UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

Before the Atomic Safety and Licensing Board

In the Matter of	
LONG ISLAND LIGHTING COMPANY	Docket No. 50-322-OL-4 (Low Power)
(Shoreham Nuclear Power Station, Unit 1)	

SUFFOLK COUNTY'S FIRST DISCOVERY REQUEST TO LILCO RELATING TO LILCO'S APPLICATION FOR EXEMPTION

Suffolk County hereby requests that LILCO respond to the discovery requests set forth below. The definition of the term "document" as used herein and other instructions concerning the response to the requests which follow, are the same as that set forth on pages 1 and 2 of Attachment A of the letter dated April 11, 1984 from Douglas J. Scheidt to T.S. Ellis, III, a copy of which is attached hereto for convenience. The documents requested below are to be produced at the offices of Kirkpatrick, Lockhart, Hill, Christopher & Phillips, 1900 M Street, N.W., Washington, D.C., or at such other locations as the parties may agree.

1. Identify the names, occupations and affiliations of the witnesses who will be providing testimony on behalf of LILCO in support of the Application for Exemption dated May 22, 1984 (hereinafter, the "Application").

2. For each witness identified in response to item 1, provide a copy of his or her resume.

3. Provide 6 copies of Attachment 3 to the Testimony of W. G. Schiffmacher, dated April 20, 1984.

4. With respect to the small building located immediately to the East of the four GM EMD DG units, and identified by LILCO personnel during last week's site visit as the EMD Control Cubicle, provide the following information:

   a. The total weight of the cubicle including all necessary equipment inside it and other equipment that is part of, attached to, or directly supported by the cubicle.

   b. The exterior dimensions of the cubicle.

   c. Identify the location of the center of gravity of the cubicle, with all necessary equipment inside it and other equipment that is part of, attached to, or directly supported by the cubicle.

d. Describe the design of the foundation supporting the cubicle and the means, if any, by which the cubicle is anchored to the foundation. Provide copies of all drawings and other documents, if any, which describe or depict the foundation or anchorage devices.

e. Identify, describe and state the location of all fixed fire detection and mitigation systems and equipment in the cubicle. Provide copies of all documents and drawings describing or depicting such systems and equipment. If any such documents or drawings were provided in response to item 15 of the County's April 11, 1984 Document Request, identify such documents or drawings.

f. Identify, describe and state the location of all electrical protection devices (e.g. under frequency protection) employed in the cubicle, and identify the setpoints of each such device. Provide copies of all documents and drawings depicting or describing such devices.

5. With respect to each EMD diesel generator unit or module (each "unit" being defined to include the diesel engine, the generator, the surrounding housing, and enclosed

equipment and materials), provide the following information:

a. The total weight of the EMD DG unit, including a full supply within the unit of necessary fuel, lubricants, coolant, and other materials.

b. The exterior dimensions of the EMD DG unit.

c. The center of gravity of the EMD DG unit including a full supply within the unit of necessary fuel, lubricants, coolant, and other materials.

d. Describe the design of the foundation supporting the EMD DG unit, and the means, if any, by which the unit is anchored to the foundation. Provide copies of all drawings and documents depicting or describing the foundation and anchorage devices.

e. Identify, describe and state the location of all fixed fire detection and mitigation systems and equipment in each EMD DG unit. Provide copies of all documents or drawings describing or depicting such systems and equipment. If any such drawings or documents were provided in response to item 15 of the County's April 11, 1984 Document Requests, identify such documents or drawings.

6. Provide copies of all electrical and mechanical drawings depicting the details of the electrical output connections:

   a. among the 4 EMD DG units;

   b. between the EMD DG control cubicle and each EMD DG unit; and,

   c. between the EMD DG control cubicle and 4 KV Bus 11.

7. With respect to the fuel pipeline serving the EMD DG units, provide the following information:

   a. The specifications of the pipe, including the material, pipe thickness and diameter, and the exact centerline dimensions of each leg of the pipeline, including curvature radii of the elbows.

   b. Copies of all drawings or other documents depicting the piping layout from the tank truck to the point of entry to each EMD DG unit.

   c. Descriptions and specifications of the supports for the fuel pipe including material, dimensions, details of the connection of each support to the pipe, and the locations of the supports along the pipeline.

d. Detailed specifications and the locations of the flexible joints in the fuel pipeline for the EMD DG units, including the design displacements and rotations of the flexible joints.

e. The specifications of the means of connecting the pipe to each of the EMD DG units. Provide copies of drawings and documents depicting or describing such means of connection.

f. The location or locations from which the tank truck will transfer fuel into the EMD DG fuel pipeline. Provide copies of all drawings and documents depicting or describing such location(s).

g. For each location identified in response to (f), provide the specifications of the means of (i) connecting the tank truck to the pipeline and (ii) transferring fuel from the tank truck into the pipeline.

8. Provide copies of all studies or analyses of, or other documents relating to, the potential effects of seismic events on:

a. Any or all of the EMD DG units.

b. The EMD DG control cubicle.

c. The fuel line serving the EMD DG units.

