George
20 McGowan was one of those four members also. I was an
21 early participant in writing the preliminary safety
22 analysis report, PSAR, and later became Chief
23 Mechanical Engineer with design responsibilities for
24 many of the Calvert Cliffs systems. I used to manage
25 the company's Production Maintenance Department which

1 included Calvert Cliffs mechanical maintenance and
2 certain plant engineering personnel.

3 I'd like to talk about where we've been,
4 particularly over the past year or so.

5 (Slide) In the past, Calvert Cliffs had a
6 good operating and performance record and we were very
7 proud members of the commercial nuclear power
8 industry. But apparently over the years a sense of
9 complacency set in. In retrospect, we see that our
10 nuclear safety awareness was not keeping up with
11 increasing expectations. Our successes in operation
12 with high capacity factors appear to have lulled us
13 into accepting the status quo with good enough in
14 nuclear safety. This complacent attitude apparently
15 led to some of the events that we were aware of. Even
16 though we took preventive measures following these
17 events, those measures were not effective.

18 (Slide) We saw indications of increased NRC
19 concern and we were very concerned ourselves last year
20 when some serious failures to comply with procedures
21 occurred. We reacted with mandatory training, heavily
22 emphasizing procedural compliance and this was
23 conducted. Management changes occurred. A new
24 Manager of Nuclear Engineering Services was named.
25 That's Charlie Cruse. A new Manager of Quality

1 Assurance and Staff Services was named. That's Bob
2 Denton. The Maintenance and Operations Department
3 were combined into a single plant organization headed
4 by our Plant Manager, Lee Russell, on my left. A new
5 General Supervisor of Design Engineering was brought
6 in and named.

7 (Slide) Nevertheless, in December '88 we
8 were put on the NRC's list of plants requiring
9 increased monitoring. This was a tremendous blow to
10 this company. We began immediately to reassess what
11 we were doing. More management and oversight changes
12 occurred.

13 As I said, I was given my present assignment
14 as Vice President of Nuclear Energy in February. The
15 previous manager of Quality Assurance agreed to put
16 off retirement and move to a consulting role and to
17 assist in our independent assessments. A senior
18 individual elsewhere in our company was brought back
19 to Calvert Cliffs. He had considerable experience, to
20 evaluate and recommend improvements for the plant
21 Operations and Safety Review Committee.

22 The Offsite Safety Review Committee charter
23 was strengthened and revised to promote a stronger
24 safety philosophy and the membership of that committee
25 has recently been made to be more independent by

1 including additional outside consultants and we
2 recently added a management representative from
3 another operating nuclear utility. It now has a
4 majority of members from offsite.

5 Recently, a new position of Maintenance
6 Superintendent was created and filled with a nuclear
7 experienced individual brought in from outside our
8 company. That man's name is Terry Camaleri.

9 Just last week, we announced that Jim Lemons
10 will be the Manager of Nuclear Outage Management. Jim
11 has recently been the Manager of Fossil Engineering
12 Services, but has extensive background, over 18 years
13 of experience at Calvert Cliffs, including Manager of
14 Nuclear Operations at one time.

15 Additionally, we're moving a BG&E employee,
16 a man named Don Graff, to a new position as Project
17 Manager of our pressurizer restoration project. More
18 about that later. Don was with Combustion Engineering
19 for over 20 years and was the Project Manager for
20 Calvert Cliffs when both of the units initially went
21 into service in the mid-70s.

22 Both of these moves are intended to give our
23 existing line managers more time to concentrate on the
24 implementation of our performance improvement plan.
25 Bob Denton will brief you later on the details of that

1 performance improvement plan.

2 In addition to all these management changes,
3 the work has been deliberately slowed down to provide
4 better control of that work. Safety and quality have
5 been and will continue to be our top priority.

6 This detailed performance improvement plan
7 was put together to determine the root causes of our
8 problems and to come up with actions to prevent
9 recurrence. We replaced one of our senior unit heads
10 in Engineering and put him in charge of that plan's
11 implementation efforts.

12 (Slide) In March, an NRC special team
13 inspection took a good look at us. They identified
14 several items that we think warrant our attention.
15 For example, we incorporated many of those special
16 team inspection concerns into our long-term
17 performance improvement plan. We put plans for
18 resolving our own concerns along with resolution of
19 our pressurizer problems and some of the short-term
20 special team inspection concerns into our agreement
21 with NRC Region I.

22 These days we are quite active and quite
23 busy. First of all, our actions to implement those
24 performance improvement plan items are our primary
25 method for achieving our number one nuclear program

1 plan goal and what that means in safety and quality.

2 Now, I just referred to what I called as our
3 nuclear program plan. I think it's important that I
4 take a moment to explain what that is and how the
5 performance improvement plan relates to it.

6 (Slide) The performance improvement plan,
7 in short, is an aggregation of actions that we're
8 taking to address problems, most of which are in the
9 areas of management expectations and communications.
10 It is a subset of what we call our nuclear problem
11 plan. The nuclear program plan is updated annually
12 and is the mechanism we use to provide nuclear program
13 input to our overall corporate business plan. In the
14 future, as our performance improvement plan reaches
15 the end of the verification process and phase and
16 accomplishes its immediate purpose, it will fade away
17 because its actions are all part of the nuclear
18 program plan for longstanding action.

19 Current status is as follows:

20 July 31st we submitted our implementation
21 plan details to the NRC.

22 August 4th, we met with NRC staff's Calvert
23 Cliffs assessment panel to discuss this background of
24 the root cause analysis process and our methodology
25 for developing the performance improvement plan.

1 Performance improvement plan developments are part of
2 our daily plant report and are discussed at daily
3 plant status meetings held in the morning.

4 Thursday afternoons are specifically
5 reserved for formal performance improvement plan
6 planning and development meetings. The meetings have
7 been held and will continue to be held specifically
8 for the purpose of insuring that all levels of
9 employees at Calvert Cliffs understand the content of
10 the performance improvement plan and their role in it.

11 Now, I recognize that the key to success of
12 this plant and to achieving and sustaining excellence
13 is effective management. Effective management entails
14 setting appropriate goals. Just as important if not
15 more so is clearly communicating those goals to our
16 employees. My experience throughout our company has
17 taught me that communications is always the most
18 challenging element of any plan of this type.

19 I know, our senior management, our line
20 managers and supervisors know that this is not a one
21 time task. By definition, we all know the hard way.
22 We will always be working to improve communications.
23 We must continually reinforce our expectations.

24 For instance, each time we make a new
25 assignment to one of our people, we've got to make

1 sure that person understands how their assignment
2 contributes to the effectiveness of our plant. As I
3 said before, Bob Denton, incidentally, will give you
4 more details on this shortly.

5 (Slide) Now, let's talk about the plant
6 itself. Both units are shut down at this time. Unit
7 number 2 is in an extended refueling outage while we
8 determine the cause of the pressurizer heater leaks.
9 We shut down Unit 1 on May 6th because of Lee
10 Russell's, our Plant Manager's concern for the
11 possible generic implication of those leaks.

12 Specifically, during one of our regularly
13 scheduled in-service inspections, we identified 28
14 heater penetrations and one instrumentation
15 penetration that had a thin film of boric acid
16 crystals on them. A project team was formed, pulled
17 together, and special emphasis was placed on not
18 destroying any of the useful evidence during the
19 course of this investigation. We chose to proceed
20 very deliberately and carefully so we wouldn't lose
21 anything along the way. An extensive review of the
22 design fabrication and maintenance has been conducted.

23 We've performed non-destructive
24 examinations, NDE, by visual, dye penetrant and eddy
25 current on 28 Unit 2 heater penetrations and we've

1 done similar things on 12 randomly selected Unit 1
2 heater penetrations. Unit 1, incidentally, showed no
3 evidence of any boric acid film on visual outside.
4 Also, and not of incidental concern, was no crack
5 indications have been found on Unit number 1.

6 On Unit number 2, as I said, ^{we} examined 28
7 sleeves visually. Ten of these showed no crack
8 indications by dye penetrant or eddy current. Fifteen
9 of these showed sleeve inside diameter crack
10 indications by dye penetrant testing and one showed a
11 J-weld indication, the J-weld being the weld made
12 between the sleeve and the interior cladding on the
13 pressurizer. One of those showed dye penetrant crack
14 indications. Six showed sleeve indications using eddy
15 current testing, two of which had not been indicated
16 on using dye penetrant testing.

17 At this point, we are not prepared to draw
18 any conclusions from these results.

19 To start getting a handle on the
20 metallography involved, we have performed last week a
21 core bore of one of these penetrations and its weld.
22 That's already been completed and it's been shipped to
23 Combustion Engineering's hot lab in Windsor,
24 Connecticut, for lab analysis. Our metallurgists will
25 participate along with that, with Combustion

1 Engineering's metallurgists.

2 In addition, two sleeves have been cut out
3 by machining below the weld area and above some
4 indications, and those have been sent out for
5 analysis. We believe that this destructive testing
6 should yield the cause, the root cause of the
7 degradation mechanism we have observed.

8 (Slide) Back to some of our other issues.
9 We requested a meeting with Bill Russell of Region I
10 on May 10th to discuss actions we were taking to
11 establish better control and firmer control of our
12 work activities. In a letter following up on that
13 meeting, we indicated we would complete these actions
14 prior to returning either of our units to service.
15 The NRC then issued a confirmatory action letter
16 confirming our commitments.

17 Some additional commitments have been made
18 during the course of this summer to close out the
19 concerns of the special team inspection report. These
20 issues are being tracked and discussed daily at plant
21 status meetings, and they are being closed out using
22 close-out packages to document how we are meeting our
23 commitments.

24 We are verifying that the commitments are
25 being made and the concerns have been appropriately

1 addressed. Our verification team includes three
2 nuclear experienced individuals, including an outside
3 consultant whose experience includes such
4 verification. They report to me.

5 (Slide) Some of the more significant items
6 involved in these things are: pressurizer
7 penetrations, as we talked about; control of systems
8 status; control of work activities; detailed level of
9 maintenance procedures for crafts; control of vendor
10 tech manuals; quality control; calibration of
11 temporary gauges; the control and use of procedures;
12 and our corrective action process.

13 (Slide) I feel the key issues to be focused
14 on at this time are the following.

15 First of all, we have to continue evaluating
16 an implementation of our performance improvement plan,
17 seeing that as each action is completed a process is
18 left in place to keep it successfully implemented.

19 We need to completely and thoroughly
20 document the close-out of the various start-up issues.

21 And we must carefully expedite a controlled
22 evaluation of the pressurizer heater problem.

23 We have to make necessary repairs to Unit 2.

24 And we have to satisfy ourselves that Unit 1
25 is safe to return to service.

1 (Slide) Let's talk about the future. My
2 vision of the future is:

3 First of all, we'll responsibly resolve the
4 pressurizer heater issue and in the process have
5 learned something that we and perhaps the entire
6 industry can benefit from.

7 We will resolve in a quality manner our
8 confirmatory action letter and special team inspection
9 short-term issues.

10 Then we're going to start up Unit 1, then
11 Unit 2 after pressurizer repairs and the refueling are
12 completed.

13 We will continue to detail the performance
14 improvement plan and its actions, and continue
15 implementation on into permanent annual nuclear
16 program plan.

17 One of our keys, we think, will be
18 improvements in self-assessment areas. We feel we
19 intend to be more active in the industry and stay
20 ahead of issues.

21 We intend to participate more in the
22 resolution of generic regulatory concerns. We
23 believe, and I think you all know, that in the past
24 years BG&E has had a strong reputation for this sort
25 of involvement.

1 In short, our intent is to be better and
2 continuously improving. Our goal is to achieve and
3 maintain event-free operation.

4 Now having said that, I'm under no delusions
5 that we've gotten there and have already cured our
6 problems. We feel it takes effort and will continue
7 to take effort, and we will continue to improve over
8 time. We think this process is dynamic and requires
9 effective feedback. We've got to monitor our
10 progress, and we think we're setting in place systems
11 to allow that feedback to monitor our progress.

