

ACCELERATED DISTRIBUTION DEMONSTRATION SYSTEM

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 9204280389 DOC. DATE: ~~01/12/91~~ NOTARIZED: NO DOCKET #
 FACIL: 50-400 Shearon Harris Nuclear Power Plant, Unit 1, Carolina 05000400
 AUTH. NAME AUTHOR AFFILIATION
 VAUGHN, G.E. Carolina Power & Light Co.
 MAZO, G.P. Carolina Power & Light Co.
 GRIFFITH, J.W. Carolina Power & Light Co.
 RECIP. NAME RECIPIENT AFFILIATION

SUBJECT: "Shearon Harris Nuclear Power Plant Unit 1 Annual Environ
 (Nonradiological) Operating Rept, 1991." W/920424 ltr.

DISTRIBUTION CODE: IE25D COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 7
 TITLE: Environmental Monitoring Rept (per Tech Specs)

NOTES: Application for permit renewal filed. 05000400

	RECIPIENT		COPIES			RECIPIENT		COPIES	
	ID	CODE/NAME	LTR	ENCL		ID	CODE/NAME	LTR	ENCL
	PD2-1	LA	3	3		PD2-1	PD	1	1
		MOZAFARI, B.	1	1					
INTERNAL:	ACRS		1	1		NRR/DREP/PRPB1		2	2
	REG FILE	01	1	1		RGN2 DRSS/RPB		1	1
	RGN2	FILE 02	1	1					
EXTERNAL:	EG&G	SIMPSON, F	2	2		NRC	PDR	1	1

NOTE TO ALL "RIDS" RECIPIENTS:

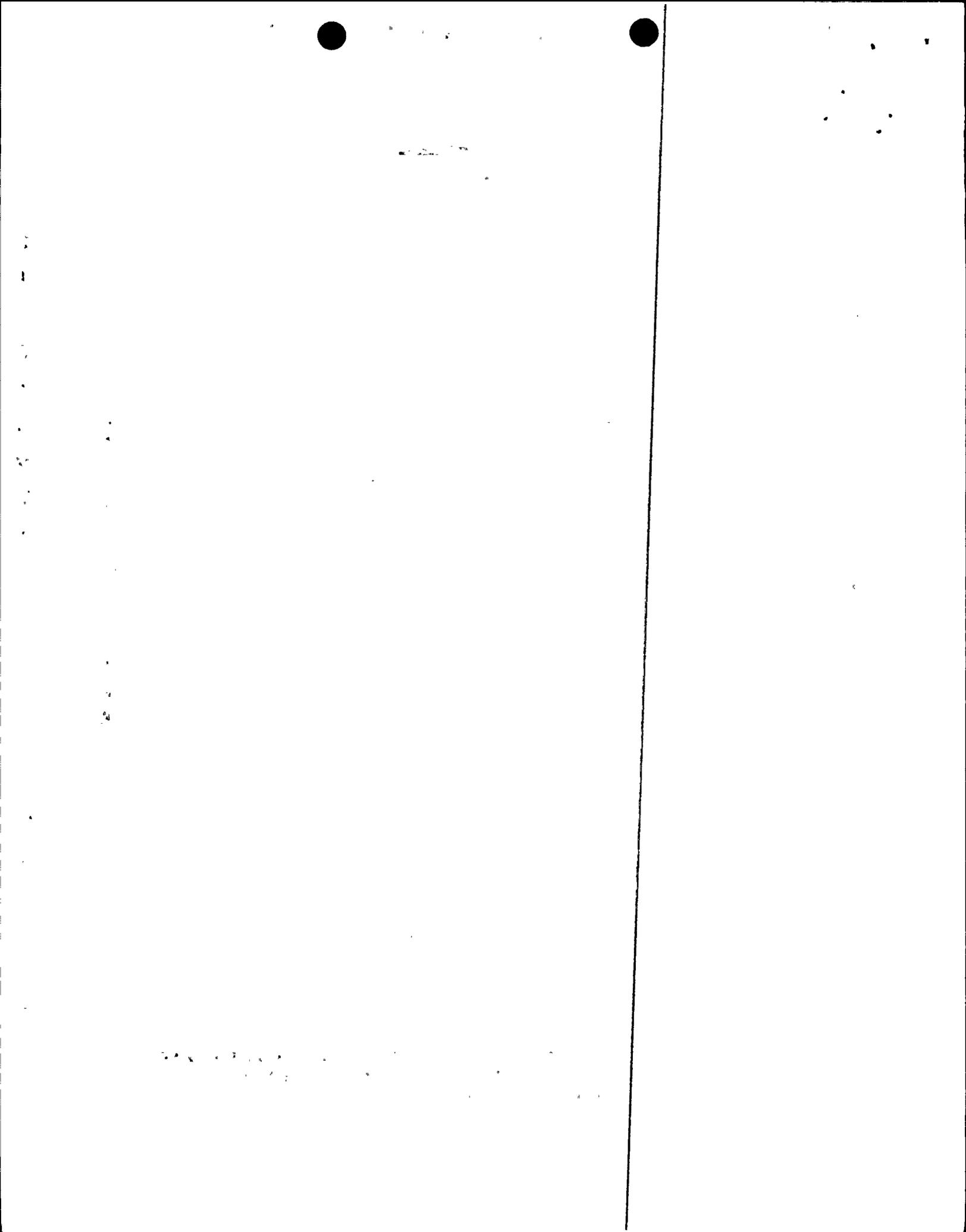
PLEASE HELP US TO REDUCE WASTE! CONTACT THE DOCUMENT CONTROL DESK,
 ROOM P1-37 (EXT. 20079) TO ELIMINATE YOUR NAME FROM DISTRIBUTION
 LISTS FOR DOCUMENTS YOU DON'T NEED!

