

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

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1 UNITED STATES OF AMERICA
2 NUCLEAR REGULATORY COMMISSION

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4 DISCUSSION OF SHOREHAM FULL POWER OPERATING LICENSE

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6 PUBLIC MEETING

7 * * *

8 Nuclear Regulatory Commission
9 One White Flint North
10 Rockville, Maryland

11
12 Monday, April 17, 1989

13
14 The Commission met in open session, pursuant to
15 notice, at 10:00 a.m., the Honorable LANDO W. ZECH, JR.,
16 Chairman of the Commission, presiding.

17
18 COMMISSIONERS PRESENT:

19 LANDO W. ZECH, JR., Chairman of the Commission
20 THOMAS M. ROBERTS, Member of the Commission
21 KENNETH M. CARR, Member of the Commission
22 KENNETH C. ROGERS, Member of the Commission
23
24
25

1 STAFF AND PRESENTERS SEATED AT THE COMMISSION TABLE:

2 SAMUEL J. CHILK, Secretary

3 WILLIAM C. PARLER, General Counsel

4 VICTOR STELLO, JR., Executive Director for Operations

5 TOM MURLEY, NRR

6 WILLIAM RUSSELL, Regional Administrator, Region I

7 WILLIAM TRAVERS, Branch Chief

8 STEWART BROWN, Project Manager

9 EBE McCABE, Region I

10
11 FOR LONG ISLAND LIGHTING COMPANY

12 DR. WILLIAM CATACOSINOS, Chairman and CEO

13 ANTHONY EARLY, President

14 JOHN LEONARD, JR., VP, Nuclear Operations

15 WILLIAM STEIGER, ASST VP, Nuclear Operations

16 JOHN SCALICE, Plant Manager

P R O C E E D I N G S

(10:03 a.m.)

CHAIRMAN ZECH: Good morning, ladies and gentlemen.

The purpose of today's meeting is for the Long Island Lighting Company and the NRC staff to brief the Commission concerning the readiness of Shoreham to receive a full power license.

Commissioner Curtiss, who is out of the country and cannot be present today, has recused himself from matters involving Shoreham, and will not participate in the Commission's actions on Shoreham.

The Commission will first be briefed by the Long Island Lighting Company and then by the NRC staff. There will be no vote taken at the meeting today. The Commission will meet at a later date, once we have had the opportunity to fully consider the presentations made before us today, in order to vote concerning the authorization of a full power license for Shoreham.

Copies of the slides to be used during the briefing should be available at the entrance to the meeting room. Also available is a copy of a letter to the Commission, dated April 14, 1989, from the counsel to LILCO, which discusses the status of the application for the license, in light of the ongoing negotiations between

1 LILCO and the State of New York, regarding the Shoreham
2 plant.

3 Do any of my fellow Commissioners have any
4 opening comments before we begin?

5 (No response.)

6 If not, Dr. Catacosinos, you may proceed,
7 please.

8 DR. CATACOSINOS: Thank you, Chairman Zech. On
9 behalf of the Long Island Lighting Company and the team
10 present, I'd like to thank you and your fellow
11 Commissioners for this opportunity this morning, to brief
12 you on the readiness of Shoreham to operate at full power.

13 Before we begin, I would like to introduce the
14 members of the LILCO team present. Tony Early, our
15 President and Chief Operating Officer; John Leonard, our
16 Vice President of Nuclear Operations; Bill Steiger, our
17 Assistant Vice President of Nuclear Operations; John
18 Scalice, our Plant Manager; Jack Notaro, Manager of
19 Nuclear Quality Assurance; Bob Kascsak, Acting Manager of
20 Nuclear Engineering; Chuck Daverio, Manager of Nuclear
21 Operations Support.

22 My background, Mr. Chairman, is as follows. I
23 spent four years in the United States Navy as a
24 commissioned officer. I worked at Brookhaven National
25 Laboratory for 13 years and, as you all know, that's a

1 nuclear research facility on Long Island. While there, I
2 was a member of the project team that built the
3 alternating gradient synchrotron, and later a member of
4 the project team that built the high flux beam research
5 reactor at the laboratory. It's hard to believe that that
6 was almost 30 years ago.

7 After I left the laboratory, I founded and was
8 the founder of two companies; one, a medical
9 instrumentation company, the second a computer
10 manufacturer and peripheral manufacturer.

11 On January 30th, 1984, I became Chairman of the
12 Long Island Lighting Company. My first priority was
13 Shoreham. I became personally involved in that plant, and
14 I have a deep personal commitment to nuclear safety.

15 We moved quickly to bring in additional
16 professional and technical nuclear competence, and we were
17 fortunate to have John Leonard join our organization.

18 John was given certain specific goals to achieve
19 for Shoreham. One was to replace consultants with our own
20 permanent professional staff; Secondly, to establish a
21 goal of excellence. We wanted to be the best -- the best
22 in performance and the best in safety.

23 We wanted to build a strong team with high
24 morale and a great deal of pride in their operation. We
25 wanted a spotless facility, a spotless plant. Further, we

1 wanted to be on the leading edge of safety. We wanted to
2 exceed INPO and NRC requirements.

3 John was asked, shortly after arriving at
4 Shoreham, to do his own independent evaluation of the
5 plant, based on his extensive experience, and to come up
6 with recommendations to enhance the safety of the plant.
7 He did that and, in his presentation, he'll provide you
8 with some specifics, but two were the corium ring and
9 enhanced boron injection system.

10 Further, we are committed to training, and the
11 company built a modern facility within 30 minutes of
12 Shoreham that cost over \$16 million, and I'm proud to say
13 we received INPO accreditation of our training programs in
14 record time. It's a very fine facility, with a site-
15 specific simulator.

16 We went further. We evaluated, on John's
17 recommendation, the Swedish filter system, which is used
18 in Sweden. Our Board received a presentation on that
19 system, and our Board authorized us to proceed, and it's a
20 hundred million dollar investment.

21 A lot of work has been done, with our technical
22 staff, with the Swedes, and with members of the NRC
23 technical staff. And as we all know, that is not a
24 requirement of current NRC regulations.

25 Our Board is deeply interested in Shoreham, Mr.

1 Chairman, and they established a Nuclear Oversight
2 Committee of the Board that reports back directly to the
3 Board of Directors. That committee meets regularly at
4 Shoreham, with the staff; attends Nuclear Review Board
5 meetings. The Chairman of that Committee attends the
6 annual INPO conferences. There's a deep involvement by
7 our Board and our management, in the Shoreham facility.

8 As you know, LILCO was the first utility to form
9 its own Emergency Response Organization. It's made up of
10 over 3,000 local employees, men and women, who have
11 volunteered. They train regularly, they train hard, and
12 we believe that they are a superb organization. I can say
13 these things because I'm proud of our organization, but
14 there are other objective measures.

15 The most recent SALP report showed that Shoreham
16 rated higher than 21 of the 23 plants in the northeast
17 region. The INPO audit, the readiness assessment team
18 review by the NRC, attests to the outstanding job our
19 people have done, under very adverse circumstances.

20 When the requirement was established for
21 emergency response plans for nuclear facilities, it was
22 never intended that that requirement would permit a
23 county, a state, or other local government, to prevent the
24 licensing of a plant but, rather, to take the
25 responsibility for emergency response planning.

1 LILCO has alone battled all of the resources
2 brought to bear by the State of New York, the county of
3 Suffolk, the town of Southampton, and the entire nuclear
4 factions in our community, to take advantage of that
5 requirement, to prevent the licensing of the plant.

6 We estimate that if all of the expenses,
7 including the time of state, county and town employees
8 were included, and that includes legal fees, consultant
9 fees, the amount is about \$75 million that has been spent
10 by these three entities since 1983, fighting the licensing
11 of the plant and taking advantage of the emergency
12 response requirement.

13 Our company has unrelentingly proceeded to
14 demonstrate that it could meet all of the requirements of
15 the NRC regulations, to qualify for a 100 percent license
16 for Shoreham.

17 The time to accomplish this has been drawn out
18 by the interminable and continuous endless loop of
19 litigation that we found ourselves caught up in. That has
20 strained the company's resources, and its impacted our
21 ability to meet our mandate to provide adequate, reliable
22 energy to the community we serve, and we serve almost 3
23 million people on Long Island.

24 Further impact on the company was the result of
25 the Public Service Commission's recent action. There we

1 received a temporary rate increase, but it was conditioned
2 on Shoreham not operating. Again, it was another form of
3 economic pressure.

4 The company had to find a process to either end
5 the controversy through a settlement with the State of New
6 York, or through obtaining a full power license for the
7 operation of Shoreham.

8 It is incredible the amount of time this
9 licensing process has taken. LILCO has had a low power
10 license for nearly four years, and it's been over three
11 years since our first emergency response plan was tested.
12 It's almost been a year since the second test of our
13 emergency response plan, and still no resolution to the
14 licensing question.

15 We believe, as an organization, we have met
16 every requirement of the NRC to be granted a full
17 operating license. We believe we've earned it and,
18 therefore, we believe we're entitled to a full power
19 license. We believe the plant qualifies for full power
20 operation.

21 The granting of a license is important, Mr.
22 Chairman. It is important because it sets a precedent for
23 all other nuclear operating plants in the United States,
24 the precedent being that no town, state or community can
25 prevent a plant from continuing its operations because of

1 the need to test its emergency response plan every two
2 years, since a utility-only plan can meet the emergency
3 planning requirements mandated by NRC regulations.

4 Now, the question that is in the minds of all
5 who have been involved in the Shoreham saga for all these
6 years is, what will LILCO do if a license is issued, given
7 that it has entered into a settlement agreement with the
8 State of New York?

9 Our response to that question is as follows:
10 The agreement is not effective, and it won't be until such
11 time as our shareholders meet in June, to determine
12 whether or not the company should accept the agreement.
13 We do not know what our shareholders will do.

14 The agreement provides that we will not operate
15 the plant until our shareholders make that determination.
16 Given the history of uncertainty of the issues surrounding
17 Shoreham, in particular the shortages of energy on Long
18 Island, we believe it is our responsibility and our
19 obligation to continue the process to license the plant
20 until such time as our shareholders have acted, and until
21 such time as the agreement is effective and binding on all
22 parties.

23 If we do not have a final binding agreement, we
24 will operate the plant if we are granted a 100 percent
25 full power operation license or a 25 percent license. If

1 we do have a final agreement, we are obligated to apply to
2 this Commission for permission to transfer the plant to an
3 agency of the State of New York. The state then will be
4 in the position of having to make a public policy decision
5 concerning the future of the plant located in a geographic
6 area that is clearly short of energy. Thank you.

7 CHAIRMAN ZECH: Thank you very much. Appreciate
8 your comments. Do you have comments from any of your
9 colleagues?

10 DR. CATACOSINOS: Yes, sir, I'd like to do that.
11 I'd like to introduce Anthony Early, who is on my right,
12 who is President and Chief Operating Officer of our
13 Company.