If any such documents were provided in response to items 26 or 31 of the County's April 11, 1984 Document Request, please identify such documents.

9. Provide copies of all electrical and mechanical drawings and specifications of the battery system for the EMD DG units, including documents depicting the connection of the battery to each separate DG unit.

10. Provide all documents, drawings and specifications depicting or describing the fuel pumping system for the EMD DG units, including that located in the "mother" diesel unit 402.

11. With respect to the fuel oil system for each EMD DG unit provide the following information:

a. Copies of all drawings and other documents depicting or describing the fuel oil supply and transfer system, including the interconnections between each EMD DG unit.

b. Copies of all drawings and other documents depicting or describing the fuel oil tank on each EMD DG unit, including the level alarms, and where they are fitted.

c. Copies of all drawings and other documents depicting or describing the fuel oil transfer pump for each EMD DG unit.

d. Identify the capacities and ratings of the fuel oil transfer pump for each EMD DG unit.

e. Identify the fuel oil consumption rates for each postulated load for each EMD DG unit.

12. With respect to the jacket cooling water system for each EMD DG unit, provide copies of all drawings and other documents concerning the jacket cooling water system.

13. Identify, describe, and state the location of all instrumentation on each EMD DG unit, including thermometers, pressure guages, manometers, pyrometers, level switches and guages, and all alarm systems. Provide copies of all drawings and documents which describe or depict such instrumentation.

14. Provide a detailed description and the design specifications of the starting and charging systems for each EMD DG unit, including, but not limited to: (i) manufacturer, (ii) material, (iii) circuitry, (iv) component parts, (v) model number, (vi) operation limitations, and (vii) operating mechanisms for the (a) starting motors, (b) battery, (c) its charger, (d) the auxiliary transformer supplying the charger, and (e) the distribution system supplying the auxiliary transformer. Specify the number of battery cells, and describe and provide drawings depicting the intercell electrical connections. Provide copies of any drawings or documents depicting or describing each such system.

15. Provide copies of all records of performance kept during all biweekly tests performed by LILCO for each EMD unit.

16. Identify the location(s) of storage place(s) for lubrication oil for the EMD DG units, and state the amount of lubrication oil for the EMD DG units stored in each such location.

17. Identify the lubrication oil storage capacity of each EMD DG unit.

18. With respect to the tank truck that will be used to store fuel oil for the EMD units, provide the following information:

a. Total weight, when the tank is fully loaded, of (i) the tank and (ii) the entire tank truck.

b. The exterior dimensions of the tank and the entire tank truck.

c. The location of the center of gravity of the tank and of the fully loaded truck.

d. Copies of all analyses or studies, related to the seismic characteristics or capabilities of (i) the entire tank truck (ii) the tank located on the truck and (iii) the transfer mechanism connecting the tank to the EMD fuel line.

e. The drawings and design details of fire detection and mitigation equipment located on the tank truck.

f. The design drawings, dimensions and capacity of the catch basin, if any, which will surround the tank truck.

19. With respect to the structure in which the 20 MW gas turbine is installed, provide the following information:

a. The weight of the structure, including the gas turbine, all enclosed equipment and all other equipment that is part of, attached to, or directly supported by the structure, and a full supply of necessary fuel, lubricants, coolant and other materials.

b. The exterior dimensions of the structure.

c. Identify the center of gravity of the gas turbine, including the support frame for the turbine, all attached equipment and a full supply of necessary fuel, lubricants, coolant and other materials. Provide copies of all drawings and other documents depicting or describing such center of gravity.

d. Describe the design of the foundation supporting the structure and turbine frame, and the means, if any, by which the structure and the turbine frame are anchored to the foundation. Provide copies of all drawings or other documents depicting or describing such foundation or anchorage devices.

e. Identify, describe and state the location of all fixed fire detection and mitigation systems and equipment in the structure. Provide copies of all drawings and other documents depicting or describing such systems and equipment. If responsive documents or drawings were provided in response to item 15 of the County's April 11, 1984 Document Requests, identify such documents or drawings.

f. Identify, describe and state the location of all electrical protection devices (e.g. under frequency protection) employed in the structure, and identify the set points of each such device. Provide copies of all drawings and other documents depicting or describing such devices.

20. With respect to the building located along side and to the West of the 20 MW gas turbine structure, and identified by LILCO personnel during last week's visit as the "Gas Turbine Control Cubicle," provide the following information:

a. The weight of the cubicle, including all enclosed equipment and all other equipment that is part of, attached to, or directly supported by the cubicle.

b. The exterior dimensions of the cubicle.

c. Identify the location of the center of gravity of the cubicle, including all enclosed equipment and all other equipment that is part of, attached to, or directly supported by the cubicle. Provide copies of all drawings and other documents depicting or describing such center of gravity.

d. Describe the design of the foundation supporting the cubicle, and the means, if any, by which the cubicle is anchored to the foundation. Provide copies of all drawings and other documents depicting or describing such foundation and anchorage devices.

e. Identify, describe and state the location of all fixed fire detection and mitigation systems and equipment in the cubicle. Provide copies of all drawings and other documents depicting or describing such systems and equipment. If responsive drawings or documents were provided in response to item 15 of the County's April 11, 1984 Document Requests, identify such drawings or documents.

f. Identify, describe and state the location of all electrical protection devices (e.g. under frequency protection) devices employed in the cubicle, and identify the setpoints of each such device. Provide copies of all drawings and other documents depicting or describing such devices.