12 Next step, we expect course changes. We
13 fully expect and I expect that we may have to add new
14 actions to the plan from time to time as need arises.
15 Likewise, I don't feel that we will have any
16 hesitation to drop action plans that don't prove
17 effective.

18 I'd now like to turn the briefing over to
19 Bob Denton, who's our Manager of Quality Assurance.
20 Bob will give you all more details regarding the
21 performance improvement plan itself.

22 MR. DENTON: Thank you, George.

23 (Slide) The objectives of our performance
24 improvement plan are to develop and implement actions
25 to address previously unidentified causes of

1 performance decline, to expand on performance
2 improvement actions that are already underway, to
3 improve our problem identification assessment and
4 resolution processes, and to establish a process to
5 monitor progress and redirect efforts accordingly.

6 We intend to implement the programmatic and
7 managerial changes necessary to prevent recurrence of
8 problems. As George said, we are aiming for event-
9 free operation.

10 (Slide) Performance improvement has had two
11 phases, the symptom assessment phase and the
12 implementation phase which we're in now. The symptom
13 assessment phase began earlier this year, in early
14 January, and this involved identifying root causes of
15 our performance decline and formulating corrective
16 actions.

17 To develop the root causes, we took an in-
18 depth look into past SALP reports, INPO reports, NRC
19 inspection reports, licensee event reports, QA audits
20 and an engineering assessment that was performed by a
21 consultant.

22 An emphasis was placed on daily involvement
23 of the department managers, general supervisors and
24 key first line supervisors. Such ownership, we
25 believe, is key to the success of the programs.

1 As a result of that process, we feel the
2 underlying root causes of our performance problems
3 were determined. Corresponding corrective actions
4 were developed. An April 7th submittal to the NRC
5 marked the end of that symptom assessment phase.

6 CHAIRMAN CARR: Could you run down those 11
7 root causes that you've --

8 MR. DENTON: They are submitted in the
9 performance improvement plan and I don't have that
10 with me.

11 CHAIRMAN CARR: Okay.

12 MR. DENTON: But we'll pull it out and go
13 down the list.

14 Do you have a copy there, Charlie?

15 MR. CRUSE: Yes.

16 MR. DENTON: Okay. Can we come back to
17 that?

18 CHAIRMAN CARR: Sure.

19 MR. DENTON: Okay.

20 (Slide) Since April 2nd, we made a
21 transition to the implementation phase. For each
22 action plan we have developed schedules which include
23 weekly updates, resource loading requirements and
24 verification plans. To ensure clear responsibility
25 and accountability, each plan has a plan manager who

1 reports directly to the general supervisor and the
2 department manager. From the manager down, action
3 plans are part of each person's performance objectives
4 and progress on these performance objectives is
5 documented quarterly and will be weighted heavily in
6 appraisals and pay raise decisions at the end of the
7 year.

8 MR. CREEL: Let me just make a comment at
9 this point, if I may. I personally meet with the
10 managers, that is the people at this table, to go over
11 their review to me of the performance objectives by
12 their various general supervisors and supervisors.
13 Incidentally, in our company a general supervisor is
14 what you would probably refer to as a manager in most
15 nuclear utilities. My style of working is such that
16 those things weigh heavily in a manager's actual
17 performance through the year to determine their merit
18 pay system. It's that simple.

19 Bob?

20 MR. DENTON: (Slide) Significant progress
21 has been achieved to date on some of the short-term
22 actions that we've determined. As mentioned
23 previously, the combining of the operations and
24 maintenance departments into one department in
25 September of 1988 makes a more responsive and

1 integrated team. Clearly we've placed a single
2 manager in charge of directing daily plant operations
3 and maintenance.

4 We've integrated the daily and outage work
5 activities and slowed the outage, as George mentioned
6 earlier, to focus our resources on the performance
7 improvement plan. We recognize we can't do everything
8 at once.

9 We've initiated a procedures upgrade
10 program. It's a very large effort that is leading to
11 better procedures and procedure compliance. About 15
12 percent of our administrative and implementing
13 procedures have been upgraded to date and the ones
14 that are most important to safety have been addressed
15 first. As I mentioned, the procedures upgrade program
16 is a major program and we recognize that we still have
17 a long way to go with that.

18 We've moved the system engineer organization
19 inside the fence, inside the protected area, closer to
20 the maintenance and operations area, and better
21 defined their job description and developed and
22 implemented an excellent system engineer training
23 program.

24 An engineering planning system has been
25 established to support a work flow consistent with

1 plant priorities for facility modifications and other
2 engineering tasks that support the plant department.
3 The priorities for the plant modifications are
4 weighted to ensure consistency with our division
5 goals.

6 The performance improvement plan consists of
7 about 30 action plans and they range from very large
8 projects, such as the procedure upgrade I just
9 mentioned, and the nuclear information project, and over
10 the life of those two projects will represent about a
11 \$100 million investment. They range to much less
12 resource intensive action plans which will also have a
13 major effect on the way we do business.

14 (Slide) This slide lists seven of the
15 programs we're putting in place or improving. Team
16 building workshops are being designed to reduce
17 conflict between interdependent work groups. A
18 communications plan has been developed to make people
19 aware of nuclear program goals and to ensure that
20 expectations of work practices are understood.

21 Quality circles are being established to
22 enhance safety performance and teamwork and to build
23 morale.

24 Leadership conferences are underway to
25 improve basic leadership skills and improve leadership

1 effectiveness at Calvert Cliffs.

2 The accuracy and timeliness of review of
3 technical manuals is being improved through the
4 application of extra engineering resources. This will
5 ensure that proper references are available for
6 maintenance and operations to accurately perform their
7 work.

8 Additional root cause analysis capabilities
9 are being developed and centralized for event analysis
10 and failure analysis and an INPO-based human
11 performance evaluation system is being put in place to
12 assist us in identifying nuclear safety concerns and
13 to reduce the potential for human error.

14 MR. CREEL: Just another brief comment for
15 myself at this point. My experience with these sort
16 of things is that plans of this type are worthless
17 without active management participation, without
18 management reinforcement and continual training and
19 communications of expectations to all levels. That
20 has been clearly transmitted and we are actively
21 working on that at this point. I want to make that
22 point with you all at this time.

23 MR. DENTON: (Slide) Part of the plan
24 includes a verification process and that process has
25 several goals. That's to monitor the action plan

1 progress as we put them in place, to assess
2 performance improvement plan effectiveness and to
3 confirm improved self-assessment actions.

4 As George mentioned earlier, the
5 verification process feeds into the nuclear program
6 plan and can offer mid-course correction
7 recommendations to management, confirmation of
8 satisfactory performance and feedback to management on
9 the achievement of the expectations set forth in the
10 action plan. The plan is flexible. If we find
11 certain action plans to be ineffective, they can be
12 modified or deleted. If we need new initiatives, we
13 can put them in place.

14 COMMISSIONER ROGERS: Just before you go off
15 that --

16 MR. DENTON: Yes, sir.

17 COMMISSIONER ROGERS: The monitoring and
18 assessment functions of the verification process, are
19 they centralized organizationally or are they -- is
20 that function broken up and distributed among the
21 different plan components?

22 MR. DENTON: The bulk of the verification
23 process will be a vertical slice assessment, type
24 assessment. And that will be centralized in our
25 audits area, but we expect to have involvement from

1 consulting and outside experts. But it will be
2 centralized under our single area in auditing.

3 A last comment on the performance
4 improvement plan. It's not a one-time project. It's
5 designed to change the way we do business and we're
6 installing the controls and incentives to make sure
7 that that happens.

8 Back to your question, sir, on the listing
9 of the 11 root causes is found in the April 7th
10 submittal and is reiterated in the most recent
11 submittal.

12 The first one is insufficient expectations
13 and performance standards.

14 The second one is insufficient
15 accountability.

16 The third is insufficient vertical and
17 horizontal communications.

18 The fourth is insufficient communication of
19 vision, direction and performance expectations by
20 senior management.

21 The fifth is an insufficient definition of
22 interdepartmental roles, interfaces and
23 responsibilities.

24 The sixth is insufficient planning.

25 The seventh, insufficient depth of

1 assessment and root cause analysis.

2 The eighth, insufficient monitoring, follow-
3 up and trending.

4 Nine, insufficient issue discovery.

5 Ten is insufficient scheduling and
6 prioritization.

7 And the 11th and last one is an insufficient
8 resource allocation.

9 That's the basic list of the underlying root
10 causes that we set forth.

11 I'd like to turn the presentation back over
12 to Mr. McGowan.

13 MR. MCGOWAN: Thank you, Bob.

14 I'd like to just briefly discuss three areas
15 in which you have recently expressed an interest and
16 some concern.

17 (Slide) First the area of diversification
18 and more specifically BG&E's diversification. A few
19 years ago, we looked at the future and decided that
20 the electric and gas utility industries in our
21 particular area could no longer expect the long-term
22 growth rates that we thought were necessary and which
23 we'd experienced in recent years. We looked elsewhere
24 for sufficient growth to meet the expectations of our
25 investors and we thus diversified, launching a group

1 of subsidiaries, led by Constellation Holdings, that
2 have had a full-time senior management organization in
3 place since 1985.

4 Chris Poindexter was chosen to be the
5 President of Constellation Holdings based on his
6 excellent leadership and management skills. He
7 obviously also had a strong nuclear background that
8 you're quite aware of by now. I want to assure you
9 that utility operations and particularly nuclear
10 utility operations have not and are not being
11 adversely affected by Constellation Holdings.

12 While Chris Poindexter did have a lot of
13 nuclear background and experience, he did not have any
14 responsibility for the operation of Calvert Cliffs at
15 the time of his reassignment. Chris has been a member
16 of the BG&E Board of Directors and a member of the
17 BG&E Board's Committee on Nuclear Power. By the way,
18 we have had a Board committee addressing the specific
19 issue of nuclear power since May of 1984. Chris is a
20 regular participant in weekly management committee
21 meetings where nuclear issues are discussed and he has
22 been -- I said is, and has been in that role for some
23 time. In fact, throughout his entire career at
24 Constellation.

25 Positions in Constellation Holdings are

1 generally filled by outside personnel, that is not
2 former utility people, who are experienced in the
3 particular business area in which their talents are
4 needed. No utility nuclear people were pulled from
5 Calvert Cliffs and put into Constellation.

6 Utility operations in general have always
7 been and will continue to be at the core of our BG&E
8 activities. Our utility business is still our core
9 business.

10 (Slide) Now, shifting a bit to state
11 regulatory matters. The Maryland Public Service
12 Commission has implemented a generating unit
13 performance program which became effective on July 9th
14 of 1988. This program focuses on the overall
15 performance of a utility system of its baseload
16 generating units. If the combined utility performance
17 falls below a baseload system target, individual
18 targets for baseload units are activated. A company
19 must then demonstrate prudence on those specific units
20 which have not met targets. Failure to meet or exceed
21 targets does not result in any automatic penalties,
22 but is factored into the normal fuel rate adjustment
23 process. No credit for good performance is
24 accumulated. This program is based on availability
25 factors for fossil units and capacity factors for

1 nuclear units. And obviously because of the size of
2 our system and the mix of our system, Calvert Cliffs
3 does dominate our system target.

4 We have been denied the collection of
5 significant dollars in replacement energy costs from
6 our rate payers over the years. We do not expect that
7 these performance programs will effect this situation
8 dramatically, except to give it a more objective
9 framework.

10 I certainly want to assure you this morning
11 that as Chief Executive Officer of this company, we
12 will take whatever actions are necessary to keep
13 Calvert Cliffs safe regardless of the results of the
14 Public Service Commission's program.

15 (Slide) We've also noted your concerns
16 regarding the perceived inconsistency between the
17 OSART evaluation of 1987 and the NRC's assessment of
18 our performance. We feel that both the NRC and OSART
19 were accurate for their purposes. Although the OSART
20 results were generally favorable, there were 36
21 recommendations and suggestions. OSART took a hard
22 look at general approaches to doing business in
23 several different areas, while I believe the NRC
24 concentrates more on actual compliance with
25 regulations and commitments.