14 Mr. Early received a Bachelor of Science in
15 physics from Notre Dame; a Masters in nuclear engineering
16 from Notre Dame; and he has his law degree from Notre
17 Dame. He has been our general counsel since 1984 through
18 1987, and then Executive Vice President of Operations and,
19 on April 1st of this year, he became President and Chief
20 Operating Officer of our company.

21 He served in the United States Navy as a
22 commissioned officer, and was qualified as a chief
23 engineer on the nuclear submarine on which he served.
24 Tony?

25 MR. EARLY: Thank you, Bill.

1 Chairman Zech and members of the Commission.
2 I'm pleased to make part of the presentation today, in
3 support of LILCO's request for a full power operating
4 license.

5 It was about four and a half years ago that I
6 had the opportunity to appear before the Commission
7 representing LILCO and arguing for a low power operating
8 license for the plant. Since that time, my role has
9 changed significantly. Then I appeared as LILCO's outside
10 counsel, today I appear as LILCO's President and the
11 leader of what I believe to be a very excellent nuclear
12 organization, and I'm proud to be associated with the
13 Shoreham Plant.

14 In the 18 years since I first became associated
15 with nuclear programs, first as a nuclear submarine
16 officer, then as a lawyer representing utilities around
17 the country and, finally, as a utility executive, I've
18 seen many nuclear programs and have seen them from
19 different perspectives. Some of them have been
20 successful, some of them have not been successful, and I'm
21 pleased to say that based on my experience -- and I think
22 your staff will confirm this today -- that LILCO is one of
23 the success stories.

24 This morning, I would like to report on two
25 aspects of LILCO's commitment to excellence -- emergency

1 planning, and LILCO's senior executive commitment to
2 Shoreham. Let me start with emergency planning.

3 LILCO's efforts in emergency planning have been
4 unmatched in their scope, their complexity, and their
5 results. The LILCO emergency planning model takes
6 advantage of the utility's expertise in emergency planning
7 and its commitment to nuclear power and nuclear safety.

8 It melds it with the decisionmaking
9 responsibility and capabilities of federal, state and
10 local governments, and produces a result that all
11 utilities with significant emergency planning problems
12 ought to consider.

13 The history of this extraordinary emergency
14 planning effort dates to 1982. Prior to that time, LILCO
15 had the full cooperation of state and local governments,
16 in developing emergency plans for Shoreham.

17 In 1982, Suffolk County withdrew its support for
18 the emergency planning process, and then after the
19 election of Governor Cuomo in New York in 1983, New York
20 State followed suit.

21 It was at that point that LILCO had to develop
22 what we call the Local Emergency Response Organization,
23 the concept that we have operated under since then.

24 I don't think it's useful spending time talking
25 about the litigation history. The litigation on emergency

1 planning started in 1983, and didn't end until this
2 Commission's recent decision. I think it's more fruitful
3 to talk about the LERO concept and some of the benefits
4 that I think we've seen from it.

5 The concept is that LILCO created an
6 organization independent from the normal utility
7 structure. It is largely staffed with volunteers from the
8 LILCO organization, but it includes the expertise of
9 various other organizations.

10 The second concept is to subject that
11 organization to intensive training, which we have done.
12 We have also equipped that organization with state-of-the-
13 art equipment necessary to meet all emergency planning
14 requirements and, in fact, LILCO has a group within the
15 company that is dedicated to ensuring the material
16 readiness of the emergency planning organization.

17 And, finally, the final link in the concept is
18 to drill as a cohesive team because we believe that that
19 is very important. Over the last few years, in drills and
20 training sessions, LILCO has spent 175,000 manhours per
21 year, on average, in emergency planning training and
22 drilling, and I think that is an impressive number.

23 A few other statistics about the emergency
24 planning organization. It involves 3,000 LILCO
25 volunteers. They range from company vice presidents down

1 to building attendants.

2 The structure approximates the emergency
3 organizations put together by most state and county plans,
4 except that it involves a single organization, trained
5 members from one company supported by technical experts.
6 The LERO organization is supported by up to 50
7 organizations, such as bus companies, hospitals,
8 helicopter companies and the like, to provide necessary
9 services for emergency planning.

10 The organization operates 13 different
11 facilities, and is designed to work in conjunction with
12 federal, state and local governments, to enhance emergency
13 planning response.

14 We believe that the LERO concept is an
15 outstanding approach to emergency planning for three
16 reasons: First, it enhances corporate involvement and
17 commitment to emergency planning; second, it facilitates
18 improved training for emergency planning; and, third, it
19 fosters a strong team concept in responding to
20 emergencies. Let me just elaborate a little bit on each
21 of those three because I think they are important.

22 The LILCO LERO program is overseen by a LERO
23 Executive Committee. As Executive Vice President, I
24 chaired that Executive Committee, and I will continue to
25 chair that as President of the company.

1 The Executive Committee consists of LILCO
2 officers that have key leadership positions in the LERO
3 organization. These are officers outside of the nuclear
4 part of the company. These vice presidents are actively
5 involved in the emergency planning process, so that the
6 whole company has an ownership of the emergency planning
7 problem and is prepared to respond to deal with those
8 problems.

9 The Executive Committee deals with a whole range
10 of policy issues, training issues, and emergency plan
11 issues associated with emergency planning. And we are
12 able, through that committee, to provide leadership to the
13 whole company, on emergency planning issues.

14 The second area of benefit, I think, is in the
15 training area. By using LILCO people, it permits a much
16 more comprehensive, well focused and consistent training
17 program. Local governments and state agencies tend to be
18 fragmented. There are different agencies involved and
19 there are different jurisdictions involved, and it is very
20 difficult to have a comprehensive training program.

21 As I mentioned earlier, LILCO has been able to
22 commit 175,000 manhours of training a year, and I think
23 that is a significant benefit to the LERO approach.

24 Finally, the LERO approach fosters teamwork in
25 responding to an emergency, and I know, from my experience

1 as a nuclear plant operator, that's vital.

2 LILCO is able to hand-pick the team that it will
3 use, selecting personnel in positions based upon skills,
4 their interests and backgrounds, and not based upon what
5 particular agency they may happen to work for in state or
6 local government.

7 The teams then drill together, and they receive
8 a full schedule of training. We believe that these
9 workers that are trained have a strong incentive to
10 perform well. It's their nuclear plant and it's their
11 company.

12 We also believe that this teamwork concept
13 enhances communications because, largely, the personnel
14 are dealing with fellow workers that they know and are
15 used to dealing with.

16 In short, we believe the LERO approach, a highly
17 trained, dedicated, emergency planning force, in
18 conjunction with federal, state and local capabilities,
19 has produced one of the finest emergency planning
20 organizations in the country, and I'm proud to be a member
21 of that and been associated with it.

22 Let me turn quickly to another aspect of LILCO's
23 commitment to excellence, and that is the high level of
24 executive involvement in Shoreham. As Bill Catacosinos
25 mentioned earlier, the company has a Nuclear Oversight

1 Committee of its Board of Directors. That committee is
2 chaired by the President, the former President of Airborne
3 Instrument Labs, an aerospace electronics firm, and the
4 committee is extremely active.

5 It meets routinely with plant senior managers.
6 The chairman of that committee attends INPO meetings--
7 in fact, he attended the exit conference that your staff
8 gave after their readiness assessment.

9 The committee has visited several other nuclear
10 plants that the Commission has rated as excellent plants
11 in order to determine what it is about those programs that
12 we need to import in our program, so that we can be the
13 best nuclear program in the country. And the committee
14 reports directly and fully to the full LILCO Board of
15 Directors.

16 The second level of commitment is to LILCO's
17 Nuclear Review Board. The Nuclear Review Board is a board
18 of five expert consultants, with various backgrounds, plus
19 the local plant manager and QA manager and other managers
20 from the site, and this board advises the company on major
21 policy and technical issues that may come up in the course
22 of our operating the plant.

23 My predecessor as President of LILCO, attended
24 the Nuclear Review Board meetings, and I intend to
25 continue that practice so I have first-hand information

1 concerning major developments relating to Shoreham.

2 The third level of commitment relates to our
3 Vice President of Nuclear. John Leonard attends all local
4 board meetings, and reports directly to the Board of
5 Directors, on developments at the Shoreham Plant.

6 In sum, LILCO is committed to the highest level
7 of safety and excellence for Shoreham.

8 What I would like to do now, Mr. Chairman, is
9 introduce John Leonard, our Vice President of Nuclear, who
10 is responsible for Shoreham's fine performance.

11 John commanded two nuclear submarines. He was
12 manager of the FitzPatrick Plant and also manager of the
13 New York Power Authority's engineering operations. He was
14 manager of quality assurance for the Virginia Electric
15 Power nuclear program, and he came to LILCO in 1984 and
16 found a program that needed some improvements, and I think
17 John deserves much of the credit for the significant
18 progress and achievements of the Shoreham and LILCO
19 nuclear program. John?

20 CHAIRMAN ZECH: Thank you very much. You may
21 proceed.

22 MR. LEONARD: Chairman Zech, Commissioners, I am
23 proud to be here representing the over 700 men and women
24 of the Office of Nuclear Operations and the Shoreham
25 Nuclear Power Station, itself. I've been in the nuclear

1 engineering business for almost 30 years, starting with
2 Naval post graduate school in 1960.

3 I can recognize the Shoreham Nuclear Power
4 Station as a quality plant, with a knowledgeable,
5 dedicated staff, served by dedicated support groups. All
6 of us are at the site, and our philosophy is simple: We
7 are all there to support that plant.

8 The plant, itself, meets all of your
9 regulations. We have held an operating license since July
10 of 1985, and three times have operated the plant at levels
11 up to 5 percent, twice synchronizing to our own Long
12 Island electrical system. Even at that low level, we were
13 able to generate sufficient power to sustain all the plant
14 loads and provide enough electricity for 10,000 average
15 homes on Long Island. Each time at power, the plant staff
16 performed well and in a professional manner.

17 Recently, we have been operating under difficult
18 conditions. We have had some attrition, and have utilized
19 contracted staff personnel as replacements. The total
20 Office of Nuclear staff now numbers 622 LILCO personnel,
21 with approximately 104 contractors serving in LILCO staff
22 positions. I am committed to replacing these contractors
23 with LILCO staff personnel, as was done with the 300
24 contractors that were serving in staff positions when I
25 arrived in 1984.

1 Having once phased out contracted staff
2 personnel, we have a program for doing it successfully. I
3 have described that program in writing to Mr. Russell, our
4 Region I Administrator, and we are prepared to do it
5 again.

6 One group of this organization at the site, the
7 Nuclear Quality Assurance Department, I feel, deserves
8 some special mention. It reports directly to me. It is
9 performance-oriented, searches for problems through our
10 organization, and keeps me continuously informed of
11 emerging areas requiring management attention that I or
12 other key staff members may have missed.

13 The department manager, Mr. Notaro who is in our
14 audience today, holds a senior reactor operator license.
15 He is also Chairman of the Corporate Nuclear Review Board.
16 He also directs our independent safety evaluation group
17 effort and our reliability engineering group, and this
18 coordinated, independent focus on quality and safety of
19 operation has significantly aided all of us on the staff,
20 department head top staff levels, in assuring our quality
21 of operation.

