

APPENDIX B

TO FACILITY OPERATING LICENSE NO. NPF-82  
SHOREHAM NUCLEAR POWER STATION, UNIT 1

LONG ISLAND LIGHTING COMPANY

DOCKET NO. 50-322

ENVIRONMENTAL PROTECTION PLAN

(NON-RADIOLOGICAL)

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SHOREHAM NUCLEAR POWER STATION

UNIT 1

ENVIRONMENTAL PROTECTION PLAN

(NON-RADIOLOGICAL)

TABLE OF CONTENTS

Section	Page
1.0 OBJECTIVES OF THE ENVIRONMENTAL PROTECTION PLAN . . . . .	1-1
2.0 ENVIRONMENTAL PROTECTION ISSUES . . . . .	2-1
2.1 Aquatic Issues. . . . .	2-1
2.2 Terrestrial Issues. . . . .	2-2
3.0 CONSISTENCY REQUIREMENTS. . . . .	3-1
3.1 Facility Design and Operation . . . . .	3-1
3.2 Reporting Related to the SPDES Permit . . . . .	3-2
3.3 Changes Required for Compliance with Other Environmental Regulations . . . . .	3-2
4.0 ENVIRONMENTAL CONDITIONS. . . . .	4-1
4.1 Unusual or Important Environmental Events . . . . .	4-1
4.2 Environmental Monitoring and Other Requirements. . . . .	4-1
5.0 ADMINISTRATIVE PROCEDURES . . . . .	5-1
5.1 Review and Audit. . . . .	5-1
5.2 Records Retention . . . . .	5-1
5.3 Changes in Environmental Protection Plan. . . . .	5-1
5.4 Facility Reporting Requirements . . . . .	5-2

## 1.0 OBJECTIVES OF THE ENVIRONMENTAL PROTECTION PLAN

The Environmental Protection Plan (EPP) is to provide for protection of nonradiological environmental values during operation of the nuclear facility. The principal objectives of the EPP are as follows:

- (1) Verify that the facility is operated in an environmentally acceptable manner, as established by the Final Environmental Statement-Operating License Stage (FES-OL) and other NRC environmental impact assessments.
- (2) Coordinate NRC requirements and maintain consistency with other Federal, State and local requirements for environmental protection.
- (3) Keep NRC informed of the environmental effects of facility operation and of actions taken to control those effects.

Environmental concerns identified in the FES-OL which relate to water quality matters are regulated by way of the New York State Pollutant Discharge Elimination System (SPDES) permit, issued to the licensee.



## 2.0 ENVIRONMENTAL PROTECTION ISSUES

In the FES-OL dated October 1977, the staff considered the environmental impacts associated with the operation of the Shoreham Nuclear Power Station, Unit 1. Certain environmental issues were identified which required study or license conditions to resolve environmental concerns and to assure adequate protection of the environment.

### 2.1 Aquatic Issues

Specific aquatic issues raised by the staff in the FES-OL were:

- (1) The need for discharge related aquatic monitoring programs to confirm that the station's cooling water system with its offshore submerged diffuser performs as predicted and is protective of indigenous biota of Long Island Sound, from a thermal and chemical discharge standpoint (FES-OL summary and conclusions and sections 5.4 and 6.3).
- (2) The need for intake-related studies to document levels of intake entrainment and impingement, to determine survival of entrained ichthyoplankton, and measure the effectiveness of the fish return system in protecting impinged fish (FES-OL summary and conclusions and sections 5.4, 6.3 and 10.4).
- (3) The need for monitoring existing wells on the Shoreham site and the Shoreham-West site to detect effects of plant operation on both water level and water quality (FES-OL Section 6.3.3).

Issues (1) and (2) are addressed by the effluent limitations, monitoring requirements and other conditions contained in the SPDES permit issued by the New York State Department of Environmental Conservation (NYSDEC). The NRC will rely on the NYSDEC for regulation of matters involving water quality and aquatic biota. NRC requirements with regard to issue (3) are specified in section 4.2 of this EPP.

## 2.2 Terrestrial Issues

The specific terrestrial issues raised by the staff in the FES-OL are:

- (1) The need to protect Wading River Marsh from disposition of sand and other materials transported from the Shoreham site (FES-OL Summary and Conclusions and Sections 4.2, 5.2, 6.2.4 and 6.3.6)
- (2) The need for monitoring and mitigating beach erosion (FES-OL Summary and Conclusions and Sections 4.2, 5.2, 6.2.4 and 6.3.6)
- (3) The need for controlled use of herbicides (FES-OL Section 5.4.1)
- (4) The need for monitoring the mortality of migratory birds resulting from collision with the meteorological tower and plant structures (FES-OL Section 6.2.4 and 6.3.6)

NPC requirements with regard to issues (1) through (3) are specified in section 4.2 of this EPP. Issue (4) is covered by section 4.1 of this EPP.