TOTAL NUMBER OF COPIES REQUIRED: LTR 14 ENCL 14

Er-1

R
I
D
S
/
A
D
D
S

R
I
D
S
/
A
D
D
S





Carolina Power & Light Company

HARRIS NUCLEAR PROJECT
P.O. Box 165
New Hill, North Carolina 27562

APR 24 1992

Letter Number: HO-920083

NRC-779

Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, DC 20555

SHEARON HARRIS NUCLEAR POWER PLANT
DOCKET NO. 50-400
LICENSE NO. NPF-63
ANNUAL ENVIRONMENTAL (NONRADIOLOGICAL) OPERATING REPORT

Gentlemen:

In accordance with Section 5.4.1 of the Environmental Protection Plan issued as Appendix B of the Operating License (NPF-63) for the Shearon Harris Nuclear Power Plant, Unit No. 1, Carolina Power and Light Company herewith submits the enclosed Annual Environmental (Nonradiological) Operating Report for 1991.

Yours very truly,

G. E. Vaughn
Vice President
Harris Nuclear Project

MGW:dmw

Enclosure

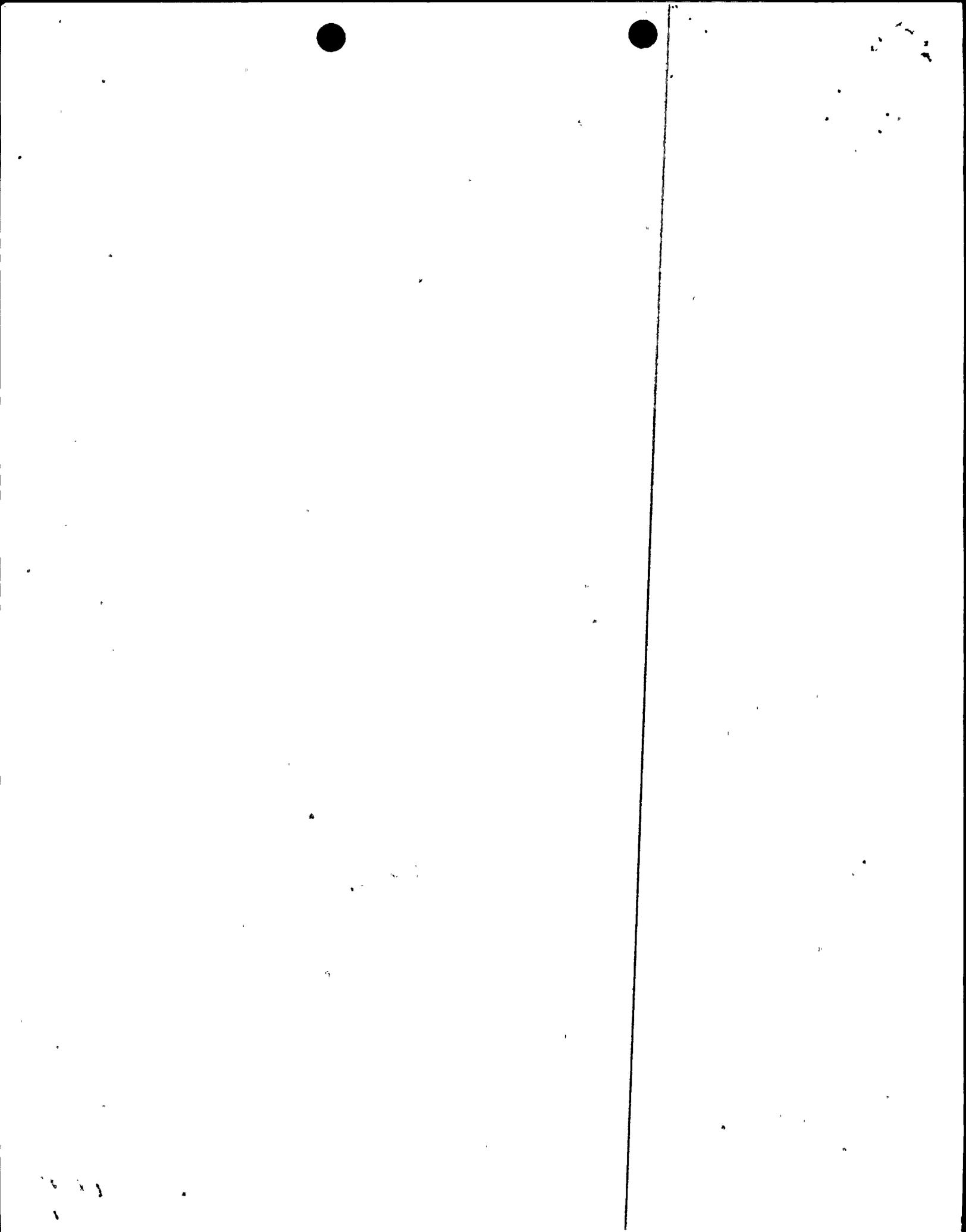
cc: Mr. S. D. Ebnetter (NRC-R11)
Mr. J. E. Tedrow (NRC-SHNPP)

270120

MEM/HO-920083/1/OS1

9204280389 911231
PDR ADOCK 05000400
R PDR

IE25
11



SHEARON HARRIS NUCLEAR POWER PLANT

UNIT 1

ANNUAL ENVIRONMENTAL
(NONRADIOLOGICAL)
OPERATING REPORT

for

January 1, 1991-December 31, 1991

CAROLINA POWER & LIGHT COMPANY

Docket No. 50-400

Facility Operating License No. NPF-63



100
100
100

100

100

100

100

100

100
100
100

1.0 INTRODUCTION

Carolina Power & Light Company (CP&L) received a low-power Facility Operating License (No. NPF-53) and a full-power Facility Operating License (No. NPF-63) for the Shearon Harris Nuclear Power Plant, Unit 1 (SHNPP), from the U.S. Nuclear Regulatory Commission (NRC) on October 24, 1986, and January 12, 1987, respectively. Appendix B (the Environmental Protection Plan [nonradiological]) of both licenses required submittal of an Annual Environmental (nonradiological) Operating Report to the NRC describing the implementation of the plan during the previous year. The purpose of this document is to fulfill that requirement for the period of January 1, 1991, through December 31, 1991.