21. With respect to the bolts or pins supporting the 20 MW gas turbine on the frame inside the gas turbine structure, provide the following information:

a. The dimensions of all support bolts and pins.

b. The materials of the bolts and pins.

c. The design stresses or forces in each such bolt or pin, as well as the actual stresses or forces in the bolts or pins computed for normal operating conditions.

d. Provide copies of all drawings or documents depicting or describing all details of the support frame for the 20 MW gas turbine.

22. State the weight of the 20 MW gas turbine including a full supply of necessary fuel, coolant, lubricants, and other materials.

23. Identify the location of the center of gravity of the 20 MW gas turbine, including a full supply of necessary fuel coolant, lubricants and other materials. Provide copies of all drawings and other documents depicting or describing the location of such center of gravity.

24. Describe the design of the foundation supporting the 20 MW gas turbine support frame and the means, if any, by which the turbine support frame is anchored to the foundation. Provide copies of all drawings and other documents describing or depicting such foundation or anchorage devices.

25. Provide copies of all analyses or studies of, or other documents relating to, the potential effects of a seismic event on:

    a. The structure in which the 20 MW gas turbine is located.

    b. The 20 MW gas turbine and its support frame.

    c. The Gas Turbine Control Cubicle.

    d. The fuel line serving the 20 MW gas turbine.

e. The 900,000 gallon fuel storage tank.

If any such documents were provided in response to items 26 or 31 of the County's April 11, 1984 Document Request, or clarification item 3 of April 12, 1984, please identify such documents.

26. Provide all qualification data relating to (i) seismic motion and (ii) vibration for the electrical protection equipment, if any, in (a) the EMD DG control cubicle or (b) the 20 MW gas turbine control cubicle. Provide copies of all documents that relate to such qualification data.

27. With respect to the compressed air storage tank for the 20 MW gas turbine, provide the following information:

a. The storage capacity (volume under standard conditions) of the compressed air storage tank.

b. The design storage pressure.

c. The expected usage of compressed air per start attempt, and the minimum pressure at which a successful start can be made.

d. Provide copies of any drawings depicting the storage tank and all interconnections, pipes or fittings between the tank and the air compressor.

28. With respect to the fuel line running from the 900,000 gallon storage tank to the 20 MW gas turbine:

a. Provide the specifications of the pipe, including material, pipe thickness and diameter, and the exact centerline dimensions of each leg of the pipeline, including curvature radii of the elbows.

b. Provide copies of all drawings and other documents depicting or describing the piping layout from the 900,000 gallon storage tank to the 20 MW gas turbine.

c. Provide descriptions and specifications of the supports for the fuel pipe, including material, dimensions, the means of connection of the supports to the pipe, and the exact locations of the supports along the pipeline.

d. Provide detailed specifications and the locations of all flexible joints in the fuel pipeline connected to the 20 MW gas turbine, including the design displacements and rotations of the flexible joints.

29. Provide the following information with respect to each of the following: (i) 13 KV to 69 KV transformer in the 69 KV switchyard; (ii) the RSS transformer; and, (iii) the NSS transformer:

a. Total weight, including internal liquids.

b. Exterior dimensions.

c. Describe the design of the foundation supporting the transformer and the means, if any, by which the transformer is anchored to the foundation. Provide copies of all drawings and other documents depicting or describing such foundation and anchorage devices.

d. Describe the design of the transformer internals (e.g., windings and core), including, the weights and centers of gravity of the internals, and methods of attachment of the internals to the transform base and tank.

e. Identify the location of the center of gravity of the transformer, including internal liquids. Provide copies of all drawings or other documents concerning the location of such center of gravity.

30. Provide the following information with respect to (i) insulators of flexible design, and (ii) insulators of rigid design used on the 138 KV transmission lines, including the line connected to the NSS Transformer:

a. The strength and stiffness of the insulators in the axial direction.

b. Quantify the maximum calculated forces to which the insulators within the boundaries of the Shoreham site are subjected (i) due to normal operating loads and (ii) due to seismic ground motion.

c. Identify the locations of those insulators within the boundaries of the Shoreham site, which experience the maximum forces identified in response to subpart b above.

d. Provide copies of drawings and design specifications, including overall and cross-sectional dimensions, of the transmission poles, towers or other structures which support the insulators identified in response to subpart c above.

e. Identify the materials of which the transmission poles, towers and other supports described in response to subpart d above are made.

f. Describe the methods of fastening the insulators identified in response to subpart c above to the transmission poles, towers or other structures that support them.