### 3.0 CONSISTENCY REQUIREMENTS

#### 3.1 Facility Design and Operation

The licensee may make changes in facility design or operation or perform tests or experiments affecting the environment provided such activities do not involve an unreviewed environmental question, and do not involve a change in the EPP.\* Changes in facility design or operation or performance tests or experiments which do not significantly affect the environment or that are covered by the SPDES permit are not subject to the requirements of this EPP. Activities governed by Section 3.3 are not subject to the requirements of this section.

Before engaging in additional construction or operational activities which may significantly affect the environment, the licensee shall prepare and record an environmental evaluation of each such activity. Activities are excluded from this requirement if all measurable nonradiological effects are confined to the on-site areas previously disturbed during site preparation and facility construction. When the evaluation indicates that such activity involves an unreviewed environmental question, the licensee shall provide a written evaluation of such activity and obtain prior NRC approval. When such activity involves a change in the EPP, such activity and change to the EPP may be implemented only in accordance with an appropriate license amendment as set forth in Section 5.3 of this EPP.

A proposed change, test or experiment shall be deemed to involve an unreviewed environmental question if it concerns (1) a matter which may result in a significant increase in any adverse environmental impact previously evaluated in the FES-OL, environmental impact appraisals, or in any decisions of the Atomic Safety and Licensing Board; or (2) a significant change in effluents or

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\*This provision does not relieve the licensee of the requirements of 10 CFR 50.59.



design power level; or (2) a matter not previously reviewed and evaluated in the documents specified in (1) of this Subsection, which may have a significant adverse environmental impact.

The licensee shall maintain records of changes in facility design or operation and of tests and experiments carried out pursuant to this Subsection. These records shall include written evaluations which provide bases for the determination that the change, test, or experiment does not involve an unreviewed environmental question nor constitute a decrease in the effectiveness of the EPP to meet the objectives specified in Section 1.0. The licensee shall include as part of the Annual Environmental Operating Report (per Subsection 5.4.1) brief descriptions, analyses, interpretations and evaluations of such changes, tests and experiments.

### 3.2 Reporting Related to the SPDES Permit

Changes to, or renewals of, the SPDES Permit shall be reported to the NRC within 30 days following the date the approved change or renewal is received. If a permit or certification, in part or in its entirety, is appealed and stayed, the NRC shall be notified within 30 days following the day the stay is granted.

The licensee shall notify the NRC of changes to the effective SPDES permit proposed by the licensee by providing the NRC with a copy of the proposed change at the same time it is submitted to the permitting agency. The licensee shall provide the NRC a copy of the application for renewal of the SPDES permit at the same time the application is submitted to the permitting agency.

### 3.3 Changes Required for Compliance with Other Environmental Regulations

Changes in facility design or operation and performance of tests or experiments which are required to achieve compliance with other Federal, State and local environmental regulations are not subject to the requirements of Section 3.1.

## 4.0 ENVIRONMENTAL CONDITIONS

### 4.1 Unusual or Important Environmental Events

Any occurrence of an unusual or important event that indicates or could result in significant environmental impact causally related to facility operation shall be recorded and promptly reported to the NRC within 24 hours followed by a written report per subsection 5.4.2. The following are examples: excessive bird impactation events, onsite plant or animal disease outbreaks, mortality or unusual occurrence of any species protected by the Endangered Species Act of 1973, fish kills, increase in nuisance organisms or conditions, and unanticipated or emergency discharge of waste water or chemical substances.

No routine monitoring programs are required to implement this condition.

### 4.2 Environmental Monitoring and Other Requirements

#### 4.2.1 Monitoring of Ground Water Levels and Quality in Onsite Wells

A program shall be established, commencing at the initiation of low power testing above 5 percent power and running for a period of 2 years, to establish the effect of fresh water consumption on ground water levels and quality. Details of the program plan shall be subject to prior approval of the NRC. Quarterly, water level readings will be taken and samples will be drawn for chloride analysis from one or more wells located onsite. Results will be tabulated and maintained for a period of up to 5 years. There shall be no routine reporting requirement associated with this condition except that if unforeseen effects are indicated, a report will be prepared and submitted to the NRC as required under section 4.1.