22 Throughout the Office of Nuclear Operations, we
23 do strive to build professionalism into our operations.
24 As an example, our operators were among the first to
25 develop a code of professionalism, as recommended by INPO.

1 In fact, Mr. Scalice, our Plant Manager, sitting at the
2 table on my right, brought that code to INPO during one of
3 their early workshop sessions. Much of our code was used
4 as a model for discussion.

5 In addition, we encourage board certification of
6 professionals, where appropriate, such as health physics
7 and in specific engineering disciplines.

8 Our new training center and plant-specific
9 simulator, headed by Mr. Stan Skorupski, who is another
10 former Navy submarine CO and ran the Fleet Ballistic
11 Missile Training Center in Charleston, complements and
12 fuels our striving for professionalism in all these areas.

13 This professionalism was measured about a little
14 over a year or so ago, by both an INPO evaluation and the
15 NRC SALP process, wherein we were judged capable of
16 operating the Shoreham Nuclear Power Station. More
17 importantly, just recently we had an intensive self-
18 assessment and an NRC operational readiness inspection,
19 and this capability was confirmed.

20 The self-assessment was an in-depth study of the
21 plant, its supporting departments, and the corporate
22 office of training. Almost 8,000 manhours of review and
23 inspection were completed, and items from that self-
24 assessment categorized for action.

25 Those items have been acted upon, so that when

1 completion of other items which have resulted from the
2 NRC's operational readiness inspection occurs on or about
3 April the 22nd, that plant will be ready to resume power
4 operations.

5 I will not cover the operational readiness
6 assessment team inspection. I'm aware the staff has made
7 you familiar with that, but I will conclude that it does
8 say we are ready for operation.

9 We have also committed to Mr. Russell to hold at
10 about the 50 percent power level, during our power
11 ascension test program, until we complete a second
12 rigorous self-assessment, that I would report to him
13 about.

14 Shoreham, Commissioners, is an exceptionally
15 safe plant. It's basic construction is safe. It was built
16 with a remote shutdown capability. It was built with an
17 interim safety parameter display system. It was built
18 with a computerized radiation monitoring and radioactive
19 effluent monitoring system, an alternate rod injection
20 system, safety grade recirc pump trips, and other items
21 that FitzPatrick, the plant I managed for the New York
22 Power Authority, did not have in its original
23 construction.

24 We have met and gone beyond the NRC requirements
25 for safety. Over the last few years, we have added even

1 more safety enhancements, having conducted not only an
2 individual plant evaluation, using the IDCOR methodology,
3 but also a complete update of our Level 3 probabilistic
4 risk assessment.

5 We can shutdown using a super-enriched boron
6 injection system, far above the requirements of the ATWS
7 rule, in something less than 20 minutes. We have
8 installed a corium ring under our reactor, to funnel any
9 core melt from a serious nuclear accident, into our
10 600,000 gallon suppression pool.

11 We'd lower our main steam isolation valve set
12 point so if there is a transient where you get shrink, we
13 don't bottle up the reactor unnecessarily and cause a loss
14 of cooling situation.

15 We provided manual actuation of our alternate
16 rod injection system, which originally was designed for
17 automatic injection, so we have two modes of using that.
18 We've provided uninterruptable power to some of our safety
19 functions. We've extended battery capacities under
20 emergency conditions, by providing portable generators,
21 and we have numerous on-site power generation for
22 emergency phases. Right now, we have over 104 megawatts
23 of electrical emergency generating capability.

24 Of course, we are prepared to install the
25 supplemental containment system, using the Swedish filter

1 concept, if we get a license and we reach agreement with
2 the NRC staff.

3 Chairman Zech and Commissioners, the plant is
4 safe, and the staff is professional. We have worked hard
5 for and earned that operating license. Sir, we are ready
6 now.

7 CHAIRMAN ZECH: Thank you very much.

8 DR. CATACOSINOS: We'd like to introduce Mr.
9 Scalice. John? John Scalice is our Plant Manager, and he
10 has been our plant manager since the 1st of March where he
11 took over the job from Bill Steiger. He was promoted from
12 the Assistant Plant Manager, a position which he held from
13 1986 to 1989, and he, before that, was Manager of our
14 Nuclear Operations Division. He holds a senior reactor
15 operator's license, has a Master of Science in nuclear
16 engineering, and has served for an operational instruction
17 period at the Brunswick Nuclear Plant, during full power
18 operation. John?

19 CHAIRMAN ZECH: Thank you very much.

20 MR. SCALICE: Mr. Chairman, Commissioners, good
21 morning. I'm very pleased to be with you today, and I'd
22 like to address, if I may, three issues.

23 First is the readiness of my staff; second is
24 our power ascension test program, both from a standpoint
25 of the lessons learned from operations and, second, as our

1 future plans for operation; and the third area I'd like to
2 address is the present status of the plant.

3 First, I'd like to discuss our staff readiness.
4 The Office of Nuclear has a total of 59 licensed
5 operators. Forty of those operators are on shift. Of
6 that number, we have 15 senior reactor operators and 25
7 reactor operators, seven of which are equipment operators
8 who are now licensed.

9 The operating shift crews rotate on and eight-
10 hour, six-shift rotation. Every sixth week, they attend
11 requalification training at our Shoreham simulator
12 facility, located 30 minutes from the plant in Hauppauge,
13 Long Island.

14 Each of the crews work together as a team and
15 have done so for other three years. These people, along
16 with the remainder of my staff, are highly motivated and
17 dedicated. They are eager to run the plant and to
18 demonstrate that they can operate it successfully.

19 We have taken great pride in developing a team
20 that has high morale and, further, we are proud that
21 they've been able to maintain this morale in the face of
22 unprecedented adversity, a fact that was validated by your
23 staff in the recent operational readiness evaluation.

24 As Mr. Leonard mentioned earlier, in almost four
25 years since the Shoreham Nuclear Power Station received

1 its 5 percent license, the station has operated up to 5
2 percent on three separate occasions, and generated
3 electricity twice, on the Long Island Lighting Company
4 grid. In fact, in January, we performed training startups
5 where each of our crew members participated in taking the
6 reactor critical.

7 Prior to each of these startups, a detailed
8 self-evaluation was performed, and readiness assessments
9 were conducted. Each of our startups proved successful.
10 Plant modifications have been made to correct the
11 deficiencies noted during our testing programs, such as
12 erratic reactor level indication and high pressure coolant
13 injection, HPCI, and reactor core isolation cooling, RCIC,
14 check valve chatter.

15 In addition, several tests which are normally
16 conducted at advanced stages of the power ascension test
17 program were brought forward and conducted at 5 percent
18 power. These tests including tuning of the RCIC and HPCI
19 turbine controls, RCIC vessel injection, and RCIC and HPCI
20 quick-starts.

21 The startups provided the plant personnel with
22 valuable operating experience, allowed us to fine-tune
23 many of our programs and procedures, and afforded our
24 staff and LILCO the opportunity to verify our capability
25 to run the plant safely.

1 At each of the startups, our supervisory
2 personnel, from first-line supervisor up through division
3 manager, were given the responsibility to review their
4 assigned areas and attest to the capability of the plant
5 to proceed to power. As I said previously, each of our
6 startups proved successful.

7 Although we were pleased at how the station ran
8 at 5 percent, we took advantage of the time that we had
9 and lessons that we learned, by reviewing all of our power
10 ascension test program and all the procedures associated
11 with it.

12 We evaluated recent startups at other BWR
13 plants, and incorporated the lessons that they learned
14 into our procedures. These updated station procedures
15 were then utilized at the Shoreham simulator. Each of the
16 crews have had the opportunity to run all significant
17 startup tests and transients that are expected to occur
18 during a power ascension test program. This, coupled with
19 our normal training program at the simulator which
20 includes routine and emergency procedure use, provides us
21 with the confidence that our personnel are ready to handle
22 any contingencies that might arise during high power
23 operations.

24 Additionally, a Station Management Review
25 Committee has been developed, to determine overall

1 readiness of the plant staff to proceed with each power
2 plateau of the power ascension test program. The members
3 consist of each of my division managers. I will chair
4 that committee. The committee will consider operational,
5 maintenance and radiological considerations, besides its
6 overall review of the testing results.

7 The remainder of our scheduled power ascension
8 test program consisted of 115 days of testing within five
9 separate test plateaus. Before proceeding from test
10 condition two to test condition three, the Office of
11 Nuclear Operations will conduct an additional self-
12 assessment, to confirm that the Shoreham Nuclear Power
13 Station, its staff and all support organizations are
14 prepared for full power operation.

15 This assessment period falls midway through the
16 power ascension test program, at approximately 50 percent
17 power. At the conclusion of the assessment, a report
18 shall be generated that outlines the major conclusions of
19 our self-evaluation. I shall review this assessment of
20 plant readiness with Mr. John Leonard.

21 Before proceeding to high power level, as
22 indicated previously by Mr. Leonard, he will discuss our
23 status at that time, with the regional administrator.

24 The third issue I will address is our current
25 plant status. Prior to the operational readiness

1 evaluation, we had planned maintenance activities to allow
2 us an operations window sufficient to complete the power
3 ascension test program operate through the Summer of 1989
4 and up through October of 1989. Many of these activities
5 are now complete, or scheduled to be completed by April
6 22nd, this Saturday.

7 As you are aware, the operational readiness
8 assessment team detailed some additional matters that
9 require resolution prior to proceeding to power, or
10 exceeding 5 percent power.

11 We have made every effort to perform the actions
12 necessary to close these items. We have reviewed
13 repetitive maintenance items dating back through March,
14 1986, to determine if a potential common course failure
15 exists that could be adverse to safety. Our conclusions
16 indicate that they do not affect safety.

17 We have reviewed low priority MWRs, to ensure
18 that they do not include misclassified items, which could
19 affect operational safety or should be completed prior to
20 startup. This review was completed satisfactorily, and
21 forwarded to your staff.

22 We have done a review of ASME bolting material,
23 and are replacing inappropriate bolts as required. The
24 identified environmental qualification equipment concerns
25 have all been resolved with your staff, and work is

1 progressing. The remainder of all of this work is
2 expected to be completed by Saturday, April 22nd.

3 As a final check, as in the past, the plant will
4 perform a review of systems and associated MWRs, LILCO
5 deficiency reports, limiting conditions of operations,
6 temporary modifications in lifter leads and jumpers. Any
7 open items will be presented to and reviewed by the Review
8 of Operations Committee and myself, to ensure that they
9 have no adverse impact on plant operation and safety.

10 Mr. Chairman, Commissioners, we recognize our
11 obligation to public safety in our pursuit of excellence,
12 and I want to assure you that we will carefully and
13 conservatively manage our operational transition. Thank
14 you.