31. With respect to the oil circuit breakers located on the 138 KV lines between the 138 KV switchyard incoming lines and the nonemergency switchgear room, provide the following information:

a. The weight of each such circuit breaker when filled.

b. The exterior dimensions of each such circuit breaker.

c. Describe the design of the foundation for each such circuit breaker, and the means, if any, by which each such circuit breaker is anchored to its foundation. Provide copies of all drawings and other documents depicting or describing such foundations and anchorage devices.

d. Identify the location of the center of gravity of each such circuit breaker when filled. Provide copies of all drawings and other documents depicting or describing the location of the center of gravity of each such circuit breaker.

e. Identify the maximum stress calculated in the insulator bushings for each such oil circuit breaker during a DBE.

f. Provide the acceleration (in g's) at which such oil circuit breaker insulators are calculated to fail, and all documents which concern derivation or calculation of this predicted failure point.

32. With respect to the metal support post supporting the output connections and devices of the 20 MW gas turbine at the point of transition from overhead conductors to buried cables, provide the following information:

a. The weight, dimensions, wall thickness, materials, and all other design data relating to the post.

b. Describe the loads and stresses, both static and dynamic, calculated to be experienced by this post. State the locations of each such load and stress. Provide copies of all documents and drawings which depict or describe such loads and stresses.

c. State the dimensions and design specifications of the concrete foundation of the post. Provide copies of all drawings and other documents depicting or describing the foundation.

d. Describe the means by which the post is fastened to its foundation. Provide copies of all drawings and

other documents depicting or describing such means of fastening, such as anchor bolts.

33. With respect to the 900,000 gallon fuel storage tank provide the following information:

a. Height and diameter.

b. Thickness of its wall.

c. The material of which it is made.

d. Provide detailed specifications of the foundation of the storage tank.

e. Describe the method of anchoring the storage tank to its foundation. Provide copies of all drawings and other documents depicting the foundation and anchorage devices.

f. Provide copies of all drawings and other documents depicting the storage tank.

34. Provide copies of all studies or analyses of, or other documents relating to possible effects of seismic events on the towers carrying the 69 KV or 138 KV transmission lines that enter the Shoreham plant. If documents

responsive to this request were provided in response to items 26 or 31 of the County's Request of April 11, 1984, or clarification item 3 of April 12, 1984, please identify those documents.

35. Describe in detail the sequence of events required to activate the 69 KV alternate line. Provide copies of all drawings and other documents that depict or describe such sequence of events, or equipment or systems used to implement such activation. Identify and describe all components or devices required to implement such activation.

36. With respect to the study titled "Seismic Fragilities of Structures and Components at the Shoreham Nuclear Power Station", Report No. SMA 14304-01, performed by Structural Mechanics Associates (SMA), for the NUS Corporation:

    a. Was this work performed as a subcontract to NUS under a prime contract between NUS and LILCO? If not, who sponsored the NUS work?

    b. Provide a copy of the latest version of the SMA report.

    c. Describe the scope and status of the NUS probabilistic risk assessment for SNPS which is referred to in the SMA study.

d. Provide a copy of the NUS risk assessment and all analyses and data pertaining to it.

37. Provide a copy of all draft and final versions of the Severe Accident Risk Assessment ("SARA") for Shoreham.

38. With respect to the Severe Accident Risk Assessment for Shoreham, provide:

a) a statement of work and schedule for its completion,

b) a description of its current status, and copies of all available analyses and data relating to that study, and

c) a description of any analysis in the SARA which addresses off-site or on-site power loss.

39. Provide a detailed master diagram(s) of the circuitry connecting the main transformers, the normal station service (NSS) and reserve station service (RSS) transformers, 69 KV and 138 KV switchyards, the 4160-V and 480-V AC Systems, the DC-Bus Systems by division, the 20 MW and 55 MW gas turbines and their common transformer, the 20 MW gas turbine starting system components (including battery,

charger, air compressor, and auxiliary transformer), diesel generators, and batteries and accessories (detailing devices including circuit breakers, switches, and specifying voltage and current limitations, and device identifiers). The diagrams should be legible (unlike Exhibit C and Attachment 9 of the Affidavit and Testimony of W.G. Schiffmacher, respectively).

40. Provide (i) maintenance records, schedules, and procedures; and (ii) test results, schedules and procedures, for:

    a) the RSS transformer,

    b) the NSS transformer, and

    c) the 13 KV to 69 KV transformer in the 69 KV switchyard.

41. Provide a detailed diagram of the 69 KV line that bypasses the 69 KV switchyard.

42. Provide, where applicable, the (i) manufacturer, (ii) material, (iii) circuitry, (iv) component parts, (v) model number, (vi) operation limitations, (vii) operating mechanism, and (viii) any other distinguishing specifications

for the following items:

A. The cooling system for each EMD DG unit, including coolant source(s), any intake or discharge facilities, and pumping equipment and power sources. Also state and describe the cooling cycle type.

B. Electrical and mechanical connections between the diesels, the components of the starting mechanisms, fuel lines, sources and pumps, and cooling cycle, coolant source(s) and pumps. (Also provide copies of any line diagrams showing such electrical and mechanical connections and power supply sources and connections for the battery.)