#### 4.2.2 Protection of Wading River Marsh

The applicant shall protect Wading River Marsh, including those portions owned by the Applicant, from deposition of sand and other materials transported from the facility site. Ultimate control shall be primarily by ground cover, other vegetation and administrative action. Reliance may also be upon snow fencing and



similar physical barriers. There shall be no routine reporting requirement associated with this condition.

#### 4.2.3 Beach Erosion

The applicant shall monitor the accumulation and/or erosion of beach sand and gravel in the vicinity of the facility site. Any beach material eroded from east of the Applicant's jetties shall be replaced with accumulated sand, if any, from Wading River Creek, from the 1000-foot-long intake channel, from between the jetties, and from the east and west sides of the jetties. Actions taken with regard to this condition shall be reported as specified under Section 5.4.1.

#### 4.2.4 Maintenance of Transmission Line Corridors

The use of herbicides within the Shoreham Nuclear Power Station transmission line corridors shall conform to the approved use of selected herbicides as registered by the Environmental Protection Agency and approved by State authorities and applied as directed by said authorities.

Records shall be maintained in the appropriate division office concerning herbicide use. Such records shall include the following information: commercial and chemical names of materials used; concentration of active material in formulations diluted for field use; diluting substances other than water; rates of application; method and frequency of application; location; and the date of application. Such records shall be maintained for a period of 3 years in conformance with NYS Department of Environmental Conservation requirements and be made readily available to the NRC upon request. There shall be no routine reporting requirement associated with this condition.

## 5.0 ADMINISTRATIVE PROCEDURES

### 5.1 Review and Audit

The licensee shall provide for review and audit of compliance with the EPP. The audits shall be conducted independently of the individual or groups responsible for performing the specific activity. A description of the organizational structure utilized to achieve the independent review and audit function and results of the audit activities shall be maintained and made available for inspection.

### 5.2 Records Retention

Records and logs relative to the environmental aspects of facility operation shall be made and retained in a manner convenient for review and inspection. These records and logs shall be made available to NRC on request.

Records of modifications to facility structures, systems and components determined to have the potential to significantly affect the continued protection of the environment shall be retained for the life of the facility. All other records, data and logs relating to this EPP shall be retained for five years or, where applicable, in accordance with the requirements of other agencies.

### 5.3 Changes in Shoreham Environmental Protection Plan

Request for change in the EPP shall include an assessment of the environmental impact of the proposed change and a supporting justification. Implementation of changes in the EPP shall not commence prior to NRC approval of the proposed changes in the form of a license amendment incorporating the appropriate revision to the EPP.

## 5.4 Plant Reporting Requirements

### 5.4.1 Routine Reports

An Annual Environmental Operating Report describing implementation of the EPP for the previous year shall be submitted to the NRC prior to May 1 of each year. The initial report shall be submitted prior to May 1 of the year following issuance of the operating license. The period of the first report shall begin with the date of issuance of the operating license.

The Report shall include summaries and analyses of the results of the environmental protection activities as required by Subsection 4.2 of this EPP for the report period, including a comparison with related preoperational studies, operational controls (as appropriate), and previous non-radiological environmental monitoring reports, and an assessment of the observed impacts of the facility operation on the environment. If harmful effects or evidence of trends towards irreversible damage to the environment are observed, the licensee shall provide a detailed analysis of the data and a proposed course of mitigating action.

The Annual Environmental Operating Report shall also include:

- (1) A list of EPP noncompliances and the corrective actions taken to remedy them.
- (2) A list of all changes in facility design or operation, tests, and experiments made in accordance with Subsection 3.1 which involved a potentially significant unreviewed environmental question.
- (3) A list of nonroutine reports submitted in accordance with Subsection 5.4.2.
- (4) A summary list of SPDES permit-related reports sent to the New York State Department of Environmental Conservation during the report period that relate to matters identified in subsection 2.1.



In the event that some results are not available by the report due date, the report shall be submitted noting and explaining the missing results. The missing results shall be submitted as soon as possible in a supplementary report.

#### 5.4.2 Nonroutine Reports

A written report shall be submitted to the NRC within 30 days of occurrence of a nonroutine event. The report shall (a) describe, analyze, and evaluate the event, including extent and magnitude of the impact and facility operating characteristics, (b) describe the probable cause of the event, (c) indicate the action taken to correct the reported event, (d) indicate the corrective action taken to preclude repetition of the event and to prevent similar occurrences involving similar components or systems, and (e) indicate the agencies notified and their preliminary responses.

Events reportable under this subsection which also require reports to other Federal, State or local agencies shall be reported in accordance with those reporting requirements in lieu of the requirements of this subsection. The NRC shall be provided a copy of such report at the same time it is submitted to the other agency.