15 CHAIRMAN ZECH: Thank you very much.

16 DR. CATACOSINOS: Thank you, Mr. Chairman, this
17 concludes our briefing.

18 CHAIRMAN ZECH: Thank you very much.

19 Questions from my fellow Commissioners?
20 Commissioner Roberts?

21 COMMISSIONER ROBERTS: No.

22 CHAIRMAN ZECH: Commissioner Carr?

23 COMMISSIONER CARR: Yes. Is the Board of
24 Directors going to make a recommendation to the
25 shareholders?

1 DR. CATACOSINOS: Yes, Commissioner Carr, the
2 Board of Directors will recommend to the shareholders that
3 they accept the settlement agreement that the company has
4 entered into with the State of New York.

5 COMMISSIONER CARR: Thank you.

6 CHAIRMAN ZECH: Commissioner Rogers?

7 COMMISSIONER ROGERS: Well, I think probably my
8 questions are somewhat of a detailed nature with respect
9 to emergency planning, and I think I may ask those of the
10 staff instead.

11 CHAIRMAN ZECH: All right. Thank you very much.

12 Dr. Catacosinos, if the NRC were to issue you a
13 full power license for the Shoreham Plant, would you be
14 prepared to use it?

15 DR. CATACOSINOS: If the agreement that we've
16 entered into with the State of New York was not approved
17 by our shareholders and did not become effective, we would
18 be prepared to operate the plant and we would use it.

19 CHAIRMAN ZECH: You would use it.

20 DR. CATACOSINOS: Yes, sir.

21 CHAIRMAN ZECH: All right. We've been through a
22 long process with the Shoreham proceeding. I'm pleased to
23 hear that you and your colleagues report to the Commission
24 that in your view, that you believe the plant is safe to
25 operate and, if you were issued a full power license, you

1 would operate it carefully and safely and within our
2 regulations, is that right, Mr. Leonard?

3 MR. LEONARD: Yes, sir.

4 CHAIRMAN ZECH: Thank you very much. Any other
5 questions before we call on the staff?

6 COMMISSIONER ROGERS: Well, just what is your
7 Board's position and commitment to safe operations of the
8 plant? It's a difficult thing for us to assess. We
9 recognize that safe operation requires a commitment at all
10 levels of an organization, from the people in the plant
11 to the people on the board, and it -- what has the Board
12 said, and how has it expressed itself on this issue of
13 operating the plant safely, with all the commitments that
14 are necessary, that may be financial and other, and at the
15 same time recommending that the plant not be operated?
16 How has it dealt with that dilemma?

17 DR. CATACOSINOS: It's a very complex answer to
18 a simple statement. Our company has proceeded down two
19 separate tracks, to answer your question, Commissioner
20 Rogers. The first is to license the plant, just
21 relentlessly proceed with the licensing of the plant.
22 Provide all of the resources that are necessary for Mr.
23 Leonard and his staff to assure that we would be ready to
24 operate that plant in the event we received an operating
25 license.

1 The commitment of the Board begins with myself
2 as its Chairman, and proceeds through the entire
3 organization, as has been described by Mr. Early. Our
4 Board is deeply involved in Shoreham's operation. It's
5 deeply involved through the Nuclear Oversight Committee,
6 which was established and is very, very active.

7 It has provided the necessary resources that are
8 appropriate for the safe operation of that plant.
9 Earlier, we commented that our Board authorized the
10 expenditure of a hundred million dollars to put in the
11 filter system that the Swedes have developed. That's a
12 requirement that is not required by the NRC. That, by
13 itself, is a major commitment to safety.

14 In addition, John's recommendations, which
15 exceed NRC requirements, were implemented, and the dollars
16 necessary were spent. Dollars have not been a problem in
17 terms of our expenditures. That's been a course of action
18 that the Board has allowed us to follow.

19 In addition, because of the long process that we
20 have described, it became clear that at some point this
21 controversy surrounding the company had to end if we were
22 to meet our obligations to our community and, therefore,
23 we participated in these discussions with the State of New
24 York toward a settlement.

25 We also, as a company, committed a hundred

1 million dollars to the building of three combustion gas
2 turbines in the town of Brookhaven, totaling 240 megawatts
3 of energy, in order to find a way to assist us in meeting
4 our obligation to provide energy in the event the plant
5 was not licensed.

6 So, we have followed those two parallel paths.
7 They are both separate and distinct, and we have a
8 commitment to both, and that's how we've done it,
9 Commissioner Rogers.

10 COMMISSIONER ROGERS: When was the filter system
11 expenditure approved?

12 DR. CATACOSINOS: Approximately two years ago.

13 COMMISSIONER ROGERS: What was the last major
14 Board financial approval of any improvement in the plant,
15 beyond the ones that were already expressed?

16 MR. LEONARD: Well, I would say -- if I may
17 answer that, Mr. Chairman -- Commissioner, that the Board,
18 by approving the budget that I had submitted for this
19 year, which is well over \$130 million, inherent in that
20 budget are modifications, such as continuing the tie-in of
21 the Colt diesels, fire protection modifications that we
22 want to continue with, and several other things.

23 So, by approving a budget of that magnitude,
24 inherently -- and that's just for the on-site work, I
25 don't mean taxes and all that other stuff.

1 DR. CATACOSINOS: It's been a continuing
2 process, and if one would look at the expenditures that
3 Shoreham has made and continues to make, I submit to you,
4 Commissioner Rogers, that our expenditures are much larger
5 than most of the nuclear plants in this country, and we
6 continually enhance and take advantage of the time to
7 enhance the safety of that plant, and to train our people.

8 CHAIRMAN ZECH: Any other questions?
9 Commissioner Carr?

10 COMMISSIONER CARR: I have two questions. How
11 many shareholders have you got?

12 DR. CATACOSINOS: I can give you an approximate
13 number, it's about 130,000.

14 COMMISSIONER CARR: And is it a majority vote?

15 DR. CATACOSINOS: Yes, sir.

16 COMMISSIONER CARR: Thank you.

17 CHAIRMAN ZECH: Any other questions?

18 (No response.)

19 Dr. Catacosinos, thank you very much. We
20 appreciate your being with us today, and we will call on
21 the NRC staff now. Thank you.

22 DR. CATACOSINOS: Thank you very much.

23 (Whereupon, the representatives of Long Island
24 Lighting Company left the table and the NRC staff came
25 forward and were seated.)

1 CHAIRMAN ZECH: Mr. Stello, before I call on you
2 for your presentation from the technical staff, I'd like
3 the General Counsel to give us a brief resume of the
4 Shoreham situation because of this rather protracted and
5 lengthy proceeding.

6 Mr. Parler, would you do that, please?

7 MR. PARLER: Thank you, Mr. Chairman.

8 Mr. Chairman, on March the 3rd, 1989, in its
9 decision in the Shoreham proceeding, the Commission
10 ordered that the Director of Nuclear Reactor Regulations
11 evaluate each contention which remains outstanding as a
12 result of the Commission's decision, and to explain to the
13 Commission in a public meeting, whether and, if so, how,
14 each has been resolved.

15 The major purpose of the highlights that I will
16 give you would be to emphasize that the vast majority of
17 Shoreham safety issues, including both the adequacy and
18 reliability of plant systems and components, and emergency
19 planning issues, were decided in adjudicatory proceedings,
20 with full rights of cross-examination and appeal.

21 There is only a relatively small number of
22 remaining issues that were the cause of the circumstances
23 which led to the Commission's March 3rd, 1989 decision
24 left for action by the Director of Nuclear Reactor
25 Regulation.

1 The administrative litigation record in this
2 proceeding is substantial. It proceeds, has proceeded
3 over years. The transcript pages are numbered in the
4 thousands, the exhibits in the hundreds. The decisions
5 have been rendered by independent licensing boards and
6 have been subject to the appellate process.

7 This administrative proceeding for the operating
8 license was initiated with the filing of the application
9 in January, 1976. The application was reviewed by the NRC
10 staff, and the Advisory Committee on Reactor Safeguards,
11 both of which concluded that Shoreham could be operated
12 without endangering the public health and safety.

13 Suffolk County, New York State agencies and
14 others then petitioned to intervene, and were admitted as
15 parties to the proceeding. Intervenors raised over 70
16 issues concerning the safety of Shoreham plant systems and
17 components. Petitions were admitted for hearings on
18 matters ranging from the design of the plant to withstand
19 earthquakes, to the reliability of valves, to quality
20 control and construction.

21 Over 50 issues were settled by stipulation.
22 Hearing on the remaining issues started in May, 1982 and
23 continued for a year. During that time, 7,000 pages of
24 direct testimony and attachments were filed, in addition
25 to 200 exhibits.

1 Intervenors extensively cross-examined witnesses
2 for the Applicant and the NRC staff, and presented their
3 own witnesses and exhibits. The transcript of the hearing
4 on the safety issues raised by Intervenors runs over
5 21,000 pages. After this extensive litigation, the
6 Licensing Board, on September 21, 1983, rendered a 200-
7 page opinion, in which that independent Board generally
8 concluded that the plant could be safely operated without
9 endangering the public health and safety, but ordered
10 further hearings on questions of diesel generator
11 reliability.

12 After extensive hearings on the diesel generator
13 reliability issues where, again, Suffolk County and the
14 other Intervenors cross-examined witnesses and presented
15 their own witnesses and exhibits, the independent
16 Licensing Board concluded on June the 14th, 1985, that
17 Shoreham could operate safely. Extensive appeals followed
18 those decisions, and Suffolk County and the other
19 Intervenors were again given a full right to be heard.

20 The issues were sustained by the Appeal Board,
21 and the Licensing Board's determination was affirmed that
22 Shoreham could be operated safely. Selected issues were
23 taken to the Commission and it, too, on June the 5th,
24 1984, affirmed the Licensing Board.

25 Proceedings to litigate emergency planning

1 issues, the LILCO emergency plan, began in early 1983.
2 Some 97 issues challenging that plan were offered by
3 Suffolk County and other Intervenor, and 70 of them were
4 found admissible for litigation.

5 The first emergency planning hearing for the
6 LILCO plan began on December the 6th, 1983 and ended on
7 August the 29th, 1984. Over 80 witnesses for LILCO,
8 Suffolk County, the staff and the Federal Emergency
9 Management Agency testified. They were subject to
10 thorough cross-examination and 200 exhibits were offered
11 into evidence.

12 Additional hearings of the LILCO plan were held
13 in June, 1985. In total, these hearings on the Shoreham
14 emergency plan covered over 16,000 pages of testimony. In
15 these hearings, Suffolk County and New York State,
16 particularly, questioned whether emergency planning and an
17 emergency evacuation was possible for Long Island, in view
18 of its long insular configuration and its road system.

19 Although raising questions concerning LILCO's
20 legal authority to implement its plan and whether the
21 county and state would perform certain functions in a
22 national emergency, the Licensing Board concluded, after
23 these heavily contested hearings, that there is no
24 question that emergency planning was possible on Long
25 Island, and that the LILCO plan and its approach for

1 evacuation was workable.