C. The following circuit breakers:

1. Numbers ACB-1, 2, 3 and 4 (between each of the mobile diesel generators and the bus shared by them).

2. Number 11.1B (between the diesel generators' bus and the 4 KV Bus Number 11).

3. All 4 KV circuit breakers in the 4 KV switchgear (Numbers 400, 410 through 417, 420, 424, 430,

435, 440, 444, 450, 455, 460, 464, 470 and two unidentified breakers between the 480 V switchgear and buses 11 and 12).

4. All 480 V circuit breakers in the normal 480 V system.

5. All 480 V circuit breakers supplying the emergency 480 V buses.

6. All 69 KV circuit breakers (Numbers 8Z-110 and 640, and the supply breaker to the 20 MW gas turbine GT-0C2).

7. Also with respect to each circuit breaker listed in Subparts 1 through 6 above, identify and describe any dual-coil features, operation and automatic transfer capability.

D. The following switches:

1. Switch between the normal station service transformer (NSST-003) and circuit breaker Number 450 (leading to Bus 11).

2. All other 4 KV switches in the normal 4 KV system.

3. All 480 V switches in the 480 V switchgear.

4. All 69 KV switches (Numbers 63F, 66F, 67F, 613, 616, 617, 623, 633, 640 and 643).

5. The supply switch to the 20 MW gas turbine GT-002.

E. The following buses:

1. The normal large motor 4 KV buses (Numbers 1A and 1B).

2. The normal small motor 4 KV buses (Numbers 11 and 12).

3. The emergency station service 4 KV buses (Numbers 101, 102 and 103).

4. The emergency 480 V buses (Numbers 111, 112 and 113).

5. The 480 V system buses (Number 11A through 11D and 12A through 12D).

6. The mobile diesel generators' 4 KV bus.

7. The 20 MW and 55 MW gas-turbines' 13 KV bus.

F. All voltage regulators to or from any of the buses listed above.

G. The 4 KV-480 V transformers (Numbers T-011A through T-011D, T-012A through T-012D, and T101, T102 and T103).

H. The 13-69 KV step-up transformer for gas turbines GT-001 and GT-002.

I. The 13,800-120/240 V step-down transformer for the 20 MW gas turbine.

J. The air start motor, pressurized air-storage vessel, and air compressor for the 20 MW gas turbine.

K. DC-powered distribution system, and associated battery and its charger for the 20 MW gas turbine.

L. Fuel pumps and sources of pumping power for the 20 MW gas turbine.

M. Auxiliary transformer supplying power to the air compressor, battery charger, and the AC fuel pump.

N. Cooling cycle type, coolant source(s), any discharge or intake facilities, and pumping equipment and power sources for the 20 MW gas turbine.

O. Line diagram showing electrical and mechanical connections between the 20 MW gas turbine, its transformer, the components of the starting mechanism, fuel lines, sources and pumps, and cooling cycle, coolant source(s) and pumps (Also indicate, describe and state location of power supply sources and connections for the battery, air compressor, and AC fuel pump).

43. Provide detailed information, line diagrams, and physical layout maps of any changes in the proposed alternate ac power sources made or intended to be made in response to the requirements specified by the NRC staff in Supplement Number 5 of the Safety Evaluation Report, April 1984, Docket No. 50-322, including, but not limited to:

a. Details of all circuit modifications, specifying the affected switches, circuit breakers, and buses and providing the information items listed in Discovery Request Number 41.

b. A listing and copies of the updated final emergency operation procedures for the proposed alternate ac power sources, including the 20 MW gas turbine and the EMD DGs, and specifying the sequences of actions and the progression of the positions of the circuit breakers and switches throughout the emergency period. Identify all devices mentioned in the procedures and provide copies of all drawings or line diagrams depicting such devices.

44. Provide structural design specifications for both sections of the underground 69 KV line (from Wildwood to the Shoreham 69 KV switchyard and from there on to the reserve station service (RSS) transformer).

45. With respect to the four EMD DG units, provide:

a. Number of times each unit has undergone engine overhaul or repowering, time elapsed between each such service, parts replaced and age of replacement.

b. The operational configurations of the units during their deployment at the Connecticut site including the starting equipment and connections to load.

46. For the 20 MW gas turbine, provide:

a. Operation and maintenance history (including weekly records) for the gas turbine prior to replacement of the fuel control and the starting air systems, i.e., the operation and maintenance history of the 20 MW Pratt-Whitney gas turbine, previously designated as the West Babylon Unit 1; specify failures, failure modes, starting difficulties, and operation policy constraints (if any).

b. Details specifying the modifications made on the West Babylon Unit 1, including replacement parts, age, and reliability.

47. Provide information on source and location of the source of control power for the following automatic circuit breakers:

(a) Numbers 8Z-100, 11.1B, 640, 1310 and 1330.

(b) All the circuit breakers in the 138-KV switchyard.

(c) All the circuit breakers inthe 4-KV switchgear.

(d) Switch breaker for the 20 MW (GT-002) gas turbine.

(e) Mobile diesel generators' individual switch breakers.