2.0 ENVIRONMENTAL MONITORING

[EPP Section 4.2]

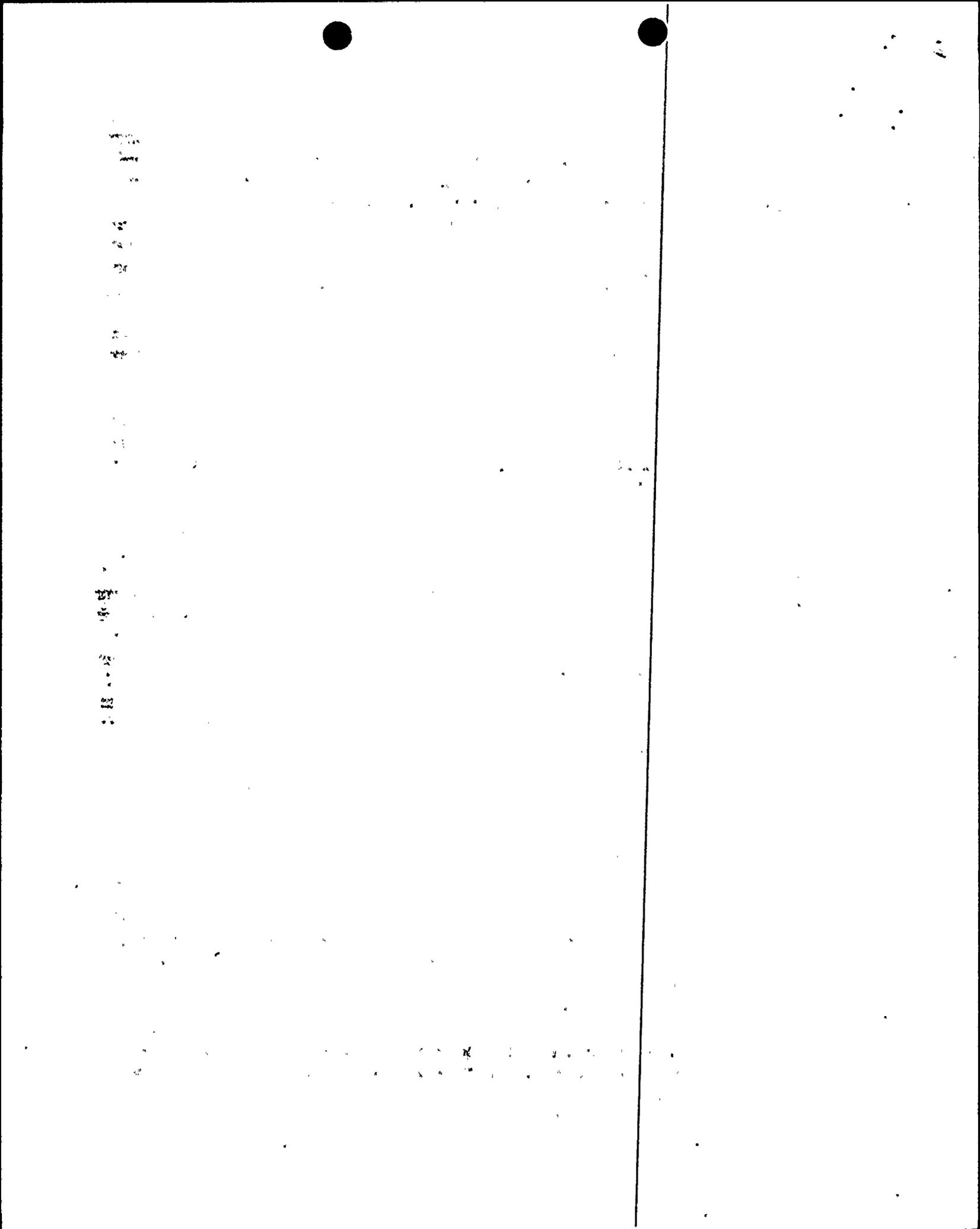
2.1 Aquatic Monitoring

The National Pollutant Discharge Elimination System (NPDES) permit (NC0039586) issued on January 18, 1990, remained in effect for most of 1991. Under the authority of the Clean Water Act, the state of North Carolina renewed the NPDES permit, effective November 1, 1991, which will remain in effect until March 31, 1996. This renewed permit reflected a reclassification of the facility from a Class II to a Class III designation. The Class III rating requires that the laboratory analysis performed on all effluent samples be performed by a laboratory certified by the state. The Harris Plant laboratory is in the process of becoming certified. Also, as a consequence of becoming a Class III facility, the sampling frequency for the analysis of Biological Oxygen Demand (BOD), Total Suspended Solids (TSS), and fecal coliform of the sanitary waste treatment plant will be increased from twice per month to daily.

2.1.1 Effluent Monitoring

Routine effluent monitoring was conducted and reported to the North Carolina Division of Environmental Management (NCDEM) as required by the NPDES permit. Out of approximately 1306 samples collected, there were approximately 4268 analyses performed. The following is a summary of NPDES noncompliances that occurred during 1991:

- A. On March 10, 1991, the K Building sewage collection tank pump was discovered to be deenergized during an electrical buss outage. The inoperable pump caused the collection tank to overflow leaking about 50 gallons of raw sewage into the area catch basin. The catch basin already contained approximately 500 gallons of rainwater. Upon high water level, the catch basin pump automatically pumped the water into the storm drains. No impact was observed in the lake at the storm drain discharge point.
- B. On April 29, 1991, the Harris cooling tower blowdown discharge was found to be out of compliance for zinc. The zinc concentration in the cooling tower blowdown sample of April 29, 1991, was 1.63 mg/liter. The concentration limit



for zinc is 1.0 mg/liter for the daily maximum and monthly average. The chemical feed was secured. However, because of low blowdown on April 29 and 30, the sample taken on April 30 was also out of compliance at 1.06 mg/liter. As a result, the monthly average limit for zinc was also exceeded at a concentration of 1.22 mg/liter. Analysis of grab samples showed a return to within limits on May 1, 1991. Any potential toxicity was precluded by the lake recirculation flow of approximately 4,000-6,000 gallons/minute for radiological waste dilution. The source of this excursion was a personnel error in improperly starting up the chemical feed system after a lengthy shutdown.