2 The Licensing Board stated, in part, that its
3 determination is not based upon a finding that there
4 anything unique about the demography, topography, access
5 route, or jurisdictional boundaries of the area in which
6 Shoreham is located. To the contrary, the Licensing Board
7 found, the record fails to reveal any basis to conclude
8 that it would be impossible to fashion and implement an
9 effective off-site emergency plan for the Shoreham Plant.

10 Again, after that Licensing Board decision,
11 there were extensive appeals involving the LILCO emergency
12 plan, to both the Appeal Board and the Commission. The
13 Licensing Board's determination that an emergency plan for
14 the Shoreham Plant on Long Island, including evacuation,
15 was both possible and capable of implementation, was not
16 disturbed.

17 As you know, Mr. Chairman, further litigation
18 was held on the 1968 exercises for the Shoreham Plant. In
19 these hearings, Suffolk County and other Intervenor
20 submitted 162 pages of contentions --

21 CHAIRMAN ZECH: I think you said 1968. I think
22 you mean 1986.

23 MR. PARLER: '86 -- I'm sorry -- 1986.
24 Extensive adjudicatory hearings were held and witnesses
25 for all parties were cross-examination. An 8300-page

1 record was compiled. Some exercise deficiencies were
2 identified by the Licensing Board, and the Licensing
3 Board's determination was subject to appeal. A second
4 off-site exercise was held -- was commenced in 1988, and
5 litigation of that exercise was about to commence, but
6 during the course of litigation of certain realism issues
7 concerning the LILCO emergency plan, the Licensing Board,
8 on September the 23rd, 1988, made a decision, which was
9 affirmed by the Commission in its March 3rd, 1989
10 decision.

11 So, that brief summary in the administrative
12 record provides the context in which Mr. -- Dr. Murley's
13 remarks should be taken.

14 CHAIRMAN ZECH: All right. Thank you very much,
15 Mr. Parler. Mr. Stello, you may proceed.

16 MR. STELLO: Thank you, Mr. Chairman. We are
17 prepared this morning, to fulfill the requirement set on
18 us pursuant to the Order you've already heard described.

19 Before doing so, I think it is important for the
20 Commission to recognize that the comments and the
21 conclusions that we reach here this morning are based on a
22 very, very extensive and comprehensive review by the
23 staff. My judgment is that this is perhaps one of the
24 most thoroughly reviewed and evaluated plants that the
25 staff has undertaken in the history of the agency. So, we

1 have not approached it lightly, nor do we approach lightly
2 reaching the conclusion that we offer you this morning,
3 namely, that we are satisfied that the plant meets the
4 regulations and that it can be operated safely and, with
5 the Commission's concurrence, we would suggest that you
6 approve the staff issue the full power license to the
7 Shoreham facility.

8 I will ask Dr. Murley to present to you his
9 findings regarding emergency preparedness and overall
10 status of the relative preparedness of the facility by Mr.
11 Russell, and then we're prepared to answer any questions
12 the Commission may have on any subject.

13 CHAIRMAN ZECH: Thank you very much. Dr.
14 Murley, you may proceed.

15 DR. MURLEY: Thank you, Mr. Chairman.

16 The Shoreham Plant construction was completed
17 and low power operation approved in early 1985. Since
18 that time, the plant has been ready for full power
19 operation except for emergency preparedness issues.

20 We're here today to describe our findings
21 regarding emergency planning and readiness of the plant
22 and operating staff to undertake full power operations.

23 From the region is Bill Russell, the Regional
24 Administrator, and Ebe McCabe, Section Chief in charge of
25 Shoreham. Also, Frank Crescenzo, the senior resident

1 inspector, is here in the audience.

2 With me, on my right, is Bill Travers, the
3 Branch Chief in charge of Emergency Planning, and Stewart
4 Brown, the Project Manager. Stewart Brown will now begin
5 the discussion.

6 CHAIRMAN ZECH: Thank you very much. You may
7 proceed.

8 MR. BROWN: Good morning.

9 In April, 1973, the staff issued to the Long
10 Island Lighting Company, a construction permit for its
11 Shoreham facility. In December, 1984, the staff then
12 issued a low power -- excuse me -- fuel load and physics
13 testing license.

14 The utility took the plant critical in February,
15 1985. The staff then issued a low power license in July,
16 1985, authorizing power up to 5 percent of full rate of
17 power.

18 The staff is proposing a license for full power
19 operation. In that license, there are six plant-specific
20 license conditions carried over from the 5 percent
21 license. They include items such as the fire protection
22 program, flux monitoring, steam condensing mode of the
23 RHR, emergency diesel generator, and a commitment to
24 reanalyze the ECCS for the second fuel load.

25 In addition, there are five EP-related license

1 conditions that are new this time. One of them is board
2 directed -- that is, a condition that would require the
3 plant to be shut down pending a strike -- and the
4 remaining four are the result of NRR's Director's review
5 of the emergency planning program. Thank you.

6 CHAIRMAN ZECH: Thank you very much.

7 MR. BROWN: Excuse me -- I'm sorry. Exemptions.
8 There were four exemptions granted with this license.
9 Three are being carried over from the 5 percent license.
10 They deal with testing -- reduced pressure testing of the
11 MSIV valves. The second one would require the utility to
12 --

13 CHAIRMAN ZECH: Main steam isolation valves.
14 You might stay away from the acronyms if you could,
15 please.

16 MR. BROWN: Yes, sir.

17 CHAIRMAN ZECH: Thank you.

18 MR. BROWN: The second one would allow the
19 utility, until the first refueling outage, to install
20 second isolation valves on certain instrument lines
21 penetrating the containment.

22 The third one that's being carried over is a
23 requirement that the utility upgrade its remote shutdown
24 panel and shutdown capability, by -- prior to startup in
25 the first refueling outage.

1 A new exemption is being granted this time, and
2 that would allow -- that would be not inerting the
3 containment immediately. This would allow frequent entry
4 into the containment during the power ascension program.

5 The current regulations require that the plant
6 containment be inert at six months from initial
7 criticality. In this case, that would impact the power
8 ascension program. The staff has accepted 120 full
9 effective power days. This would allow the utility to
10 proceed with the power ascension program, and monitor or
11 inspect anything that's necessary to be inspected inside
12 the containment. Thank you.

13 CHAIRMAN ZECH: Are you satisfied that these
14 exemptions would not involve any condition of the plant
15 safety that should be a concern to us or to our
16 regulations?

17 MR. BROWN: Yes, sir.

18 COMMISSIONER ROGERS: What's the justification
19 for carrying those forward from the first low power
20 license all the way up to this time? Why, in your
21 opinion, was it necessary to do those before getting to
22 this point?

23 MR. BROWN: Okay. The first license condition
24 is a permanent one.

25 COMMISSIONER ROGERS: I'm talking about the

1 exemptions.

2 MR. BROWN: Okay. Excuse me.

3 COMMISSIONER ROGERS: The three exemptions
4 carried over from the 5 percent license.

5 MR. BROWN: Okay. The first one is a permanent
6 exemption. That's based on the design of the boiling
7 water reactor main steam line isolation valve
8 configuration.

9 The second one will require that the utility
10 install about 40 valves, additional valves. The staff has
11 determined that it was not a safety significant item, it
12 was just that the staff has allowed the utility to go to
13 the first return -- return to power operation from the
14 first refueling outage. It was not a safety significant
15 item.

16 The remote shutdown upgrades. The utility has
17 made progress in this area. They have completed about 50
18 percent of their engineering. They have purchased the
19 hardware that was necessary. They are making progress
20 with respect to getting approval with GE, to tie into GE
21 panels and equipment, and it seems to be a reasonable--
22 that they are making reasonable or a good faith effort to
23 get the job done.

24 COMMISSIONER ROGERS: Well, hasn't it -- I mean,
25 it's been four years since the 5 percent license was

1 granted, with those exemptions. Wasn't four years an
2 adequate time to carry these out?

3 MR. BROWN: In some instances -- again, there
4 appears to have been reasonable progress on the remote
5 shutdown panel. We can discuss that in detail. We have
6 Mr. Scott from the staff -- Scott Newberry.

7 COMMISSIONER ROGERS: Well, I'm just concerned
8 that we have exemptions that were granted at the 5 percent
9 operating license level, that were still -- are still
10 exemptions, and I'd like to know why that's a reasonable
11 thing to do. And if there are good reasons for it, then I
12 think we ought to hear them.

13 DR. MURLEY: We believe there are good reasons.
14 Mr. Scott Newberry, Branch Chief in charge of this area,
15 will address that.

16 CHAIRMAN ZECH: Will you identify yourself for
17 the Reporter, please.

18 MR. NEWBERRY: Yes, sir. My name is Scott
19 Newberry. I'm Chief of the Instrumentation and Control
20 Systems Branch, in NRR, Mr. Chairman.

21 CHAIRMAN ZECH: Thank you.

22 MR. NEWBERRY: I can speak specifically to the
23 question on the remote shutdown capability at Shoreham.
24 First, I would say that the plant, in our view, does have
25 adequate remote shutdown capability.

1 Commissioner Rogers' question, I think, though,
2 is, what about the time that's been available between the
3 low power license and where we are today. I think, as far
4 as I can tell, the plant has made every effort to keep
5 Shoreham safety systems, including the remote shutdown
6 panel and capability, fully operational.

7 This modification is a rather extensive
8 modification, and to enter into it you're talking about
9 rather significant modifications which would render that
10 capability inoperable for a period of time.

11 Our view indicates that the utility in terms of
12 ordering equipment, performing engineering, has gone quite
13 far -- clearly, far enough so that they will be able to
14 support the modification during the first refueling
15 outage, which is their original commitment.

16 So, it's a judgment, Commissioner Rogers, in
17 terms of the significance of the modification, and
18 weighing that modification with the need to keep the plant
19 fully operational, given the unique circumstances of
20 Shoreham.

21 DR. MURLEY: That, Commissioner, that the--
22 there has been a commitment for several years now, at the
23 first refueling outage, to tie in the Colt diesel
24 generators. You'll recall, they had problems with their
25 GDI diesel generators some years ago, and they built a new

1 -- complete set of new diesel generators with their
2 building, and so forth. Those have not been tied into the
3 safety systems.

4 There will be a major outage at the end of the
5 first refueling period. In light of that major outage,
6 that needs to be done. It was a staff judgment that we
7 could, at the same time, require the modifications that
8 would be required for the alternate shutdown panel at that
9 time. In the meantime, we're satisfied that they have the
10 capability to safely shut the plant down.

11 CHAIRMAN ZECH: Anything else, Commissioner
12 Rogers?

13 COMMISSIONER ROGERS: Well, there are the other
14 two items, the main steam isolation valve and the second
15 isolation valves on lines that go into the containment.
16 I'd like to hear explicitly on each of those.

17 MR. BROWN: Yes. The first one is a permanent
18 exemption. That's based on the design of the main steam
19 line isolation valves. This is typical of most boiling
20 water reactors. They come in at a slant angle and,
21 normally -- well, they don't have a lock valve between the
22 main steam isolation valve and the reactor vessel.