48. Provide copies of all documents, responsive to the requests contained in Attachment A to the letter dated April 11, 1984 from Douglas J. Scheidt to T.S. Ellis and attached to the letter dated April 12, 1984 from Douglas J. Scheidt to T.S. Ellis, that have been located, generated, created, revised, modified or finalized since the date of LILCO's responses thereto.

49. State the basis for the assertion in the Application (at page 7) that the activities to be conducted during LILCO's proposed low power testing program "obviously . . . are authorized by law," and provide copies of all documents upon which LILCO relies for support for such assertion.

50. Identify each of the exceptional circumstances upon which LILCO intends to rely for support of its request that its Application be granted, and provide copies of all documents upon which LILCO relies to support the existence of such exceptional circumstances.

51. State the basis for LILCO's assertion (at footnote 10, page 15 of the Application) that "nothing in LILCO's exemption request has any impact on . . . security," and

provide copies of all documents upon which LILCO relies for support for such assertion.

52. State the basis and provide copies of all documents relied upon for support for the following assertions in the Application:

a. "The Shoreham proceeding has become prejudicially burdensome to LILCO." (p. 17);

b. "Many of LILCO's people have been compelled to devote inordinate amounts of their time and energy to licensing struggles." (p. 17);

c. The Shoreham proceeding "has been prejudicial to LILCO because it has created the perception that licensing litigation over Shoreham may never end . . . ." (p. 18);

d. The Shoreham proceeding "has been prejudicial to LILCO because it has created the perception . . . that the plant may never come on line because a merits decision on its operation will be delayed for one reason or another, over and over again." (p. 18);

e. "The prejudice to LILCO caused by the [Shoreham proceeding] is not justified by its substantive results to date." (p. 18).

53. With respect to the assertion listed in subpart (b) of item 52 above, identify the "LILCO people" who, in LILCO's view, have spent "inordinate" amounts of time on licensing matters, and for each individual identify the time (dates and hours) which LILCO believes to have been "inordinate," and the reason such time is believed to have been "inordinate."

54. With respect to the assertion in the Application (at 17-18) that the licensing litigation "has also cost LILCO substantial sums of money," identify the amounts of money spent by LILCO, the dates spent, and the recipients, as follows:

a. legal fees on work relating to NRC licensing proceedings;

b. legal fees on work relating to litigation involving Shoreham other than that before the NRC;

c. consultant and other expert witness fees and related costs for work relating to NRC proceedings involving Shoreham;

d. consultant and expert witness fees and related costs for work relating to litigation, other than before the NRC, involving Shoreham;

e. costs related to the filing of LILCO's 1983 Low Power License Motion;

f. costs related to the filing of LILCO's March 20, 1984 Low Power License Motion and the documents and activities, including testimony and hearings, related thereto; and

g. all costs related to LILCO's decision to create the proposed AC system that is the subject of the Application and the implementation of that decision.

55. Provide copies of all documents which relate in any way to the answers to the preceding request.

56. State the basis for the assertion, at p. 20 of the Application, that the requested exception "will accelerate Shoreham's availability to reduce this country's reliance on foreign oil," and provide copies of all documents upon which LILCO relies for support for such assertion.

57. By how much time, in LILCO's view, would the granting of an exception from GDC 17 "accelerate" Shoreham's availability? What is the basis for LILCO's view? Provide all documents that relate in any way to this matter.

58. What constitutes "availability" as used in the statement referenced in item 56 above?

59. Quantify the assertion, at page 20 of the Application, that "a substantial portion of New York State's electric power" is dependent upon foreign oil imports, and provide copies of all documents upon which LILCO relies for support for such assertion.

60. Identify the total quantities and types of foreign petroleum products used by LILCO, from 1981 to date, to generate electricity, and provide the following information concerning such foreign petroleum products used by LILCO:

    a. The quantity and prices of such foreign petroleum products actually consumed on a monthly basis (from 1981 to date) in each of LILCO's power plants.

    b. the nations in which such petroleum products were produced.

c. the quantities of the products that were produced in each nation.

d. the nations in which such products were refined.

e. the quantities of the products refined in each nation.

f. the name and location of each of LILCO's suppliers of the products.

61. Identify the quantities and prices of domestic (including Alaska) petroleum products consumed, on a monthly basis, in each of LILCO's power plants from 1981 to date.

62. Identify the type and volume of petroleum products LILCO has had in storage from 1981 to date, and identify the storage locations and storage costs.

63. Identify the quantities and locations of all crude oil reserves and crude oil production owned by LILCO at any time during the period 1981 to date.

64. Of the quantities of (a) foreign, and (b) domestic, petroleum products consumed in LILCO's power plants from 1981 to date, what quantity per year has been purchased by LILCO under firm contracts and what quantity per year under spot market contracts?

65. Identify the quantity of natural gas consumed by each of LILCO's power plants from 1981 to date, and state the names of the suppliers of such natural gas and the prices paid.

66. Identify the quantity and prices of coal consumed by each of LILCO's power plants from 1981 to date, and state the names of the suppliers of such coal.