1 (Slide) Now I'd like to make a few closing
2 remarks. We are placing safety and quality ahead of
3 production. We are doing a thorough job of closing
4 and verifying our commitments. Before we start up, we
5 will be satisfied that we are ready to start up. We
6 are convinced that putting safety and quality first
7 will lead to more effective production for the long-
8 term.

9 We are willing to commit adequate resources
10 to Calvert Cliffs. We have significantly increased
11 our budget and authorized complement increases.

12 We have put three new department managers
13 into key positions at the plant. We put a very
14 capable Vice President in charge of our Nuclear Energy
15 Division early this year, an individual with a very
16 successful record. We created a new management
17 position within the Nuclear Division, our Maintenance
18 Superintendent, and filled that position with a highly
19 qualified person from outside of BG&E. Just recently
20 we have created a new Nuclear Outage Management
21 Department headed by the former Manager of Nuclear
22 Operations, and we have created the Vice Chairman
23 position, giving him Calvert Cliffs as his only
24 priority at this time.

25 Let me pause for a moment and say that these

1 are a lot of changes that have taken place, some of
2 them quite recently. That's not by happenstance. We
3 have been going through a thorough process of self-
4 evaluation and certainly of NRC evaluation of what our
5 situation is. We think we have digested that rather
6 well at the moment. We have a plan and now we want to
7 implement it. To do that we think we needed to make
8 some of the changes that we've just made. So, those
9 changes have been under consideration and have been
10 given a lot of thought for some time. We think the
11 time was ripe now to make some of those changes which
12 we've just announced.

13 In addition, I'd like to mention two major
14 capital improvements. We have recently committed \$77
15 million for two full-sized additional diesel
16 generators and all the support structures and spare
17 parts to raise the diesel generator reliability at
18 Calvert Cliffs. This issue has been a source of
19 problems with station blackout concerns and Calvert
20 Cliffs has historically been on the borderline in this
21 area.

22 This fall we will submit an application to
23 build an independent spent fuel storage installation.
24 We have selected the new homes design similar to those
25 at the H.B. Robinson and Aconi power stations. We

1 anticipate beginning construction in the fall of 1990
2 with facility operations beginning in 1992.

3 Our number one goal for Calvert Cliffs is to
4 improve safety and quality. Our performance
5 improvement plan is one of our vehicles for achieving
6 that. The plan is very detailed, was well thought
7 out. It will have a significant positive impact on
8 the way we do business. Implementation of the
9 performance improvement plan has top priority in the
10 company and let me say that we recognize that plans
11 are only as effective as they are implemented. We are
12 very serious about achieving a high level of
13 excellence at Calvert Cliffs. We will be satisfied
14 with nothing less.

15 I want to thank you very much for your
16 attention and we will be happy to answer any questions
17 you may have.

18 CHAIRMAN CARR: Thank you, Mr. McGowan.

19 Commissioner Roberts?

20 COMMISSIONER ROBERTS: Who fabricated the
21 pressurizer?

22 MR. CREEL: Combustion Engineering.

23 COMMISSIONER ROBERTS: Where?

24 MR. CREEL: In Chattanooga.

25 COMMISSIONER ROBERTS: Chattanooga?

1 MR. CREEL: Chattanooga.

2 COMMISSIONER ROBERTS: Are you buying power
3 now?

4 MR. MCGOWAN: We have been buying power this
5 summer, that's right.

6 COMMISSIONER ROBERTS: What is the makeup of
7 the Maryland Public Service Commission? Is it elected
8 or appointed?

9 MR. MCGOWAN: It's appointed with --

10 COMMISSIONER ROBERTS: By the governor?

11 MR. MCGOWAN: It's appointed by the governor
12 with confirmation by the state senate.

13 COMMISSIONER ROBERTS: What percentage of
14 the geographic percentage of the state of Maryland is
15 your service area, roughly?

16 MR. MCGOWAN: About a third.

17 COMMISSIONER ROBERTS: Well, I think you've
18 been quite candid. I remember vividly visiting
19 Calvert Cliffs, good Lord, six or seven years ago, and
20 thinking what a terrific plant it was. An older
21 plant, but it was clean and well maintained and I
22 encourage you to accomplish your stated objectives.

23 That's all I have.

24 CHAIRMAN CARR: Commissioner Rogers?

25 COMMISSIONER ROGERS: Yes. I take it from

1 the date that you gave of fall 1990 construction on
2 the dry vault spent fuel storage facility that you
3 have gotten the -- that the NRC review of the topical
4 report has been completed?

5 MR. CRUSE: That's correct and we expect to
6 submit a license application this fall.

7 COMMISSIONER ROGERS: When was that
8 completed? I didn't know whether that had been
9 finished or not. I was going to ask the wrong people.

10 MR. CRUSE: I can't give you a date, but
11 basically it's already in operation at Carolina Power
12 and Light with the seven --

13 COMMISSIONER ROGERS: No, I know. Yes, I
14 know they have, yes. Okay.

15 I was pleased to hear about your decision on
16 the diesel generators. When was that decision made to
17 commit that \$77 million?

18 MR. MCGOWAN: Three or four months ago.
19 Obviously under a lot of study and consideration for
20 probably three or four months prior to that.

21 COMMISSIONER ROGERS: Right.

22 MR. MCGOWAN: But that has been approved by
23 our Board and is --

24 COMMISSIONER ROBERTS: Is that recoverable?

25 MR. CRUSE: It's capitalized.

1 MR. MCGOWAN: It's capitalized.

2 COMMISSIONER ROBERTS: Sure.

3 MR. MCGOWAN: We have three diesels, as you
4 probably are aware --

5 COMMISSIONER ROGERS: Yes.

6 MR. MCGOWAN: -- with one serving as a swing
7 diesel.

8 COMMISSIONER ROGERS: Right. Well, I think
9 that was a very important move.

10 The question of what additional hardware
11 that you are considering to take care of the decay
12 heat removal problem with mid-loop operation, where
13 does that stand?

14 MR. MCGOWAN: Charlie will discuss anything
15 we've got going on now.

16 MR. CRUSE: Well, I'm really not prepared to
17 give you details on that right now. Maybe -- I don't
18 know if Lee has any information.

19 MR. RUSSELL: The redundant remote level
20 indication, I believe, is scheduled to be completed by
21 the end of this year.

22 MR. CRUSE: Right. We're doing tests this
23 summer to identify it.

24 MR. RUSSELL: We've completed the test on
25 the vortexing level and --

1 COMMISSIONER ROGERS: But you haven't
2 settled yet on that, just how you're going to deal
3 with that issue totally, is that it?

4 MR. RUSSELL: That's correct.

5 MR. CRUSE: Not totally, no. We need to get
6 the results of the tests that are being run.

7 MR. CREEL: I don't believe we've submitted
8 the results of those tests to the Commission yet. Am
9 I correct on that?

10 MR. RUSSELL: I believe so.

11 COMMISSIONER ROGERS: Do you have a
12 contemplated date on which you'd make that decision of
13 what additional hardware would be required and that
14 you plan to put in place?

15 MR. RUSSELL: That would be done within--
16 by September some time.

17 COMMISSIONER ROGERS: By September this
18 year?

19 MR. MCGOWAN: The determination of what's
20 needed.

21 MR. RUSSELL: The determination of what's
22 needed, yes.

23 COMMISSIONER ROGERS: But then you may have
24 to make a corporate decision on that? But that would
25 be fairly promptly --

1 MR. MCGOWAN: I think no problem, yes.
2 We've seen that coming down the track. That's not a
3 surprise item at all.

4 COMMISSIONER ROGERS: Well, I just want to
5 say that I was out to visit you folks recently, I
6 guess, just shortly before Poindexter's appointment
7 was made public. I found it a very interesting visit
8 and a very good looking plant. I met, as you know,
9 with a number of the folks that are at the table here
10 and I found that your attitudes and plans were very
11 impressive and that you are fully appreciative of what
12 you want to accomplish and how you intend to do it.

13 I still had a little bit of a question about
14 how -- to what extent everybody in the organization
15 down to the lowest levels really believes it was a
16 serious problem.

17 MR. CREEL: I'd like to comment on that. I
18 think that's always a concern. As I told you at the
19 time, Commissioner Rogers, just about every
20 organization I've worked in, vertical as well as
21 horizontal communications is a difficult process. In
22 order to address that, rather than just talk about it,
23 many of us spent a significant amount of our time, for
24 example myself personally spent a significant amount
25 of my time not only talking to people like the

1 managers here. I probably spend more time in direct
2 meetings with people at the lowest craft levels,
3 operator level, HP technician level, as well as
4 intermediate organizations.

5 Each of these managers have a series of
6 program objectives involving what we call focus
7 meetings which are three tier communications process.
8 That is work and my experience is it has to be worked
9 at continuously.

10 To answer your question directly, I don't
11 think we've totally been successful in getting that
12 message to everywhere in the organization, nor will we
13 probably ever totally be there. The job is to work at
14 it and see that our expectations of it are transmitted
15 accordingly. I think we're getting there. I see a
16 lot of improvement. I see a lot of behavioral and
17 attitudinal things that I feel better about today than
18 I did three or four months ago, but it takes some work
19 and we're working at it.

20 MR. POINDEXTER: I would like to add that I
21 intend to make that a high priority of mine also.
22 George and I were talking driving over here how I can
23 best leverage my time in playing that role of
24 communications.

25 COMMISSIONER ROGERS: It's the biggest

1 problem for people who have been successful in the
2 past, biggest problem.

3 MR. CREEL: Well, I think any good
4 organization goes through a period of time called
5 denial. I think we've passed that early in the year
6 and I think we're at the point now where our
7 organization recognizes that the problems that we have
8 at Calvert Cliffs are problems that we have to work on
9 and we cannot attribute those to others. I think
10 we're getting that message across.

11 COMMISSIONER ROGERS: Good. Well, good luck
12 to you.

13 MR. CREEL: Thank you.

14 CHAIRMAN CARR: Commissioner Curtiss?

15 COMMISSIONER CURTISS: I have four areas
16 that I want to cover.

17 Back to the root cause question. You took
18 the 11 root causes that you've identified and looked
19 at those for any common trend. Beyond the general
20 observation that some complacency may have set in in
21 recent years, is there something that jumps out at you
22 in more detail that suggests a common root cause?

23 MR. DENTON: Yes. When we look at the 11
24 and look at the field of symptoms and individual
25 corrective actions that we studied, there were about

1 400 of those, it was apparent that there were three
2 major groupings of root cause. Those groupings tend
3 to be grouped under insufficiency in management
4 setting of expectations, performance standards and
5 holding people accountable for those standards.

6 The second major grouping is insufficient
7 ability to perform self-assessment and problem
8 correction.

9 The third is an insufficient application of
10 resource.

11 MR. POINDEXTER: I'd like to say, having
12 looked at this after it was all developed, that my
13 observation is that maybe you'd have to add attitude
14 as an overlying reason for some of these things too.

15 MR. CREEL: Well, clearly, our opinion, and
16 that's what it is because this a very subjective
17 process -- our opinion is that the first one that Bob
18 Denton listed, which is management expectations and
19 performance accountability and things of that sort not
20 being well transmitted, umbrellas the major thing, and
21 with that goes my personal assessment. With that goes
22 the communication of that well. Then how we account
23 for that at the end of the process. That's the way I
24 summarize them.

25 COMMISSIONER CURTISS: On the issue of the

1 employee turnover and management changes in the
2 organization, a number of the changes that you've made
3 are obviously self-initiated by the utility addressing
4 areas where you think you need to beef up or change
5 out personnel. Beyond that, are you seeing recently
6 any attrition in your employee personnel in key
7 positions that would be of concern?