23 The way to test it is to apply pressure between
24 the valves. This would be conservative and correct for
25 the outboard one, but the one inboard would tend to

1 unseat, yielding unrealistic results. For most boiling
2 water reactors, a reduced pressure test has been found to
3 be acceptable, and this is just a normal exemption that's
4 granted with most boiling water reactors.

5 COMMISSIONER ROGERS: Nothing unique here to
6 Shoreham?

7 MR. BROWN: No, sir. There is one part to this,
8 that the exemption allows them not to include the leakage
9 into their integrated amount, and the reason for that is
10 their main steam isolation collection system. They have a
11 system that collects down -- between the two valves and
12 downstream of the outboard valve, takes it to a volume
13 where it's processed by the standby gas treatment system.
14 That has been analyzed, and it's counted separately. This
15 is a permanent exemption based on their design.

16 The second item would be the containment
17 isolation valves on the instrument lines. During the
18 review process, the utility assumed that these were closed
19 systems, thereby only requiring that they needed one
20 isolation valve.

21 The staff, during its review, determined that
22 these were GDC 56 valve penetrations that required two
23 penetrations. To go in and change them, I guess, could
24 have been done, but the staff has determined that it's not
25 really a safety significant item based on the design.

1 They are closed instruments. They are designed to
2 pressure much higher than the peak calculated pressure,
3 and would probably -- it would be best done during a major
4 outage.

5 The staff sees no safety problem allowing this
6 to go forward, sir.

7 COMMISSIONER ROGERS: Thank you.

8 CHAIRMAN ZECH: Anything else?

9 COMMISSIONER ROGERS: No.

10 CHAIRMAN ZECH: All right. Thank you very much.
11 You may proceed, Dr. Murley.

12 DR. MURLEY: Thank you, Mr. Chairman. We'll now
13 take some time to discuss the emergency planning situation
14 at the Shoreham site.

15 The NRC staff, both headquarters and Region I,
16 has been deeply involved in emergency planning at Shoreham
17 in recent years. The staff has reviewed the plans, worked
18 with FEMA, observed two exercises of the plant, and
19 reviewed the hearing record and all the outstanding
20 contentions from that litigation.

21 Most recently, on March 28th, in preparation for
22 this meeting, I went with my senior staff to the LILCO
23 emergency operations facility. I was briefed by LILCO on
24 their plan and their readiness to execute it. I observed
25 the emergency operations center at Brentwood, which is the

1 LERO command, control and communications center.

2 In addition, we observed the facilities at Fort
3 Jefferson, which is one of the three staging areas for the
4 LERO emergency field workers. In addition, the NRC staff
5 had the experience of reviewing emergency plans and
6 exercises at over 70 other nuclear sites, in 33 other
7 states in the United States. It's with this perspective
8 that we approached our evaluation of emergency
9 preparedness at Shoreham.

10 A comparison of the geography of the Shoreham
11 site with other nuclear plant sites, leads to the
12 conclusion that the Shoreham site compares favorably with
13 other sites in the United States, from an emergency
14 planning standpoint.

15 The plant is located on a flat, coastal plain,
16 without complex terrain to complicate predictions of plume
17 trajectory, in contrast with other sites set in hilly
18 areas or in river valleys that present more difficult
19 geographic conditions.

20 The road system around Shoreham also compares
21 favorably with other coastal sites having similar
22 populations within the emergency planning zone.

23 There is a well developed transportation network
24 within the EPZ, with several major highways traversing the
25 EPZ in both the east-west and the north-south direction,

1 thus making evacuation planning relatively
2 straightforward.

3 With regard to demographics, there are several
4 nuclear sites in the United States that have greater
5 populations within the ten mile emergency planning zone,
6 than does Shoreham.

7 One of the common concerns heard about emergency
8 planning at Shoreham is that the Long Island Expressway is
9 so crowded at times, that evacuation would be impossible.
10 I have been on the Long Island Expressway many times, most
11 recently on March 28th, during the morning and the evening
12 rush hours. It is a fine road. It's a multi-lane,
13 divided highway. It gets crowded at times, just like
14 other highways in the United States and in the EPZ' of
15 other nuclear sites across the country, but there's no
16 question that with modern traffic control procedures, it
17 can be as effective road to carry out any necessary
18 evacuations.

19 Another common concern frequently heard about
20 Shoreham is that it is situated on an island that would be
21 impossible to evacuate in an emergency. Of course, Long
22 Island is an island. It's 118 miles in length, and 15
23 miles wide at the location of Shoreham.

24 The emergency planning zone extends less than 20
25 percent of the length of the island, and covers only about

1 10 percent of the area of the island. The emergency plan
2 does not require evacuating more than ten miles from the
3 plant, even in the most serious accidents considered.

4 The notion of evacuating all of Long Island is
5 not only not required, but would be contrary to common
6 sense.

7 Regarding weather, winters are less severe than
8 at many other sites in the United States because of the
9 moderating effect of Shoreham being a coastal site. Since
10 heavy snows are relatively uncommon and the surrounding
11 terrain is generally flat, impediments to evacuation
12 should occur relatively infrequently at the site.

13 Like other sites along the Atlantic coast,
14 Shoreham is subject to hurricanes. The plant will be
15 required by license condition, to shutdown in the even of
16 an approaching hurricane. Hence, it is concluded that
17 there are no unique features of the Shoreham site that
18 render emergency planning fundamentally more difficult
19 than for other nuclear sites in the United States.

20 A unique aspect of emergency planning at
21 Shoreham, of course, is that New York and Suffolk County
22 have refused to participate in off-site emergency planning
23 and training. This circumstance raises questions whether
24 an effective emergency plan can be developed, and whether
25

1 the plan can be executed effectively.

2 LILCO has developed the local off-site
3 radiological emergency response plan, which is implemented
4 by the local emergency response organization, also called
5 LERO, for the Shoreham site.

6 LERO is comprised of LILCO and contractor
7 personnel, with support organizations such as the U.S.
8 Department of Energy, located at Brookhaven National
9 Laboratory, within the ten-mile emergency planning zone.

10 The Department of Energy is an integral part of
11 LERO, with responsibilities for radiological monitoring
12 and dose assessment.

13 FEMA, in coordination with the NRC, has reviewed
14 extensively the LERO plan, and has found it to be a
15 comprehensive, well integrated approach to emergency
16 planning at the Shoreham site, for the following reasons:
17 It is a well organized and complete plan. The required
18 LERO staff, under the plan, is rostered at 150 percent of
19 expected needs.

20 There are adequate facilities and equipment
21 identified and provided. All supervisory positions in the
22 LERO plan are filled with supervisors or managers in
23 LILCO, who are reachable by pager for rapid response.

24 LILCO employees and contractors fill all
25 emergency response positions, and the utility, therefore,

1 has the ability to assure that needed training occurs.

2 Training program for off-site response is
3 comprehensive and quarterly training drills are being done
4 and will be required in the future, by a license
5 condition.

6 The LERO plan was extensively litigated during
7 the hearing process. It was closely reviewed by FEMA;'s
8 regional assistance committee, and has been found
9 acceptable by FEMA.

10 The LERO plan has provisions to evacuate the
11 families of LERO emergency workers in order to relieve
12 those workers of potential conflicting concerns between
13 protecting their families and meeting their
14 responsibilities under the plan.

15 For the reasons above, it is concluded that the
16 LERO plan compares favorably with emergency plans from
17 many other sites in the United States, which typically
18 rely on volunteers for many local response functions
19 during an emergency.

20 Turning now to the question of whether the LERO
21 plan can be executed effectively, the staff assumes that
22 state and local authorities will use their best efforts to
23 protect the health and safety of the public in the event
24 of an emergency at Shoreham, and that absent a superior
25 emergency plan, they will follow the LERO plan.

1 Further, staff review indicates that state and
2 local resources are adequate and available to support
3 implementation of the LERO plan. There remains a
4 question, however, that if state and local authorities do
5 not participate in preparing and exercising the LERO plan,
6 can 11th hour participation by the state and county in an
7 actual emergency, be effective in achieving the goal of
8 dose savings for the population in the vicinity of
9 Shoreham.

10 While it would be clearly preferable for the
11 state and county to participate in planning and exercises,
12 the LERO plan is written to accommodate state and county
13 response at the 11th hour.

14 LERO officials would activate the LERO emergency
15 operations center at the Brentwood district office, at the
16 alert stage in an emergency, where they would set up their
17 command, control and communications center.

18 There will be a designated LERO worker around-
19 the-clock at the EOC, by license condition, to ensure that
20 logistical arrangements at the EOC can be made with no
21 undue delays.

22 If county officials choose to operate from the
23 LERO EOC, there are space, facilities and information to
24 enable them to function effectively. If, on the other
25 hand, county officials choose to operate from the Suffolk

1 County EOC, a designated LERO official will be available
2 to provide full communication between the county officials
3 at the county EOC and the LERO emergency managers at the
4 LERO EOC.

5 A license condition requiring that a designated
6 LERO official be dispatched automatically at the alert
7 stage to the county EOC with appropriate information and
8 equipment, will assure prompt establishment of
9 communications.

10 Outside of EOC activities, LERO personnel would
11 be dispatched to their off-site plant positions. If state
12 or county authorities arrive, the LERO responder is
13 trained to explain the function of the position to the
14 individual with authority, and the LERO responder then
15 either assists or relinquishes control, as the situation
16 dictates.

17 LERO personnel are trained in the use of
18 dosimetry and radiological precautions, and will provide
19 dosimetry coverage and protective advice to responding
20 state or county representatives.

21 The presence of these trained LERO individuals
22 at the various response locations will be available to
23 provide direct support, and they should result in enhanced
24 performance of state and local authorities in their
25 emergency response duties.

26 Turning now to New York State, the state has a

1 well developed emergency plan. It has participated in
2 numerous exercises with the other nuclear power plants in
3 New York, and has always performed competently.

4 The LERO plan was developed to be compatible
5 with the New York State plan, and the staff finds no
6 serious impediments to implementing the LERO plan at the
7 state level.

8 Furthermore, although the state and county may
9 not have formally participated in planning, some key
10 officials are, in fact, very familiar with the LERO plan.
11 They have reviewed, commented upon, and participated in
12 the litigation of many issues concerning the LERO plan.

13 Therefore, it is concluded, while acknowledging
14 it would be clearly preferable for the state and county to
15 participate in planning and in exercises, that the
16 comprehensive LERO plan and a demonstrated ability of LERO
17 to rapidly mobilize well trained personnel, provides
18 assurance of effective emergency response actions even in
19 the event of 11th hour participation by state and county
20 authorities in an actual emergency at Shoreham.

21 The adequacy of the LERO plan was tested in a
22 February 13, 1986 exercise and, most recently, in a June
23 7th to 9th, 1988 exercise. FEMA has advised NRC that the
24 June, 1988 exercise demonstrated adequate overall
25 preparedness on the part of LERO personnel.

1 Based on their review of the LERO plan as well
2 as the June, 1988 exercise results, FEMA reached an
3 overall finding of adequacy regarding Shoreham off-site
4 emergency preparedness.