67. Provide all documents which relate in any way to items 60-66 above.

68. At pages 19-20 of the Application, LILCO asserts, "the plant is now ready to load fuel and conduct low power testing." Based on observations made during a site visit on May 24, the County assumes the assertion is not literally true. Identify all activities or approvals which must be undertaken, accomplished, completed, or obtained before (i) fuel loading, and (ii) low power testing, could actually commence, and for each such activity or approval, state:

    a. who must perform or approve it;

    b. what is involved in the activity or approval;

c. how long LILCO believes the activity or approval would take.

69. State the basis, and all underlying assumptions, for LILCO's assertion, at pages 20-21 of the Application, that approval of the exemption request "will result in economic benefits of $90-135 million," and provide copies of all documents upon which LILCO relies for support or which relate in any way to this assertion.

70. With respect to the assertion referenced in item 69 above, state:

a. To whom is the referenced "benefit" expected to accrue?

b. When is the referenced "benefit" expected to accrue?

71. Provide copies of all documents which relate in any way to subparts a or b of item 70.

72. Provide copies of all analyses or studies of, or other documents relating to the cost of decommissioning Shoreham if the plant operated at five percent power but not at any higher power levels.

73. State the basis for the assertion, at page 21 of the Application, that "[i]f the low power testing program is already completed [by the end of 1984], several months can be cut off the time it would otherwise take to achieve commercial operation," and provide copies of all documents upon which LILCO relies for support for such assertion.

74. With respect to the assertion referenced in item 73 above, identify all assumptions which underlie the assertion, including all prerequisites which LILCO believes must be satisfied in order "to achieve commercial operation."

75. State the basis for LILCO's assertion, at pages 21-23 of the Application, that GDC 17 is an "unnecessary regulatory requirement" which should be eliminated, and provide copies of all documents upon which LILCO relies for support of this assertion.

76. Provide copies of all documents upon which LILCO relies for support for its assertion, at page 23 of the Application, that there is an "internal inconsistency between the Commission's regulation promoting low power licensing and the now-mandated inflexibility of GDC 17."

77. Is it LILCO's position that the Commission has evidenced an intent to eliminate the requirement set forth in GDC 17 with respect to low power operation? (See Application at 23.) If yes, state the basis for that position and provide copies of all documents upon which LILCO relies for support for such position.

78. At page 24 of the Application, LILCO asserts that "the Commission should . . . recognize the benefits of interim low power licensing by granting the exemption . . . ." Identify each and every "benefit" which LILCO asserts would accrue if its requested exemption were granted, and should be "recognized" by the Commission, and for each such benefit, identify (a) the beneficiary, (b) when such benefit would accrue, and (c) the assumptions or prerequisites which must be satisfied in order for the benefit to accrue. Provide copies of all documents upon which LILCO relies for support for its assertions.

79. State the basis for the assertion, at page 25 of the Application, that "two of the three TDI diesels have successfully completed their preoperational testing," and provide copies of all documents upon which LILCO relies for support for such assertion.

80. Provide copies of all documents upon which LILCO relies for support for its assertion that "installation and testing [of the Colt diesels] are expected to be completed by mid-1985." (Application at 25.)

81. Identify all "physical modifications" that (a) are necessary, and (b) "have begun," to accommodate the Colt diesels, as stated at page 25 of the Application.

82. Is it LILCO's position that the training described at pages 27-28 of the Application will not be conducted if the requested exemption is not granted?

83. Provide copies of all documents relating to the "standard low power testing program" referenced at page 28 of the Application.

84. Identify every difference between the "standard low power testing program" (Application at 28) and the proposed LILCO training program.

85. Is it LILCO's position that there is no domestic (i.e. U.S. produced and refined) fuel oil available to be used in LILCO's oil-fired power plants? If the answer is "yes", what is the basis for this position? Produce all documents which relate in any way to this position. If

the answer is "no", why has LILCO not used such domestic fuel oil for its oil-fired plants? Produce all documents which relate in any way to this position.

86. Provide copies of all documents relating to the decision to install the 20 MW gas turbine on the Shoreham site.

87. With respect to all current LILCO employees who are licensed reactor operators, provide the following information:

a. Identify each such individual by name and current job title. Identify also whether each individual is scheduled to be part of a regular operating shift.

b. State the number of years of actual BWR operating experience for each such individual.

c. State the length of time each such individual has been employed by LILCO.

d. Identify each such individual who has notified LILCO that he or she will leave LILCO's employ, and state the date on which he or she will leave LILCO's employ.

88. With respect to all individuals other than licensed reactor operators, who are involved in the management chain of command for SNPS, from operator supervisors through Chairman of the Board, provide the following information:

a. Identify each such individual by name and current job title.

b. State the number of years of actual BWR operating experience for each such individual.

c. State the length of time each such individual has been employed by LILCO.

d. Identify each such individual who has notified LILCO that he or she will leave LILCO's employ, and state the date on which he or she will leave LILCO's employ.