8 MR. CREEL: I'll comment on that.

9 MR. MCGOWAN: I think George can comment on
10 that.

11 MR. CREEL: Well, my observation is that
12 Calvert Cliffs probably has had historically very low
13 turnover for a nuclear utility. I can't give you
14 numbers, so if you ask me that I'd be kidding you. I
15 can't give you those. But our observation is the
16 turnover at all levels at Calvert Cliffs has been
17 relatively low. We do not see any great increase in
18 turnover of key individuals. We see occasional
19 sporadic people moving in, people moving out. We are
20 hiring a substantial number of people. We have
21 occasional resignations.

22 Very frankly, my assessment when I moved
23 down there is that I would expect to see more turnover
24 than we've seen so far. My expectations are that we
25 may still see some more turnover. But none of it, in

1 my opinion, so far appears to be damaging.

2 For example, we appear not to have the level
3 of turnover in licensed operators and in key ~~INC~~^{key}
4 technicians or high-level technical supervision that
5 some utilities seem to struggle with. That could
6 occur, but we don't see it yet.

7 MR. MCGOWAN: Just to add a clarifying
8 point, we did experience during the early days of our
9 operation some of the heavy turnovers that everybody
10 was experiencing. A lot of plants were coming on line
11 and a lot --

12 COMMISSIONER ROBERTS: They were taking your
13 employees.

14 MR. MCGOWAN: That's right. I don't want to
15 mislead you, we had some problems back in those days.
16 But in recent years, we've not seen that.

17 COMMISSIONER CURTISS: What I guess I'm
18 getting at is whether you see a morale problem
19 creeping in as you attempt to recover from the
20 situation that you're in, whether that's leading to
21 any employee attrition. I gather what you're saying
22 is that you don't see that problem, at least right
23 now.

24 MR. CREEL: We have a morale problem of
25 sorts that revolves around a bunch of good people that

1 really want to do a job and are ready to do a job and
2 part of our job is to convince them that they've got
3 to do it slightly different. So, we have to redirect
4 and refocus their actions. And we're now at the stage
5 where we're ready to put together some good plans to
6 get these units started up again and running, the
7 right way.

8 COMMISSIONER CURTISS: Okay. Third
9 question. On the Unit 2 pressurizer, I gather from
10 what you've said that you haven't seen any of the
11 problems in the Unit 1 pressurizer crop up from the
12 testing that you've done.

13 MR. CREEL: That's correct.

14 COMMISSIONER CURTISS: Is there anything
15 different about those pressurizers that would suggest
16 that the problems that you see at the Unit 2
17 pressurizer shouldn't come up at Unit 1?

18 MR. CREEL: At this point we see no obvious
19 thing that just leaps out and strikes you between the
20 eyes and said, "This is an obvious difference between
21 these two pressurizers and their sleeves or their
22 method of operation or chemistry," and things of that
23 sort. We are looking for such a thing and nothing
24 obvious has leaped out at this point.

25 COMMISSIONER CURTISS: On the arrangement

1 with the PSC, I have three questions. What are the
2 baseload and the individual plant targets under that
3 agreement?

4 MR. MCGOWAN: They are set by the
5 Commission. They vary and they're based upon other
6 similar sized units. They're based on data that's
7 collected by NARC, the North American Reliability
8 Council. Those vary from year to year, based upon
9 what the industry average might be.

10 COMMISSIONER CURTISS: Can you give us an
11 idea as to what the targets are this year?

12 MR. MCGOWAN: I don't know that there has
13 been an agreed to target this year. I can give you
14 what our system targets were for 1988, for example,
15 59.8 percent.

16 COMMISSIONER CURTISS: That's for system?

17 MR. MCGOWAN: System. System target. We do
18 not have an agreed upon target for 1989.

19 COMMISSIONER CURTISS: What was the nuclear
20 plant target for '88?

21 MR. CREEL: I don't recall.

22 MR. MCGOWAN: I don't recall that number. I
23 can certainly get it for you.

24 MR. CREEL: I think it was in the 60s.

25 MR. MCGOWAN: I think it was in the high

1 60s.

2 COMMISSIONER CURTISS: All right. If you
3 could get that figure, I'd be interested in it.

4 MR. MCGOWAN: All right.

5 MR. CREEL: We can get that.

6 COMMISSIONER CURTISS: Final question. Do
7 you know off the top of your head how much has been
8 withheld under that arrangement over the years?

9 MR. MCGOWAN: Not off the top of my head
10 because it's come in a lot of bites. We've had a
11 multitude of brief mini-outages for various reasons.
12 We've been denied recoverability of those in some
13 cases, not in all. But I could get that number for
14 you.

15 COMMISSIONER CURTISS: I'd be curious to see
16 the figures, if you could.

17 MR. MCGOWAN: Okay. Sure.

18 COMMISSIONER CURTISS: Thank you.

19 COMMISSIONER ROGERS: I don't want to follow
20 this too deeply because of time, but that 59.8 percent
21 number looks to me like it must come from a formula of
22 some sort. You don't set a policy of 59.8 percent.

23 MR. CREEL: Let me describe it. It's
24 arrived at by a mutually agreed upon technique between
25 ourselves and the other Maryland utilities, including

1 PEPCO, Delmarva, and ourselves and the Maryland
2 Commission. It is a formula. It uses a regression
3 analysis technique by NERA who looks at common
4 characteristics of the nuclear and the fossil units,
5 does a regression analysis, and develops targets with
6 a plus and minus dead band about those targets.

7 So, individual targets are set based on the
8 characteristics of the units. For example, Calvert
9 Cliffs is such and such an age PWR, CE, built in such
10 and such a year, and that's how the regression
11 analysis works.

12 MR. MCGOWAN: But they build it off of NERC
13 data, don't they?

14 MR. CREEL: They build it off of NERC data
15 and the analysis is done by regression analysis to
16 comparator units nationally.

17 COMMISSIONER CURTISS: That's all I have.

18 COMMISSIONER ROGERS: Thank you.

19 CHAIRMAN CARR: On your combination of your
20 operations and maintenance, my understanding is you
21 combined those under a single manager?

22 MR. MCGOWAN: Yes.

23 CHAIRMAN CARR: But I assume you've got a
24 superintendent for Ops and a superintendent for -- so,
25 did you just add a layer of management?

1 MR. MCGOWAN: We have added a general
2 superintendent for maintenance --

3 MR. CREEL: Yes.

4 MR. MCGOWAN: -- more recently.

5 George, you may want to discuss that.

6 MR. CREEL: Yes. We added deliberately
7 another layer of management in order to reduce the
8 number of direct reports to Lee Russell as Plant
9 Manager. The plant manager of an operating nuclear
10 plant, in my opinion, has to spend an awful lot of
11 time in technical issues, reviewing things and that
12 sort. So, we wanted a maintenance person, a single
13 one that reported to the plant manager, responsible
14 for all mechanical, INC electrical as well as certain
15 modification work that we do with our own maintenance
16 forces.

17 CHAIRMAN CARR: But he doesn't report to the
18 plant manager, the maintenance sup. doesn't.

19 MR. CREEL: Yes, he does.

20 MR. RUSSELL: We did not add a layer in the
21 operations area.

22 MR. CREEL: No. To recap, you have the
23 plant manager and you have a superintendent of
24 maintenance and you have a general supervisor of
25 nuclear operations, equivalent levels reporting to the

1 plant manager.

2 CHAIRMAN CARR: How was it before?

3 MR. RUSSELL: We had a manager of
4 maintenance and basically the superintendent has
5 replaced that manager of maintenance.

6 CHAIRMAN CARR: So now you just call him
7 maintenance superintendent instead of a maintenance
8 manager, but he's a different guy.

9 MR. RUSSELL: He's a different guy and it
10 resulted in an additional layer.

11 MR. POINDEXTER: And he reports to Lee.

12 MR. RUSSELL: And he reports directly to me.

13 MR. MCGOWAN: Previously, that nuclear
14 manager reported to the Vice President. Now he
15 reports to --

16 CHAIRMAN CARR: Well, when we're all
17 through, I'm not sure what I learned. How about going
18 over it again for me.

19 MR. CREEL: Let's start back.

20 CHAIRMAN CARR: Okay.

21 MR. CREEL: At one point in time, Calvert
22 Cliffs had an organization last summer, the summer of
23 '88 or prior to the summer of '88, that had a manager
24 of nuclear operations and a manager of nuclear
25 maintenance, each of whom individually reported by

1 line organization to the Vice President. The manager
2 of nuclear operations --

3 CHAIRMAN CARR: Where was the plant manager
4 in that chain?

5 MR. CREEL: The plant manager was the
6 equivalent of the manager of nuclear operations. In
7 order to reduce that force of confusion that some
8 people had on the role of manager of nuclear
9 operations, those two departments were eliminated and
10 amalgamated into one, called the Plant Department,
11 headed by the plant manager. That was done last
12 summer.

13 Now, the most recent thing we did in the
14 spring of this year was to then under the plant
15 manager put back in place lower level a maintenance
16 superintendent reporting to the plant manager.

17 CHAIRMAN CARR: And so under the plant
18 manager we now have a maintenance superintendent and a
19 superintendent for operations.

20 MR. RUSSELL: That's correct.

21 CHAIRMAN CARR: I understand that then.

22 In your root cause, it's long been an
23 experience of mine that there's basically just three
24 root causes, lack of knowledge, I mean something you
25 didn't know was going on, lack of effort or a lack of

1 follow-up. It sounds like you fit there all right.

2 In retrospect, what are the lessons learned?
3 I mean if you go back three, four, five years, what
4 would you not do that you did? It looks like you took
5 a successful management team and brought it back in
6 your description today. In retrospect, did you
7 dissolve a successful management team?

8 MR. MCGOWAN: Certainly not knowingly.

9 CHAIRMAN CARR: Well, but I mean we can look
10 backwards now.

11 MR. MCGOWAN: Nor do I think we dissolved a
12 successful management team.

13 CHAIRMAN CARR: Maybe I should say scattered
14 it.

15 MR. MCGOWAN: Well, we may have done a
16 little bit of scattering, but I don't think that
17 really is what lead to our problem. I think it goes
18 back to my earlier comments that I believe the
19 expectations were rising, both your expectations as a
20 Commission and industry's expectations in general. I
21 don't think we were keeping pace with that rise.

22 CHAIRMAN CARR: Well, but that would lead me
23 to think that you think you were today or yesterday or
24 whenever where you were three or four years ago and
25 the standards have changed. I don't know whether I

1 concur with that or not.

2 MR. MCGOWAN: I don't think the standards
3 have changed, but I do think the expectations, the
4 margins I think have increased. I think we all today
5 are looking to operate our plants with more margin
6 above the standards.

7 CHAIRMAN CARR: Well, I'm uneasy with that
8 and I was uneasy also with the kind of -- when you got
9 to your complacency set in chart, there was another
10 word added in there. It said, "Apparently complacency
11 set in." It said, "Apparently we were lulled into and
12 apparently we were led to," which sounded to me like
13 there's still some doubt in somebody's mind.

14 MR. MCGOWAN: There's no doubt in my mind.

15 MR. CREEL: No, there's no doubt in our
16 minds on that at all. That is a retrospective look,
17 by the use of the word "apparently."

18 CHAIRMAN CARR: Well, what I'm trying to get
19 back to is let's go back to where you were and say,
20 "Okay, how did it happen, what did we do wrong, so
21 that now I know we can recognize it and not do it
22 wrong again?"

23 MR. MCGOWAN: Well, I believe that we
24 recognize, certainly I recognized two to three years
25 ago that we had a degree of complacency setting in.

1 As I visited the plant, as I talked to people, as I
2 looked at reports, and I went to the plant on a couple
3 of occasions and I talked to -- not every soul, but I
4 talked to certainly the top echelon of people in the
5 plant and communicated my concerns. We get back to
6 the whole issue of communication. I'm not so sure
7 they believed what I had to say. I don't fault them
8 for that. Maybe I didn't say it forcefully enough.

9 But I think I saw at that time that there
10 was a slippage setting in and obviously we didn't
11 attack it as effectively as we should have.