5 With respect to on-site emergency preparedness,
6 the NRC staff has observed on-site drills and exercises at
7 Shoreham, and has conducted inspections of LILCO's on-site
8 emergency preparedness program.

9 Staff concludes that the on-site plan is
10 adequate and that there's reasonable assurance that it can
11 and will be implemented in the event of an emergency at
12 Shoreham.

13 In addition to the broad issues discussed above,
14 there are a number of outstanding emergency planning
15 contentions that have arisen in the Shoreham hearings.
16 Each of these contentions has been reviewed and has been
17 found to be satisfactorily resolved.

18 The evaluation of each contention is documented
19 in a Director's Finding Report, which has been provided to
20 the Commission.

21 In summary then, the following conclusions have
22 been reached. First, the Shoreham site compares favorably
23 with other nuclear plant sites in the United States.
24 There are no unique features of the site that render
25 emergency planning at Shoreham fundamentally more

1 difficult than for other nuclear sites in the United
2 States.

3 The Shoreham off-site emergency plan, as
4 implemented by LERO, results in a response capability that
5 is equivalent to, or better than, the response capability
6 for many other sites in the United States.

7 Third, because of the thoroughness of the LERO
8 plan and the demonstrated ability of LERO to rapidly
9 mobilize well trained personnel, effective emergency
10 response actions can and will be taken in conjunction with
11 the best efforts of state and county emergency response
12 organizations.

13 Fourth, the LERO plan has been found by FEMA to
14 be adequate, based on a thorough review of the plan as
15 well as an evaluation of a full participation exercise at
16 Shoreham on June 7th to 9th, 1988.

17 Fifth, each of the outstanding emergency
18 planning contentions has been satisfactorily resolved.

19 It is concluded, therefore, that there is
20 reasonable assurance that adequate protective actions can
21 and will be taken in the event of a radiological emergency
22 at Shoreham.

23 Now, I'll turn to Bill Russell, who will discuss
24 the readiness of the plant for operations.

25 CHAIRMAN ZECH: Thank you very much. Mr.

1 Russell, you may proceed.

2 MR. RUSSELL: Thank you, Mr. Chairman.

3 NRC conducted an operational readiness
4 assessment team inspection in March of 1989. This
5 inspection involved 17 staff and approximately 1,000
6 direct inspection hours.

7 From that inspection, we concluded that there
8 were effective management controls in place and in
9 particular noted the strong operational QA, quality
10 assurance programs on the part of the company.

11 There is adequate staffing and with stable and
12 ample operation staff to support operation. The training
13 program and contracts are in place, to provide personnel
14 to staff the startup and test organization, and we have
15 concluded that the procedural controls to assure that that
16 training is accomplished prior to the testing is adequate.

17 We found that the morale of the staff was good.
18 Particularly noteworthy were some of the activities in
19 their maintenance programs, with some what I will
20 characterize as leading-edge activities on the part of the
21 company, particularly as it relates to predictive
22 maintenance techniques.

23 I would also note that they are quite far along
24 with respect to design control, with approximately 90
25 percent of all the design basis documents having been

1 turned over from the architect engineer and the nuclear
2 steam supplier, to Long Island Lighting Company, for
3 maintaining the design database of the facility.

4 It's also noteworthy that with an inspection
5 this large, with this type of activity, that there were
6 very few open items from this inspection.

7 There were eight that we had identified, and of
8 those eight, five have been resolved to the satisfaction
9 of the staff. One was already mentioned. This is the
10 transition plan of going from contractor support to LILCO
11 employee support by Mr. Leonard.

12 The maintenance work request priority review,
13 the equipment qualification, temperature pressure
14 envelope, repetitive maintenance over the last year or so,
15 and motor operated valve covers for equipment
16 qualification -- those items have been found satisfactory
17 by the staff.

18 There are three that are remaining, for which
19 the schedule is to complete that work by Saturday, the
20 22nd -- modification to motor operated valves, which was
21 completed this morning, but the staff has not yet
22 completed its review; there are some questions on
23 fasteners in Class 2 and 3 systems, for which the
24 licensees completed the review, but not all of the
25 replacement of questionable fasteners has been completed;

1 and then one remaining item, which is the controlling path
2 item, which is associated with pressure detectors and
3 differential pressure detectors, the type of sealing that
4 is used for environmental qualification. It is reasonable
5 that those tasks can be completed by Saturday.

6 We have a very few open inspection items which
7 we are following up on, there are only four which, at this
8 point in time, leaves a total of about seven items open
9 for closeout before the plant would be ready to operate.

10 CHAIRMAN ZECH: But those seven items, you are
11 saying that they must be required for closeout before full
12 power operations?

13 MR. RUSSELL: That's correct; yes, sir, and we
14 would expect that they could be closed out by Saturday --

15 CHAIRMAN ZECH: By Saturday of this week?

16 MR. RUSSELL: That would be with the licensees'
17 work, and then it will take some few days for the staff to
18 assure, through its review process, that they are all
19 completed.

20 CHAIRMAN ZECH: All right. Thank you.

21 MR. RUSSELL: As it relates to allegations,
22 we've had 22 allegations on the facility since December of
23 1984. All have been investigated, and there are no
24 outstanding safety concerns that need to be addressed as
25 it relates to allegations.

1 One of the 22 was substantiated. It did result
2 in an enforcement action for which we issued a severity
3 Level 3 enforcement, with no civil penalty. The basis for
4 that was the prompt action taken by the company in
5 response. It involved some falsification of records. The
6 individuals involved were terminated, and we concluded
7 from our own investigation, that it did not go above the
8 foreman level within the organization.

9 As it relates to operating experience at the
10 facility, the company described the periods of time of
11 operation with phasing the generator to the grid, they did
12 have four unplanned reactor trips from power during that
13 period of time. Those have been thoroughly reviewed, and
14 we find that the actions taken have been responsive.

15 With respect to staffing, I mentioned that we
16 found that the operations staff was well qualified, that
17 they have more than the minimum required by the technical
18 specifications available for operations, and they have
19 also committed to have the shift technical adviser rotate
20 and train with the same crew during this period of time.
21 We have no open items or questions on staffing.

22 We conclude that the facility, from a technical
23 standpoint, management standpoint, is ready to be operated
24 and can be done so safely. That concludes my remarks.

25 CHAIRMAN ZECH: Okay. Thank you very much.

1 DR. MURLEY: Mr. Chairman, in conclusion then,
2 staff believes the plant meets the regulations. There's
3 reasonable assurance that the plant can be operated with
4 no undue risk to the health and safety of the public, and
5 we recommend Commission approval to issue a full power
6 license. That concludes our discussion.

7 CHAIRMAN ZECH: All right. Thank you very much.
8 Any other --

9 MR. STELLO: We're through, Mr. Chairman.

10 CHAIRMAN ZECH: All right. Thank you very much.
11 Questions from my fellow Commissioners?
12 Commissioner Roberts?

13 COMMISSIONER ROBERTS: I don't have a question,
14 just a comment. It's my understanding that the staff's
15 work to respond to our staff requirements memo of March
16 13th was a herculean effort that took a lot of night work
17 and weekend work and I want to acknowledge that. Thank
18 you.

19 MR. STELLO: Well, we appreciate that because,
20 indeed, they did work very hard, including over the
21 holiday, Easter holiday; Easter Sunday itself.

22 COMMISSIONER ROBERTS: That's all I have.

23 CHAIRMAN ZECH: I think he expressed the respect
24 from the entire Commission for that, Mr. Stello, I think
25 we're all aware of that. I appreciate Commissioner

1 Roberts making that comment because the staff has, indeed,
2 worked through holidays, weekends and nights in order to
3 accomplish this. I think you've obviously done a very
4 thorough task, and we all appreciate that, and hope you'll
5 pass our respects to all the people involved.

6 Commissioner Carr?

7 COMMISSIONER CARR: No.

8 CHAIRMAN ZECH: Commissioner Rogers?

9 COMMISSIONER ROGERS: Just on the emergency
10 planning, how do the numbers or percentages of vehicles,
11 schools, people who agreed to participate in this
12 exercise, compare with the numbers for a typical emergency
13 planning exercise at other nuclear plants where local
14 cooperation hasn't been an issue?

15 DR. MURLEY: During the exercise itself, for
16 example?

17 COMMISSIONER ROGERS: Yes.

18 DR. MURLEY: Okay. Bill, do you recall --

19 MR. RUSSELL: The exercise scope for the June,
20 1988 exercise at Shoreham, was herculean by comparison to
21 most exercises. The participation, however, by the
22 schools in question was limited. Only one public school
23 district agreed to participate, however, FEMA concluded
24 that the demonstration through the control cell as well as
25 the participation by that one school district, was

1 sufficient to give an indication of the plan and the
2 contents of the plan and how it deals with providing
3 protective measures for schools.

4 COMMISSIONER ROGERS: I think that's all.

5 CHAIRMAN ZECH: All right. Well, let me thank
6 the Long Island Lighting Company and the NRC staff, for
7 these very important presentations this morning.

8 Dr. Catacosinos, I'd like to extend to you and
9 to the staff of the Long Island Lighting Company, my
10 respects for your persistent and significant efforts to
11 complete the NRC licensing process for the Shoreham Plant,
12 for your maintaining corporate support for the plant
13 throughout that long and highly publicized process, and
14 for maintaining a strong safety commitment as well as for
15 your efforts to maintain a capable operating staff and
16 high morale throughout the LILCO proceedings concerning
17 the Shoreham Nuclear Power Plant.

18 Well, to summarize what we've heard here today,
19 we've heard from the LILCO Company regarding Shoreham and
20 their views. We've also heard that the NRC staff, as I
21 understand it, has concluded that the emergency planning
22 issues at Shoreham are resolved sufficiently to support an
23 overall finding of reasonable assurance for emergency
24 preparedness.

25 We've also heard from the staff that after

1 completion of the prerequisites which were noted here
2 today, that there's reasonable assurance that the plant
3 can be operated with no undue risk to the health and
4 safety of the public, and that the plant meets the NRC
5 requirements for issuance of a full power license.

6 As I mentioned in my opening remarks, the
7 Commission must now take the time to carefully consider
8 what we've heard today, and come to a decision concerning
9 the full power licensing of Shoreham.

10 I ask my fellow Commissioners to advise the
11 Secretary of their individual votes, and once the voting
12 is completed, the Commission will meet again in a public
13 meeting in order to affirm our decision. The earliest
14 this public meeting could take place to affirm our
15 decision should be Thursday of this week, if we're ready
16 by then; if we're not, we'll take whatever time we need to
17 be ready.

18 Do any of my fellow Commissioners have any final
19 remarks to make?

20 (No response.)

21 If not, thank you very much. We stand
22 adjourned.

23 (Whereupon, at 11:37 a.m., the meeting was
24 adjourned.)

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: DISCUSSION OF SHOREHAM FULL POWER OPERATING
LICENSE

PLACE OF MEETING: ROCKVILLE, MARYLAND

DATE OF MEETING: APRIL 17, 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.