89. With respect to all individuals who have been hired by LILCO to serve as reactor operators of SNPS, but who have not yet begun working for LILCO at SNPS, provide the following information.

a. Identify each such individual by name, current employer and current job title.

b. State the number of years of actual BWR operating experience for each such individual.

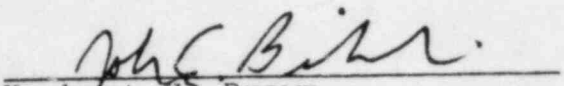
c. State whether each such individual is a licensed reactor operator.

d. State the date on which LILCO hired each such individual.

90. At page 21 of the Application LILCO states that "it costs approximately $45 million per month for Shoreham to sit idle..." With respect to this assertion, identify all items of cost that comprise the estimated monthly cost of $45 million, including (a) the amount of each such item, (b) a description of each such item, and (c) identification of the party or parties to which payment is owed.

Respectfully submitted,

Martin Bradley Ashare
Suffolk County Department of Law
Veterans Memorial Highway
Hauppauge, New York 11788



Herbert H. Brown
Lawrence Coe Lanpher
Karla J. Letsche
John E. Birkenheier
KIRKPATRICK, LOCKHART, HILL,
CHRISTOPHER & PHILLIPS
1900 M Street, N.W., Suite 800
Washington, D.C. 20036

Attorneys for Suffolk County

DATED: May 30, 1984

ATTACHMENT A

The County hereby requests LILCO to produce the documents listed below. For purposes of this request, the word "documents" is to be given its broadest meaning to include, without limitation, correspondence, memoranda, reports, notes, computer printouts and other forms of written data and material, all whether in draft or final form. Furthermore,

(i) If a document has been prepared in several copies, or additional copies have been made that are not identical (or are no longer identical by reason of any subsequent notation on or other modification of a copy), each nonidentical copy is to be construed as a separate document if the notations or other modifications thereon are significant to the substance of the document. Identical copies need not be supplied.

(ii) If any document covered by these requests is withheld under a claim of privilege, furnish a list of such document(s) with the following information: data, author, addressee or recipient, persons to whom copies were furnished, subject matter, the privilege which is claimed, and the requests which call for such document(s).

(iii) If any requested document was but is no longer in your possession or subject to your control, state what disposition was made of it.

Unless expressly limited, documents to be produced include not only those in the possession or subject to the control of LILCO, but also documents in the possession or subject to the control of LILCO's consultants, persons under contract with LILCO and vendors of equipment or services to LILCO.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

Before the Atomic Safety and Licensing Board

In the Matter of	)	
LONG ISLAND LIGHTING COMPANY	)	Docket No. 50-322-OL-4 (Low Power)
(Shoreham Nuclear Power Station, Unit 1)	)	

CERTIFICATE OF SERVICE

I hereby certify that copies of Suffolk County's First Discovery Request to LILCO Relating to LILCO's Application for Exemption have been served on the following this 30th day of May 1984, by U.S. mail, first class, except as otherwise noted.

Judge Marshall E. Miller, Chairman
Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Judge Glenn O. Bright
Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Judge Elizabeth B. Johnson
Oak Ridge National Laboratory
P.O. Box X, Building 3500
Oak Ridge, Tennessee 37830

Eleanor L. Frucci, Esq.
Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Bernard M. Bordenick, Esq.
Edwin J. Reis, Esq.
Office of Exec. Legal Director
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Edward M. Barrett, Esq.
Long Island Lighting Company
250 Old Country Road
Mineola, New York 11501

Honorable Peter Cohalan
Suffolk County Executive
H. Lee Dennison Building
Veterans Memorial Highway
Hauppauge, New York 11788

Fabian Palomino, Esq.
Special Counsel to the Governor
Executive Chamber, Room 229
State Capitol
Albany, New York 12224

W. Taylor Reveley, III, Esq.*
Anthony F. Earley, Jr., Esq.
Robert M. Rolfe, Esq.
Hunton & Williams
707 East Main Street
Richmond, Virginia 23212

Mr. Martin Suubert
c/o Cong. William Carney
1113 Longworth House Office
Building
Washington, D.C. 20515

Martin Bradley Ashare, Esq.
Suffolk County Attorney
H. Lee Dennison Building
Veterans Memorial Highway
Hauppauge, New York 11788

Docketing and Service Branch
Office of the Secretary
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Stephen B. Latham, Esq.
John F. Shea, Esq.
Twomey, Latham and Shea
33 West Second Street
Riverhead, New York 11901

James Dougherty, Esq.
3045 Porter Street, N.W.
Washington, D.C. 20008

Mr. Brian McCaffrey
Long Island Lighting Company
Shoreham Nuclear Power Sta.
P.O. Box 618
North Country Road
Wading River, New York 11792

Jay Dunkleberger, Esq.
New York State Energy Office
Agency Building 2
Empire State Plaza
Albany, New York 12223

John E. Birkenheier
KIRKPATRICK, LOCKHART, HILL,
CHRISTOPHER & PHILLIPS
1900 M Street, N.W., Suite 800
Washington, D.C. 20036

Dated: May 31, 1984

---

* By Federal Express