12 CHAIRMAN CARR: Well, for instance the SALP
13 and the OSART both agreed in one area, maintenance.
14 Both of them implied maintenance wasn't doing very
15 well. I visited in, I guess, December '87 and at that
16 visit I said maintenance doesn't look -- they both
17 told you maintenance is not doing very well. Well,
18 two years later we say, "Maintenance isn't very well."
19 So, obviously, they're weren't listening or they
20 weren't taking action, one or the other.

21 MR. MCGOWAN: Well, I think it was the
22 latter that was --

23 CHAIRMAN CARR: Well, I would suggest you
24 have a lessons learned look at this thing. So,
25 whatever it is you learn, you don't have to do it all

1 over again in six or eight years from now. I don't
2 know. Maybe you've already done that.

3 MR. MCGOWAN: We are constantly in that
4 process as we go from step to step of looking back
5 and --

6 CHAIRMAN CARR: But it's a shame to go
7 through this kind of a wrenching experience if you
8 could think, "Boy, if I'd just done it a little
9 different, we wouldn't be here." I'm trying to figure
10 out where that decision could have been made and what
11 maybe it would have been. Not just necessarily for
12 me, but that's an experience you can share with
13 somebody else.

14 MR. MCGOWAN: Absolutely.

15 CHAIRMAN CARR: Because you're not the only
16 plant like this, you know. One of the first keys to
17 complacency is you have a record run. That's what I
18 told the last guy that was in here. That should have
19 been your first clue. When you step down from a
20 record run, you've set the stage for complacency to
21 set in.

22 MR. MCGOWAN: We have never made a major
23 issue of record runs.

24 CHAIRMAN CARR: No, you don't have to.

25 MR. MCGOWAN: But you're right. I don't

1 disagree with your observations.

2 CHAIRMAN CARR: You know, there's Cresswell
3 or B&W will come along or somebody will give you an
4 award always for making a record run.

5 MR. MCGOWAN: Oh, yes, exactly.

6 CHAIRMAN CARR: I mean it's not going to go
7 without recognition.

8 MR. MCGOWAN: Of course not.

9 CHAIRMAN CARR: I don't think I have any
10 other questions.

11 You all?

12 COMMISSIONER ROGERS: No.

13 CHAIRMAN CARR: Thank you very much. We
14 appreciate your being in.

15 MR. MCGOWAN: Thank you very much.

16 CHAIRMAN CARR: That pressurizer problem is
17 a tough problem.

18 MR. MCGOWAN: If it's a concern and of
19 appropriate interest to you, we will --

20 CHAIRMAN CARR: And of course we'll be
21 interested in a possible generic problem.

22 MR. MCGOWAN: Exactly.

23 CHAIRMAN CARR: Mr. Taylor, you may proceed.

24 MR. TAYLOR: Good morning, Mr. Chairman.

25 With me at the table today, to my left, Jim

1 Partlow, Associate Director of Projects from NRR.
2 Next to him, Bruce Boger, who is the Associate
3 Director for Region I Plants. The far left, Scott
4 McNeil who is the Project Manager for Calvert Cliffs.
5 To my right, of course, is Bill Russell, Region
6 Administration; and to his right is Dave Limroth who
7 is the Acting Senior Resident at Calvert Cliffs at
8 this time.

9 Since the staff identified Calvert Cliffs as
10 a station requiring close Agency-wide monitoring, we
11 have indeed increased our attention to what has been
12 going on at Calvert Cliffs and we'll lay that out for
13 you today starting with Bill Russell to be followed by
14 Bruce Boger.

15 So, Bill, I'll turn to you.

16 MR. RUSSELL: Okay. I'd like to set the
17 stage first with a little bit of background.

18 On December 16th, senior managers did
19 identify Calvert Cliffs as a station requiring close
20 Agency-wide monitoring. The reasons for that were, to
21 some extent, engineering issues that we have been
22 discussing related to equipment qualification,
23 material control accountability, volting issues, some
24 problems we had seen with evaluations of root causes
25 of auxiliary feed water system reliability.

1 But more importantly, in the late summer or
2 fall of 1988, we observed procedural adherence
3 problems that resulted in improper surveillance
4 activities on emergency diesel generators that
5 resulted in one generator being unavailable; a reactor
6 start-up with an improperly aligned temperature
7 instrumentation, which is used for measuring what we
8 call delta T power, with low nuclear instrumentation
9 gains; and culminated in an event associated with
10 repair to a condensate storage tank level indicator
11 that resulted in a fatality of a diver.

12 We had had, prior to that time, two meetings
13 at the executive director level with the company. We
14 met again on December 20th with the EDO, and at that
15 meeting Mr. Stello requested Mr. McGowan to develop a
16 comprehensive plan to turn around the declining
17 performance. Our concern principally was one that we
18 had seen a decline in performance. We had not gotten
19 to the point where we had concerns about continued
20 operation of the facility, but the trends were not
21 being turned around.

22 In April, they submitted their performance
23 improvement plan identifying the root causes as the
24 licensee has discussed. That plan is intended not
25 only to address the root causes, but describe their

1 overall strategy for improvement, the specific actions
2 that they're going to be taking, and the mechanisms
3 that they're going to use to affirm through a self-
4 assessment process that the actions are adequate.

5 We have developed a panel, joint Region I
6 and NRR panel, that is headed up by Bruce Boger, the
7 Assistant Director for Region I Projects, and Bruce
8 will be discussing that panel review process. As the
9 company has indicated, we've had one meeting with the
10 company on that.

11 The company has, at the end of July,
12 submitted their detailed implementation plans for the
13 overall performance improvement program.

14 However, in parallel with these activities
15 of developing the plan, we noted a continuing problem
16 with adherence to procedures. There were some
17 instances of operator error associated with valve
18 alignments and missteps in procedure that nearly lost
19 a condenser vacuum and could have caused a unit trip.
20 We had a number of instances, three I believe, in the
21 March time frame related to surveillance testing or
22 other personnel errors that related to engineered
23 safeguard feature actuations, one of which resulted in
24 injection into the vessel.

25 These events were of lesser safety

1 significance than the ones that had occurred in the
2 summertime which resulted in the civil penalty actions
3 and the plant being placed on the NRC watch list, but
4 they were still of concern because they were
5 continuing.

6 Then in April, we identified concerns with
7 work control and tagging problems. There were two
8 cases where there were violations of containment
9 integrity during core alterations. They had another
10 instance with improper tagging with a diver in the
11 intake structure.

12 In addition, they had discovered the
13 problems with the observations of the boric acid
14 indications on the bottom of the Unit 2 pressurizer
15 and the actions that were taken by the company to shut
16 Unit 1 down and do a visual inspection.

17 At that time, as Mr. Creel indicated, we met
18 in early May and discussed some of those issues and
19 the company proposed to the staff a number of very
20 specific actions to address the items. And that
21 resulted in our issuance of a confirmation of action
22 letter to the licensee, 89-08, principally to address
23 the pressurizer heater problems, the control of system
24 status issues, control of work activities and
25 procedure uses and how procedures were changed.

1 The major team inspection which was a
2 diagnostic-like inspection, we call it a special team
3 inspection, was led by NRR, identified a number of
4 other issues. The company has identified certain
5 short-term actions from that inspection and they have
6 been defined quite well in their June 21st, 1989
7 submittal.

8 In addition, the staff has conducted an
9 emergency operating procedure inspection at the
10 facility, evaluating the ability of the operators to
11 use the EOPs. This was done on the simulator and we
12 identified some issues associated with procedural
13 compliance and how the emergency procedures were to be
14 used, whether they were guidelines or, in fact,
15 procedures to be followed. So, there are a few issues
16 in those areas to be addressed.

17 The reason that I go over this background is
18 to give the Commission an impression of the scope of
19 the near-term activities which are being conducted now
20 under the confirmation of action letter. We believe
21 that they are well defined. The company is following
22 a process of developing corrective actions for each
23 one. When they are satisfied that they have been
24 adequately implemented, they intend to present them to
25 the staff at which time we will inspect those

1 activities to assure that they are, in fact,
2 satisfactory.

3 We have agreed to meet at the point in time
4 when the company feels that they have adequately
5 addressed all the short-term actions related to
6 restart. And following that meeting with an
7 understanding of the results of their own review, we
8 will conduct a team inspection to integrate these
9 individual activities and assure for ourself the
10 readiness for operation of the unit.

11 We do not have a schedule for completing
12 those activities as of this time. The company has not
13 identified any of the individual items as being ready
14 for inspection. So, we are in a status review, but I
15 wanted to give you an overview of what the process is
16 that we'll be following.

17 At this point I'd like to turn over to Bruce
18 Boger to describe our review process for the
19 performance improvement plan.

20 MR. BOGER: As Bill indicated, there are
21 some well defined short-term corrective actions. The
22 purpose of the panel was or is to determine what long-
23 term corrective actions would be appropriate. We have
24 found in the past that a panel approach allows us to
25 be more focused and better coordinated in some of our

1 review activities, particularly when they involve both
2 regional and in headquarters activities.

3 The main objective of the panel is to assess
4 whether the BG&E corrective action plan and its
5 implementation programs constitute an adequate long-
6 term plan to correct the deficiencies at Calvert
7 Cliffs.

8 The panel consists of several members of NRR
9 from different divisions and also several Region I
10 personnel with various backgrounds and past
11 association with the plant.

12 We have two basic phases to conduct our
13 review. First we will review the performance
14 improvement plan to evaluate the licensee's root cause
15 determinations and make sure that we feel comfortable
16 that they've come up with the correct causes. Then
17 we'll review the corrective action programs to
18 determine whether these programs, if implemented
19 properly, would resolve the root causes.

20 We plan to meet as a panel periodically and
21 consolidate our issues, discuss issues and also to
22 conduct some on-site reviews. We will also meet with
23 the licensee, as we did on August 4th, and have plans
24 in the next couple of weeks to better understand their
25 self-assessment process and also schedules for their

1 implementation of the program.

2 After acceptance by the panel and further
3 management review, we will formally respond to the
4 licensee and conclude the panel activities at that
5 time. Beyond that time, the determination of the
6 effectiveness of the implementation of the program
7 will be determined through the normal inspection
8 program.

9 MR. TAYLOR: That concludes the staff's
10 presentation, sir. We intend to very carefully, as
11 Bill has outlined, follow the work, the short-term
12 issues and through our inspection process and through
13 the region and with NRR oversight, ensure that the
14 correction of the issues has taken place. And of
15 course, the pressurizer work will be a very dominant
16 feature and as the company has indicated. Before the
17 restart of the first unit, we will ensure that these
18 things are completed before we agree with the company
19 that the first unit should be restarted.

20 That concludes our portion of the
21 presentation.

22 CHAIRMAN CARR: Questions, Commissioner
23 Rogers?

24 COMMISSIONER ROGERS: What's on that list of
25 STI issues that have to be completed before restart?

1 How long a list is that?

2 MR. TAYLOR: Bill?

3 MR. RUSSELL: For the ones that we've
4 reached agreement on short-term, the four -- let me
5 give you a quick rundown. The four items related to
6 the CAL that are broadly described constitute some
7 approximately 15 specific actions that the company has
8 taken. Within the special team inspection, we had a
9 number of unresolved issues, as well as issues of
10 additional concern that the company has reviewed.
11 Within that, the company has broken it out a little
12 bit differently and that's why I'm hesitating now.
13 They break it out by assigned responsibility, where we
14 break it out by functional area.

15 We've identified approximately 16 items that
16 we're tracking. Some examples include control over
17 measuring and test equipment; changes in procedural
18 intent; long-time use of standing orders rather than
19 procedure revisions; temporary modifications; vague
20 work instructions in some of the work procedures;
21 incomplete maintenance documentation as to what was
22 actually done in the course of maintenance; control
23 over vendor technical manuals; issues associated with
24 welding process control; how weld rot is accounted
25 for; control of quality activities, QC activities in

1 the field; temporary procedure changes.