Phyllis Young

Reporter's name: PHYLLIS YOUNG

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SCHEDULING NOTES

TITLE: DISCUSSION OF SHOREHAM FULL POWER OPERATING LICENSE

SCHEDULED: 10:00 A.M., MONDAY, APRIL 17, 1989 (OPEN)

DURATION: APPROX 1-1/2 HRS

PARTICIPANTS: LONG ISLAND LIGHTING COMPANY 30 MINS

- DR. WILLIAM CATACOSINOS (10 MINS)
CHAIRMAN AND CEO W/EARLY
- ANTHONY EARLY, PRESIDENT
- JOHN LEONARD, JR. (20 MINS)
VICE PRESIDENT, NUCLEAR OPERATIONS
- WILLIAM STEIGER
ASSISTANT VICE PRESIDENT, NUCLEAR OPERATIONS
- JOHN SCALICE
PLANT MANAGER

NRC 40 MINS

- VICTOR STELLO, JR. (5 MINS)
- THOMAS MURLEY (20 MINS)
- WILLIAM RUSSELL
- FRANK CRESCENZO (5 MINS)
- STEWART BROWN (10 MINS)

COMMISSION BRIEFING

ON

SHOREHAM NUCLEAR POWER STATION, UNIT 1

FULL POWER LICENSE

APRIL 17, 1989

OUTLINE

- ° LICENSING MILESTONES
- ° LICENSE CONDITIONS
- ° EXEMPTIONS
- ° EMERGENCY PLANNING
- ° READINESS REVIEW PROGRAM
- ° ALLEGATIONS
- ° OPERATING EXPERIENCE

OUTLINE (CONTINUED)

- STAFFING
- STAFF CONCLUSION

LICENSING MILESTONES

CONSTRUCTION PERMIT	APRIL 1973
ASLB DECISION	OCTOBER 1984
FUEL LOAD LICENSE	DECEMBER 1984
FUEL LOAD COMPLETE	JANUARY 1985

LICENSING MILESTONES (CONTINUED)

INITIAL CRITICALITY	FEBRUARY 1985
ASLB DECISION	JUNE 1985
LOW POWER LICENSE	JULY 1985
ASLB DECISION	SEPTEMBER 1988

LICENSE CONDITIONS

- FIRE PROTECTION PROGRAM
- FLUX MONITOR

LICENSE CONDITIONS (CONTINUED)

- STEAM CONDENSING MODE OF RHR
- EMERGENCY DIESEL GENERATOR
- FISSION GAS RELEASE AND BALLOONING
AND RUPTURE

LICENSE CONDITIONS (CONTINUED)

- STRIKE SHUTDOWN
- HURRICANE SHUTDOWN
- COUNTY LIAISON
- BRENTWOOD STAFFING
- QUARTERLY DRILLS

EXEMPTIONS

- LEAK TESTING OF MSIVS AT PEAK
CALCULATED PRESSURE (10 CFR 50,
APPENDIX J)
- SECOND ISOLATION VALVE ON INSTRUMENT
LINES (10 CFR 50, APPENDIX A, GDC 56)
FIRST REFUELING OUTAGE

EXEMPTIONS (CONTINUED)

- REMOTE SHUTDOWN SYSTEM (10 CFR 50,
APPENDIX A, GDC 19) FIRST REFUELING
OUTAGE
- INERTING PRIMARY CONTAINMENT (10 CFR
50.44(c)(3)(i)) 120 FULL EFFECTIVE
POWER OPERATING DAYS

EMERGENCY PLANNING

SHOREHAM SITE COMPARES FAVORABLY TO OTHER SITES

° TOPOGRAPHY

- FLAT COASTAL PLAIN WITHOUT COMPLEX TERRAIN

° TRANSPORTATION NETWORK

- SEVERAL MAJOR EAST-WEST AND NORTH-SOUTH ROADS

° METEOROLOGICAL INFLUENCES

- RELATIVELY MILD WINTERS DUE TO COASTAL LOCATION
- HURRICANES ARE POSSIBLE, HOWEVER, A LICENSE CONDITION
WILL REQUIRE A SHUTDOWN

° DEMOGRAPHY

- POPULATION DENSITY WITHIN 10-MILE EPZ IS LESS THAN
THAT FOR SEVERAL OTHER NUCLEAR POWER PLANTS

EMERGENCY PLANNING (CONTINUED)

LOCAL OFFSITE RADIOLOGICAL EMERGENCY RESPONSE PLAN (LERO)

- ° LERO POSITIONS ARE ROSTERED AT 150% OR GREATER OF EXPECTED NEEDS
- ° LERO SUPERVISORS AND ALL KEY LERO WORKERS ARE NOTIFIED BY PAGER WHICH ENSURES RAPID LERO MOBILIZATION
- ° LILCO EMPLOYEES AND CONTRACTORS FILL ALL LERO POSITIONS ASSURING THAT REQUIRED TRAINING IS CONDUCTED
- ° LERO TRAINING PROGRAM IS COMPREHENSIVE AND INCLUDES QUARTERLY DRILLS
- ° FEMA REACHED OVERALL FINDING OF REASONABLE ASSURANCE ON SEPTEMBER 9, 1988
- ° LICENSING BOARD AND APPEAL BOARD DECISIONS HAVE VERIFIED PLAN ADEQUACY

EMERGENCY PLANNING (CONTINUED)
STATE AND COUNTY EMERGENCY RESPONSE

- ° EMERGENCY PLANS EXIST FOR NEW YORK STATE AND SUFFOLK COUNTY
- ° LERO PLAN HAS BEEN DEVELOPED TO BE COMPATIBLE WITH NEW YORK STATE PLAN
- ° AT ALERT, LERO PERSONNEL REPORT TO STATE AND COUNTY OFFICIALS TO ASSURE COORDINATED RESPONSE
- ° LERO TRAINING INCLUDES INSTRUCTIONS FOR COORDINATING WITH STATE AND COUNTY EMERGENCY RESPONSE PERSONNEL
- ° NEW YORK PARTICIPATES IN EXERCISES AT OTHER NEW YORK PLANTS
- ° STATE AND COUNTY HAVE EXTENSIVE EMERGENCY RESPONSE RESOURCES
- ° THE EXPECTED STATE AND COUNTY RESPONSE WILL ENHANCE AN ADEQUATE LERO RESPONSE

EMERGENCY PLANNING (CONTINUED)

EXERCISE OF LERO PLAN

- ° THREE DAY FULL-PARTICIPATION EXERCISE CONDUCTED
JUNE 7-9, 1988
- ° 2300 LERO WORKERS PARTICIPATED IN THE EXERCISE
- ° 88 FEDERAL OBSERVERS EVALUATED LERO PERFORMANCE
- ° NO DEFICIENCIES IDENTIFIED BY FEMA
- ° FEMA CONCLUDED THAT EXERCISE DEMONSTRATED ADEQUATE OVERALL
PREPAREDNESS OF LERO

EMERGENCY PLANNING (CONTINUED)

OUTSTANDING CONTENTIONS

- ° TWO ISSUES PENDING BEFORE THE APPEAL BOARD
- ° TWO ISSUES REMANDED TO THE LICENSING BOARD BY THE APPEAL BOARD
- ° EIGHT REALISM CONTENTIONS
- ° FIVE ADMITTED EXERCISE CONTENTIONS FROM THE JUNE 1988 EMERGENCY EXERCISE
- ° EIGHT EXERCISE CONTENTIONS NOT ADMITTED BUT APPEALED BY INTERVENORS
- ° ALL CONTENTIONS HAVE BEEN RESOLVED AS DISCUSSED IN DIRECTOR'S FINDINGS

EMERGENCY PLANNING (CONTINUED)

SUMMARY

- ° THERE ARE NO UNIQUE FEATURES THAT RENDER EMERGENCY PLANNING AT SHOREHAM MORE DIFFICULT THAN AT OTHER SITES
- ° THE NRC STAFF HAS CONCLUDED THAT THERE IS REASONABLE ASSURANCE THAT THE ONSITE PLAN CAN AND WILL BE IMPLEMENTED
- ° THE LERO PLAN HAS BEEN FOUND TO BE ADEQUATE BASED ON A REVIEW OF THE PLAN
- ° THE STATE AND COUNTY RESPONSE WILL ENHANCE THE LERO RESPONSE
- ° THE EXERCISE DEMONSTRATED PREPAREDNESS OF LERO PERSONNEL
- ° THE OUTSTANDING CONTENTIONS RESULTING FROM THE TERMINATION OF THE SHOREHAM HEARINGS HAVE BEEN RESOLVED

CONCLUSION

- ° THERE IS REASONABLE ASSURANCE THAT ADEQUATE PROTECTIVE MEASURES CAN AND WILL BE TAKEN IN THE EVENT OF A RADIOLOGICAL EMERGENCY AT SHOREHAM

READINESS REVIEW PROGRAM

- NRC ORAT INSPECTION - MARCH 1989
 - FOUND LICENSEE READY FOR SAFE OPERATION
- OPERATIONAL READINESS SELF-ASSESSMENT DEC 1988
 - NRC REVIEW FOUND ALL REQUIREMENTS FOR STARTUP SUCCESSFULLY COMPLETED

ALLEGATIONS

- 22 ALLEGATIONS RECEIVED SINCE
DECEMBER 1984
 - ALL HAVE BEEN INVESTIGATED AND NO
OUTSTANDING SAFETY CONCERNS REMAIN
TO BE RESOLVED

OPERATING EXPERIENCE

- ° 527 HOURS OF OPERATION UNDER 5%
LICENSE
 - 4 UNPLANNED TRIPS FROM POWER
- ° MAIN GENERATOR SYNCHRONIZED TO GRID
TWICE
 - 315 MWHrs TOTAL GENERATION
- ° 23,000 HOURS OF SHUTDOWN OPERATION
- ° EXPERIENCED SHIFT ADVISORS ON EACH
SHIFT (UNTIL SUFFICIENT OPERATING
EXPERIENCE IS OBTAINED)

STAFFING

° SHIFT COMPLEMENT (6 SHIFTS)

	<u>TS REQ'D</u>	<u>ACTUAL</u>
WATCH ENGINEER (SRO)	1	1
WATCH SUPERVISOR (SRO)	1	1
NUC. STATION OP (RO)	2	3
EQUIP. OP (RO)	-	1
(NON-RO)	2	4

STAFFING (CONTINUED)

	<u>TS REQ'D</u>	<u>ACTUAL</u>
RAD WASTE	-	1
<u>STA</u>	<u>1</u>	<u>1</u>
TOTAL	7	12

STAFF CONCLUSIONS

- THE PLANT MEETS THE REGULATIONS
- THERE IS REASONABLE ASSURANCE THAT THE PLANT CAN BE OPERATED WITH NO UNDUE RISK TO HEALTH AND SAFETY OF THE PUBLIC
- RECOMMEND COMMISSION APPROVAL TO ISSUE FULL POWER LICENSE