2 We've had a number of areas with continuing
3 procedure non-compliance. That's a broad issue. Part
4 of their procedure upgrade program. There are some
5 short-term actions being taken and we need to satisfy
6 ourselves that the short-term actions are sufficient
7 to allow for the longer term actions to go forward,
8 which are a part of the performance improvement plan.

9 We had issues with ineffective corrective
10 action for control of deficiencies in use of non-
11 conformance reports. So, these are a representative
12 sample of some of the types of things that have come
13 out of that review.

14 In the emergency procedure area, which is
15 the final area we're tracking, we had a concern that
16 the symptom-based emergency operating procedures were
17 being used for guidance. That's what the staff was
18 telling us and that's what we observed in a simulator.
19 We feel, in fact, that they are procedures to be
20 followed and when it requires that you confirm certain
21 critical functions, that that be followed in a
22 verbatim manner to assess whether you have the
23 appropriate conditions.

24 The company has taken short-term action to
25 direct that those procedures be followed in a verbatim

1 manner. They are implementing training on it and
2 they've not yet gotten to the point where they are
3 satisfied themselves. And so while there are a number
4 of areas that they are working on, they have
5 significantly strengthened their own internal QA
6 review and I believe that's the reason that we have
7 not yet had any individual areas presented to us yet
8 for inspection and closeout. They're going to develop
9 a package and they want to be sure that when they say
10 they're ready, that they have high confidence that
11 they indeed are.

12 Overall, it's on the order of some 45 or so
13 specific items that we are looking at at this time.
14 That list will change and that does not include items
15 which would relate to maintenance activities, the
16 normal things which would have to be corrected for a
17 reactor mode change for startup. These are more
18 process control issues.

19 So that's a flavor for the kinds of things
20 that we're working on in the short-term related to
21 restart.

22 COMMISSIONER ROGERS: And the pressurizer is
23 the major hardware item?

24 MR. RUSSELL: Pressurizer, I see that there
25 are two long tent poles in this issue. One is the

1 pressurizer issue and assuring that the problems on
2 Unit 2 are not generic to Unit 1.

3 The second issue which I see is an issue
4 that needs to be gotten control of is procedural
5 compliance and how the people are using the
6 procedures. Changing that attitude in the past
7 allowed a procedure to be considered a guideline need
8 not be followed. So, there are issues with procedure,
9 change control, procedure intent and
10 institutionalizing that and getting that to be well
11 accepted by the staff, I think, is one of the more
12 difficult tasks. So, I personally view the
13 pressurizer heater issue and the procedure issue as
14 the two tough issues that they need to get control of.

15 COMMISSIONER ROGERS: On the assessment
16 panel, how often do you contemplate meeting?

17 MR. BOGER: It will kind of depend on how
18 the review activities stack up. Probably on the
19 monthly type time frame.

20 COMMISSIONER ROGERS: Okay. Thank you.

21 CHAIRMAN CARR: Commissioner Curtiss?

22 COMMISSIONER CURTISS: Just three or four
23 quick questions. By long tent poles, do you mean
24 those are the issues that are holding up the operation
25 and are the pacing items or --

1 MR. RUSSELL: Those are the pacing items,
2 critical path.

3 COMMISSIONER CURTISS: All right.

4 MR. TAYLOR: That's a colloquialism.

5 CHAIRMAN CARR: It's a camping term.

6 COMMISSIONER CURTISS: I must have missed
7 that in camp.

8 I guess sort of a general question I have
9 following up on the Chairman's line of questioning to
10 the question. I guess Calvert's presence on the
11 problem plant list has been particularly troubling
12 because it came as such a surprise to, I think, so
13 many of us. Second, because their fall from grace
14 came so quickly and they fell so far given the good
15 performance that they'd had over the years.

16 For a plant like this, and given what you've
17 seen to date, are there early warning signals that you
18 have identified? You've talked about the things that
19 in retrospect you've identified, procedural adherence,
20 there have been a number of significant events at the
21 plant. But in a case like this where, perhaps unlike
22 any of the other plants on the problem plant list,
23 we've got a top performer falling so quickly and so
24 far, what sort of early warning signals do you all see
25 emerging from something like this?

1 MR. TAYLOR: Maybe I can start and, Bill,
2 please add in.

3 I think one of the things that we are
4 attempting to do is try to identify this declining
5 performance before a plant gets into an actual forced
6 shutdown. Now, as it occurred, there are other
7 reasons why these two plants are down.

8 We've been distressed too by Virginia
9 Power's situation at Surry where for quite a period of
10 time the units, North Anna and Surry units, were
11 operating quite well. But we began there to see the
12 symptoms of declining performance and that was the
13 basis of the decision that was made for Surry.

14 Our attempt, of course, is to, before some
15 very, very significant event or other feature or our
16 own action causes a forced shutdown condition, we're
17 attempting to identify the declining performance and,
18 of course, it's a difficult call to add all the
19 symptoms together. But that's where we are. I'd like
20 not to have to see these extended shutdowns and other
21 conditions.

22 COMMISSIONER CURTISS: Let me pick up on one
23 of the points that Vic Stello raised at the problem
24 plant briefing, some of the factors that he flagged as
25 a potential watch point. The question of financial

1 diversification, he raised at the last meeting and
2 indicated that his view, although I don't think he was
3 talking about any particular utility, there was an
4 increasing pattern of financial diversification and
5 some indication that that may be distracting the
6 attention of utilities. That's an area that he wanted
7 to continue to look at.

8 You mentioned Surry, of course, which is
9 probably one that is noted for that. This company as
10 well has diversified with its Constellation Resources.

11 From what you see now in looking at that
12 operation, do you concur in the utility's assessment
13 that that diversification has not affected the ability
14 to operate the plant and the commitment of resources?

15 MR. TAYLOR: Bill?

16 MR. RUSSELL: Let me address it a little bit
17 differently. I'm not sure that we would be able to
18 attribute the declining performance to a cause. I
19 look back at the last two or three years and the issue
20 in my mind is whether we forcefully enough alerted the
21 company to our concerns as to what we saw by way of
22 declining performance and had we acted more forcefully
23 sooner, would we have a different situation at this
24 point in time?

25 I think we're able to observe the symptoms.

1 We see events. We see procedural non-compliances. We
2 have gotten better at doing that and we need to
3 clearly communicate that information to utilities
4 through SALP processes and where that's not effective
5 through the senior management meeting process with
6 that assessment.

7 I think we're doing a better job of that,
8 but there are clearly some lessons learned. We had
9 three meetings at the EDO level with this company. We
10 had --

11 CHAIRMAN CARR: It takes a willing listener.

12 MR. TAYLOR: I agree with that and I even go
13 back before Peach Bottom ultimately got into the
14 ordered shutdown where we had a very extensive meeting
15 with the senior management of that utility and it was
16 a very tough meeting concerning items that we saw in
17 the way of performance that was indicative of some of
18 the things that ultimately came out in a shutdown.

19 COMMISSIONER ROGERS: I think there is a
20 little problem here though within our own system in
21 that I'm not sure how clearly at all levels within
22 this organization there was a perception that there
23 was a problem. I was concerned because of an apparent
24 discrepancy between our findings and actions and the
25 OSART review.

1 However, in poking along into both of those
2 matters a little bit more and talking to more people
3 certainly within the NRC, there certainly was a
4 feeling in some levels within the NRC that it was
5 quite a long time ago that problems were being
6 identified and that we were not so -- you know, this
7 wasn't really such a big surprise but that there were
8 a number of items that were giving the staff pause and
9 that, in fact, the OSART review itself said some of
10 these things. They didn't say them quite as directly
11 as they might have and certainly the executive summary
12 of the OSART report beclouded those issues. But if
13 you look at the report itself, there's more indication
14 in that of some of these things.

15 So, I think that the perception of us
16 sitting here as Commissioners is that this thing hit
17 all of a sudden like a tropical storm. But in fact
18 there were lots of indications some time ago that
19 things were not all so well and that somehow we
20 weren't really perhaps quite coming to grips with it
21 enough ourselves. We weren't communicating
22 effectively to ourselves as well as to the licensee.

23 So, I think that it may not be that we need
24 new indicators as much as we need to communicate
25 effectively within our own organization and to the

1 licensee maybe to be a little bit more clear on how
2 seriously we are taking some of these things. We're
3 seeing them and we're mentioning them, we're talking
4 about them and then as time goes on they become more
5 and more of a serious concern but never enough to
6 really take the action and even the action that we
7 took, I take it, was one that required considerable
8 debate and discussion before deciding to put the plant
9 on that list.

10 So, it wasn't something that just really
11 popped out --

12 MR. TAYLOR: Well, I agree with you. There
13 was a history of civil penalty action and other issues
14 that were there. I think your point though is well
15 taken because if we can arrest declining performance
16 from any means, we will attempt to do that. And I
17 think your point is well taken. The earlier the
18 better is really your issue.

19 COMMISSIONER ROGERS: Well, I'm just saying
20 it may not be that we really need new tools, that
21 maybe had those and we weren't really quite using them
22 as effectively ourselves in communicating, getting
23 together and deriving as consensus within the
24 organization that there was -- this is a plant that
25 needs to be really talked to and getting that message

1 over before finally putting them on the list, because
2 putting somebody on that list is a pretty extreme step
3 and it's something we shouldn't be hesitant to do when
4 we really feel that it's absolutely necessary, but if
5 we can head that off and get the system turned around
6 before it gets to a point that we really feel we have
7 to do that, then everybody comes out ahead.

8 MR. TAYLOR: I agree with you completely.
9 We'll try to do that.

10 COMMISSIONER CURTISS: One other quick
11 question on the personnel turnover issue that I raised
12 with the utility. From what you see at the plant and
13 from your perspective with the reshuffling that
14 they've gone through, has the personnel situation
15 settled down there to the point where it's relatively
16 stable now and they've got the team in place ready to
17 carry out their program?

18 MR. RUSSELL: I see the issue that they have
19 a quality staff that's looking for leadership. They
20 need to be told what direction to go and what needs to
21 be done. One of the major conclusions out of the NRR
22 team inspection related directly to the quality of the
23 workers and the fact that in many cases the ability of
24 the workers were making up for poor procedures, poor
25 institutional controls.

1 I'm not aware of a personnel issue that's
2 causing a loss of staff. Rather, it's more the
3 frustration of where do we go from here and getting
4 the message down that they do have problems that have
5 to be addressed down to the first line supervisor
6 working level.

7 COMMISSIONER CURTISS: Okay. That's all I
8 have.

9 CHAIRMAN CARR: Well, I guess I'm a
10 little -- I'm somewhat in disagreement with people who
11 think that you can't read the OSARTs and the SALPs and
12 see what's going on because both the SALP and the
13 OSART that year were very pointed in pointing out what
14 was wrong. Management, it seems to me, always tends
15 to read any report in the best light possible. So
16 once you start out in the OSART report that says the
17 overall impression was that the plant is above average
18 in the upper range of the nuclear power plant's visit
19 by the OSART missions, and you think, "Well, that
20 sounds all right." Then you realize that's the first
21 look at a U.S. plant. So that ought to be your first
22 clue.

23 A second one is if you read the next page
24 over you see such words as "maintenance is the area
25 where major improvements could be made," "technical

1 support offers a considerable potential for
2 improvement," "this explains the unsatisfactory ratio
3 of latent deficiencies detected to spontaneous
4 failures." There's plenty in there to tell
5 management, "Hey, we've got a problem. They may think
6 we're above average, but if you read that, we don't
7 want those kinds of things to happen." I think the
8 SALP does the thing.

9 My problem with SALPs is they are so late.
10 They come out so long afterward, the guy can lull
11 himself into saying, "Well, we fixed all that. You
12 know, that was eight, ten months ago. We're in better
13 shape now."

14 Enough of that.

15 November 30, '88 was the last SALP period.
16 When's the next one?

17 MR. LIMROTH: We decide December 31st of
18 this year.

19 CHAIRMAN CARR: This December? Okay.

20 Are we taking -- we're keeping up on the
21 pressurizer heater problem so if there's a generic
22 application we can jump on it?

23 MR. RUSSELL: Yes, sir. In fact, as you're
24 aware, we have out of Region I the non-destructive
25 examination capability. While I'm not sending the

1 band down, we're using their equipment, I am sending
2 the level 3, level 2 inspectors down that have
3 expertise in welding. They're on site this week
4 trying to understand from our perspectives what are
5 the issues. We've had good support from NRR, from the
6 people involved in the code reviews. So, we are
7 following it closely.

8 CHAIRMAN CARR: It's interesting that there
9 wasn't any confirmation -- I mean the dye check and
10 the electric check had two non-confirms, which is
11 interesting to me. So, I don't know whether that
12 means we should go back and check those other 12 tubes
13 with a different method or not in Unit 1. Those kinds
14 of questions, of course, are always going to hang
15 there.

16 Well, I certainly want to thank the BG&E for
17 coming in and giving us their frank opinion on how
18 they saw things and what they're doing to fix them.
19 They seem to me making process in their recovery. As
20 they mentioned, implementation is the key. I'm sure
21 they recognize that. The plan is no better than how
22 well we carry it out. I want to be sure the staff
23 monitors that implementation closely.

24 I appreciate the insight with respect to the
25 OSART and NRC differences in approach. I think that

1 that may be good. If you get both of them, you ought
2 to get more information than you would if we used the
3 same approach.

4 I would encourage always management to focus
5 not on the grade, which I notice that much management
6 do. They say, "We're a 1.3 in the SALPs or we're a
7 1.8," and they never bother to look at the
8 discrepancies in the report. I mean once they get
9 those grades, that's passing or failing. If you read
10 through those SALPs carefully, you'll find a lot to
11 work on.

12 This situation, as has been mentioned, is a
13 demonstration that complacency can easily occur. It's
14 a lot easier to go down in a hurry than it is to get
15 back up. My opinion, continual objective assessment
16 is difficult, but it's vital to safe operation.

17 Do any of my fellow Commissioners have any
18 additional comments?

19 We stand adjourned.

20 (Whereupon, at 11:46 a.m., the above-
21 entitled matter was adjourned.)

22

23

24

25

CERTIFICATE OF TRANSCRIBER

This is to certify that the attached events of a meeting
of the United States Nuclear Regulatory Commission entitled:

TITLE OF MEETING: BRIEFING ON STATUS OF CALVERT CLIFFS

PLACE OF MEETING: ROCKVILLE, MARYLAND

DATE OF MEETING: AUGUST 16, 1989

were transcribed by me. I further certify that said transcription
is accurate and complete, to the best of my ability, and that the
transcript is a true and accurate record of the foregoing events.

Carol Lynch

Reporter's name: Peter Lynch

NEAL R. GROSS
COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVENUE, N.W.
WASHINGTON, D.C. 20005

8/16/89

SCHEDULING NOTES

Title: Briefing on Status of Calvert Cliffs

Scheduled: 10:00 a.m., Wednesday, August 16, 1989 (OPEN)

Duration: Approx 1-1/2 hrs

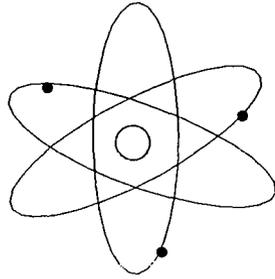
Participants: Licensee (Baltimore Gas and Electric Company) 45 mins

- George V. McGowan, Chairman of the Board
- Christen H. Poindexter
Vice Chairman of the Board for
Nuclear Energy Oversight
- George C. Creel
Vice President - Nuclear Energy
- Robert E. Denton, Manager
Quality Assurance and Staff Services
- Leon B. Russell, Manager
Calvert Cliffs Nuclear Power Department
- Charles H. Cruse, Manager
Nuclear Engineering Services
- James Lemons, Manager
Nuclear Outage Management

NRC

15 mins

- James M. Taylor
- William T. Russell
- James Partlow
- Bruce A. Boger
- David Limroth
- Scott McNeil

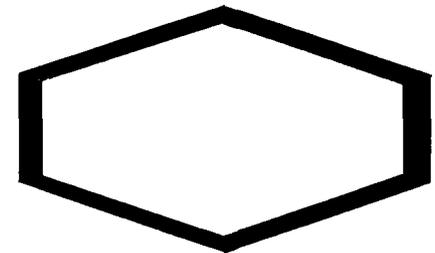


**Briefing of the
NRC Commissioners
on the Status of
Calvert Cliffs**

August 16, 1989

BRIEFING WILL COVER

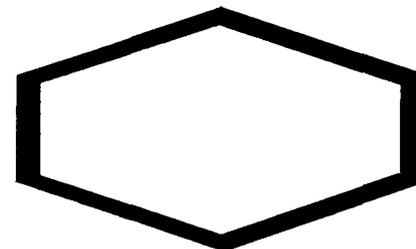
- Familiarization with BG&E Senior Management and Structure
- Where Calvert Cliffs has been
- Where Calvert Cliffs is now
- Where we intend Calvert Cliffs to be and how we'll get there
- Short Discussions on:
 - PSC Incentives
 - Diversification
 - OSART



SLIDE2.CHT

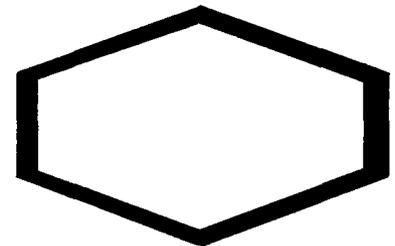
CALVERT CLIFFS MOST IMPORTANT ASSET

- Example of our Progressive Attitude
- We will keep our promise to Marylanders
- We are proud of Calvert Cliffs
 - 1st PWR with 24-Month Fuel Cycle
 - 1st U.S. Volunteer for IAEA OSART
 - Welcomed USSR Tour Group Recently



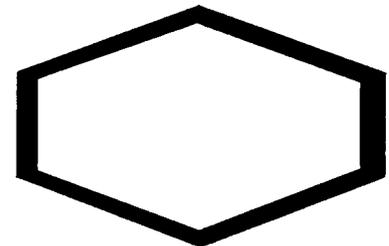
WE KNOW WE HAVE PROBLEMS

- Absolute adherence to standards is our biggest problem
- A change in culture must occur
- BG&E will support restoration
 - One example is our creation of the Vice Chairman position



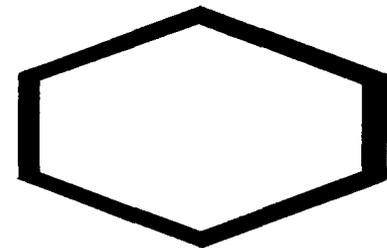
VICE CHAIRMAN POSITION

- Effective August 1, 1989
- Filled by an individual with much nuclear experience
- Initially will be dedicated solely to Calvert Cliffs



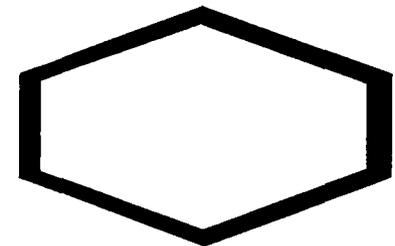
CALVERT CLIFFS HAD GOOD PERFORMANCE

- But complacency set-in
- Fell behind industry improvements in safety
- Ineffective event preventive measures



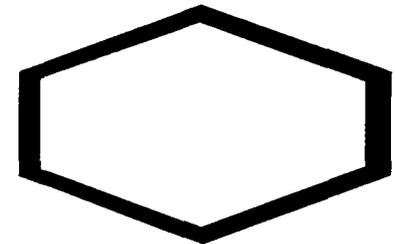
1988 BROUGHT HEIGHTENED CONCERN

- Serious procedure compliance failures, therefore,
 - Mandatory Training
 - Management Changes



CALVERT CLIFFS WAS PLACED ON NRC WATCH LIST IN DECEMBER 1988

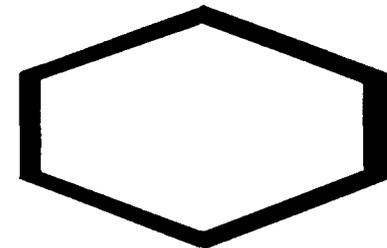
- Tremendous Blow
- Immediate Reassessment
 - More Management Changes
 - Safety Committee Changes
 - Changes to Control Work
 - Performance Improvement Plan



NRC SPECIAL TEAM INSPECTION

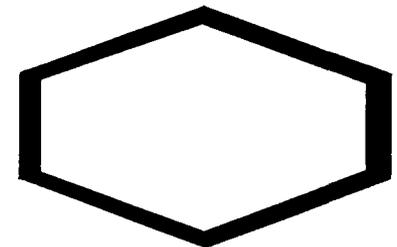
MARCH 1989

- Several unresolved items
- Long-Term concerns incorporated into Performance Improvement Plan
- Short-Term concerns combined with other issues in an agreement with NRC Region 1



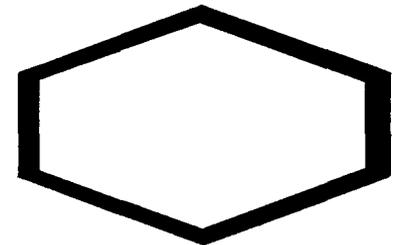
PERFORMANCE IMPROVEMENT PLAN

- Primary method for improving safety and quality
- Plan details submitted July 31st
- Background of process presented August 4th
- All levels of employees are being involved
- More details later
- Becomes part of normal planning

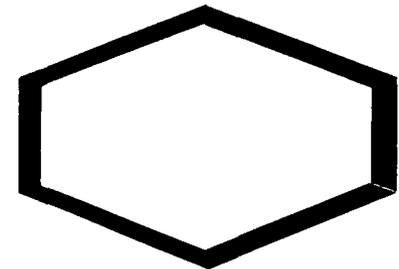
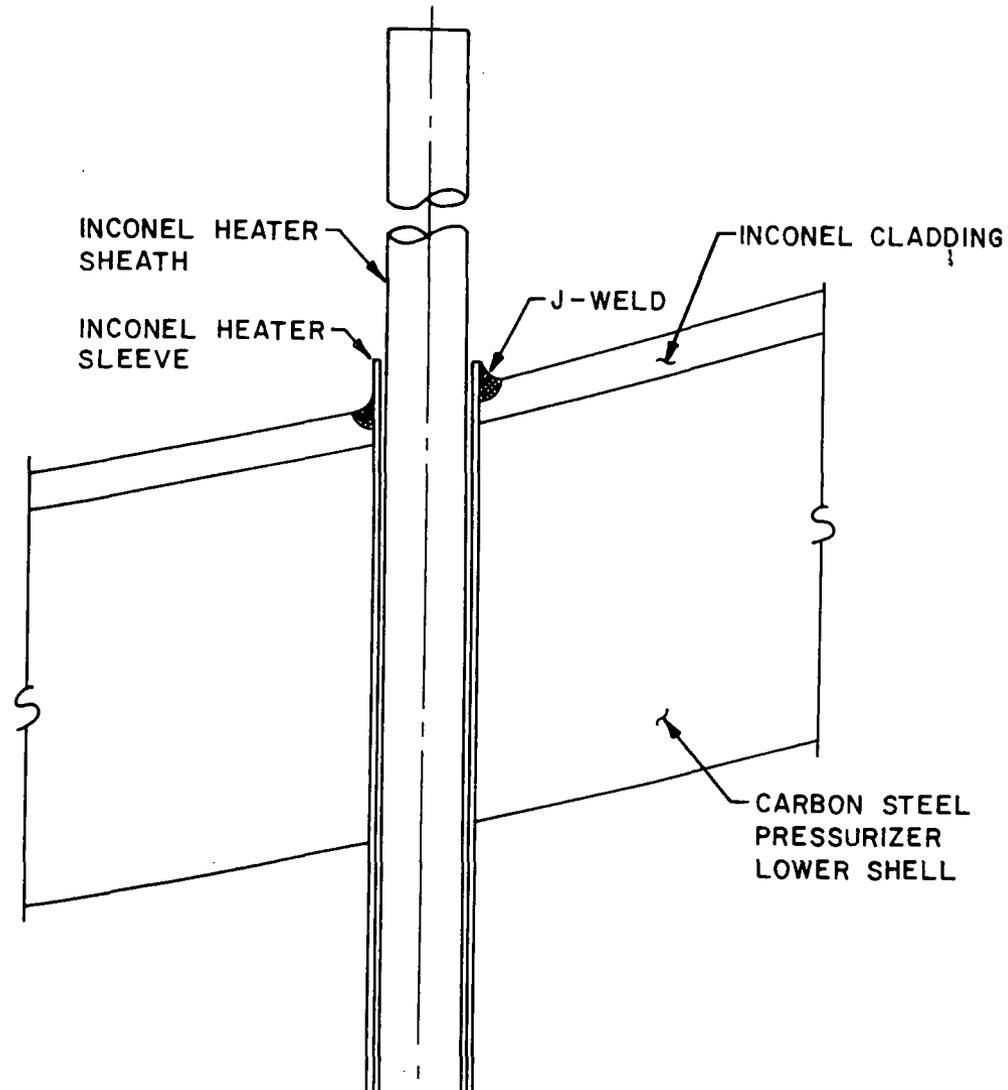


BOTH UNITS ARE DOWN

- Unit 2 is in extended refueling outage
- Unit 1 is down while pressurizer heater concern on Unit 2 is resolved
 - Penetrations have thin boric acid film
 - Project team formed
 - Extensive documentation review
 - NDE ongoing

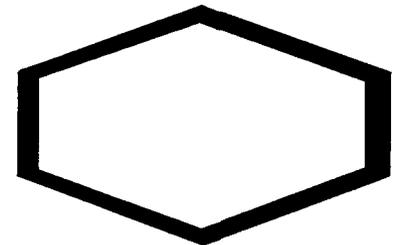


PRESSURIZER HEATER SLEEVE ARRANGEMENT



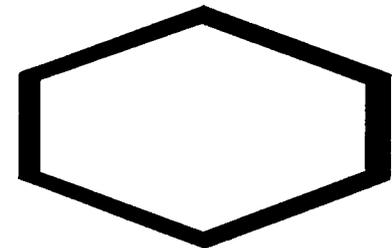
CONFIRMATORY ACTION LETTER

- Issues are being tracked, closed, and verified
- We will meet with Region I prior to returning either of our Units to service



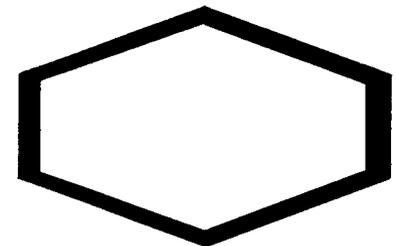
CONFIRMATORY ACTION LETTER SIGNIFICANT ITEMS

- Pressurizer Heater Penetrations
- Control of System Status
- Control of Work Activities:
 - Detail in Maintenance Procedures
 - Control of Vendor Technical Manuals
 - Quality Control
- Control and Use of Procedures



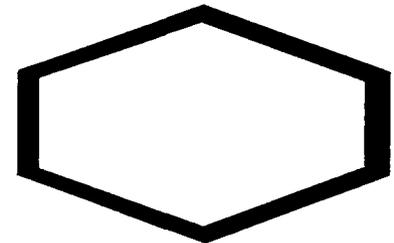
KEY ISSUES TO FOCUS ON

- Continued evaluation and implementation of the Performance Improvement Plan
- Expedite a controlled evaluation of the pressurizer penetrations



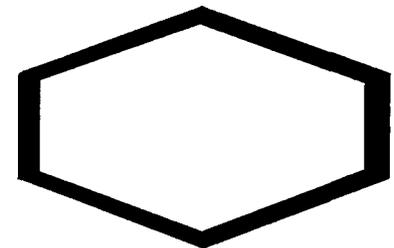
VISION OF THE FUTURE

- Pressurizer issue resolved
- Confirmatory Action Letter issues closed
- Performance Improvement Plan continued
- Improved self-assessment
- Improvement in keeping abreast
- We'll be better and improving

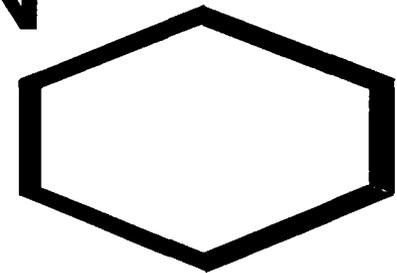


PERFORMANCE IMPROVEMENT PLAN OBJECTIVES

- Actions to address causes
- Expand actions already underway
- Improve self-assessment
- A process to monitor progress

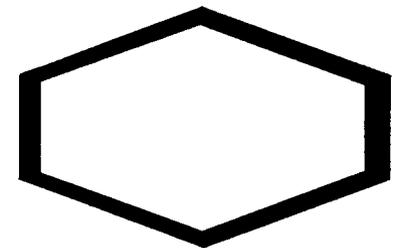


**WE ARE
AIMING FOR
EVENT-FREE
OPERATION**



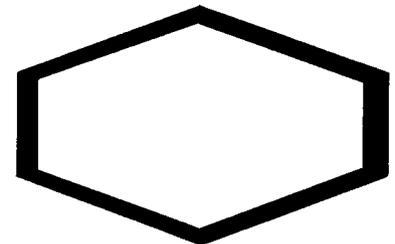
TWO PHASES TO PLAN

- Symptom Assessment Phase
 - Involves identifying root causes and formulating actions
 - Very in-depth look into past
 - Eleven root causes



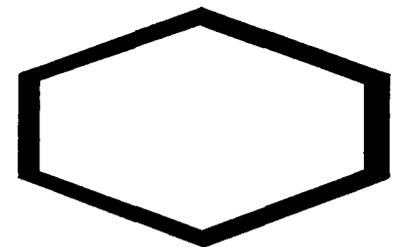
IMPLEMENTATION PHASE

- Action plans detailed
- Each has a Manager
- Part of Performance Objectives
- Progress status tracked



SIGNIFICANT PROGRESS IN SOME AREAS

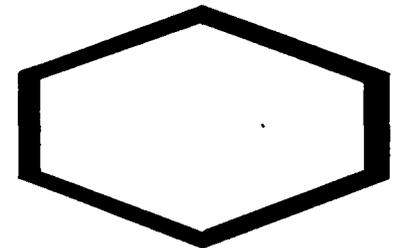
- Combined Operations and Maintenance
- Integrated work activities, slowed work
- Procedures Upgrade Plan
- System Engineer improvements
- Facility Change Request ranking / Engineering Planning established



PERFORMANCE IMPROVEMENT PLAN

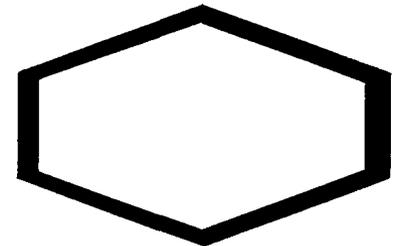
CORRECTIVE ACTION PLAN EXAMPLES

- Team Building Workshops
- Communications Plan
- Quality Circles
- Leadership Conferences
- Technical Manual Improvements
- Root Cause Analysis
- Human Performance Evaluation System



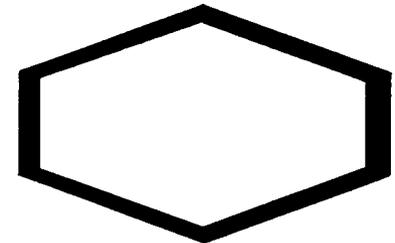
PERFORMANCE IMPROVEMENT PLAN VERIFICATION PROCESS

- Three Goals
 - Monitor
 - Assess Effectiveness
 - Confirm Improvement
- Feeds Nuclear Program Plan
- Plan is flexible



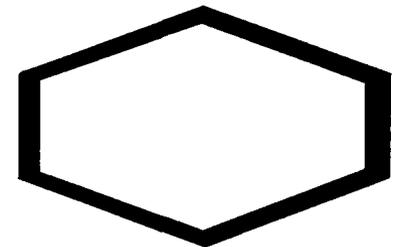
BG&E DIVERSIFICATION

- Initiated to meet stockholder growth expectations
- Chris Poindexter selected as President, CEO
- Utility Operations not adversely affected
- Utility Operations have been and will always be the core of Baltimore Gas & Electric



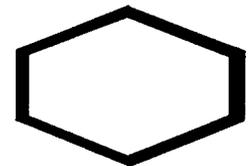
PUBLIC SERVICE COMMISSION

- Generating Unit Performance Program
- Failure to meet targets does not result in automatic penalties
- We will keep Calvert Cliffs safe.



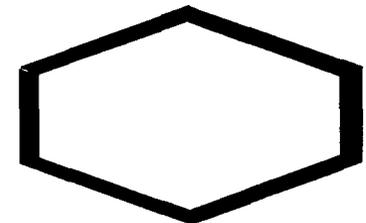
OSART

- We feel NRC and OSART assessments were accurate
- There were 36 OSART recommendations or suggestions
- OSART looked at general approaches in several areas, while
- NRC concentrated on actual compliance
- Are standards the same?



CLOSING

- We have slowed work, concentrating on safety and quality
- We are willing to commit adequate resources
- Implementation of the Performance Improvement Plan has top priority in this Company
- We are very serious about achieving a high level of excellence at Calvert Cliffs. We will be satisfied with nothing less.



CALVERT CLIFFS STATUS BRIEFING
NRC STAFF
AUGUST 16, 1989

- C OPENING REMARKS J. TAYLOR, EDO
- C BACKGROUND AND W. RUSSELL, RI
CURRENT STATUS
- O ASSESSMENT PANEL B. BOGER, NRR
ACTIVITIES

BACKGROUND

12/15/88 - CALVERT CLIFFS IDENTIFIED
AS STATION REQUIRING CLOSE
AGENCY WIDE MONITORING

12/20/88 - EDC MEETS WITH CEO AND
REQUESTS COMPREHENSIVE PLAN
TO TURN AROUND DECLINING
PERFORMANCE

BACKGROUND

04/07/89 - PERFORMANCE IMPROVEMENT
PLAN (PIP) SUBMITTED

07/31/89 - PIP IMPLEMENTATION
PROGRAM SUBMITTED

CONFIRMATION OF ACTION LETTER

(89-08)

- 03/89 - PROCEDURAL ADHERENCE PROBLEMS
CONTINUE
- o LOSS OF VACUUM
 - o ESF ACTUATIONS

89-08 CONTINUED

- 04/89 - WORK CONTROL AND TAGGING
PROBLEMS
- o CONTAINMENT INTEGRITY
 - o DIVER IN INTAKE STRUCTURE
- 05/89 - PRESSURIZER HEATER LEAKS

89-08 CONTINUED

05/23/89 - LICENSEE PROPOSED CORRECTIVE
ACTIONS BEFORE RESTART OF
EITHER UNIT

05/24/89 - CAL 89-08 CONFIRMS LICENSEE
COMMITMENTS

06/21/89 - LICENSEE COMMITS TO RESOLVE
CERTAIN STI ISSUES BEFORE
RESTART

CALVERT CLIFFS ASSESSMENT PANEL

OBJECTIVE: EVALUATE THE ADEQUACY OF
THE BG&E LONG-TERM
CORRECTIVE ACTION PLAN FOR
PLANT PERFORMANCE AND
PROCESS CONTROLS
DEFICIENCIES

CALVERT CLIFFS ASSESSMENT PANEL

- PROCESS:
- o JOINT NRR AND REGION I
EFFORT
 - o EVALUATE ROOT CAUSE
DETERMINATION
 - o EVALUATE PROGRAMS
INTENDED TO RESOLVE
ROOT CAUSES
 - o FORMAL RESPONSE TO
LICENSEE