- C. The Sanitary Sewage Treatment effluent was out of compliance for 5-day BOD on July 17, 1991. It is believed that this composite sample was inadvertently contaminated based upon (1) the TSS and fecal coliform results for July 17, 1991, were well within specification; (2) results from samples obtained prior to and after July 17, 1991, were also well within limits; and (3) the sewage treatment plant was operating normally as indicated by microbiological and chemical test results. A notice of violation was received from NCDEM regarding this exceedance.
- D. On September 28, 1991, the Harris cooling tower blowdown discharge was out of compliance for the length of time of chlorine release. The time of chlorine release was 365 minutes. The daily maximum limit is 120 minutes. The reason for this exceedance was a malfunction of the dechlorination system that was a result of a faulty chemical feed pump. The dechlorination system appeared to be working intermittently. If the backup dechlorination system had been functioning properly and not out of service for repairs, the incident would have been prevented. The total residual chlorine concentration never exceeded 0.5 mg/liter. To prevent this from recurring, the faulty chemical pump was restored to normal operation, and the backup dechlorination system was repaired and placed in service.

All NPDES noncompliances were corrected promptly and were not of an ongoing nature. All noncompliances were reported to NCDEM with no additional actions required by NCDEM.

2.1.2 Biological Monitoring

Through observations made during routine biological monitoring at Harris Lake during the week of October 1, 1991, it was determined that the major concentrations of Asiatic clams *Corbicula fluminea* were still in the vicinity of the two public boat ramps. Observations also indicated that the clams have continued to spread slowly throughout Harris Lake. Three Asiatic clams were collected at the mouth of the main intake canal. No Asiatic clams were collected in the main intake structures, the auxiliary intake structures, the auxiliary intake canal, or in plant service water (fire protection) system. Monitoring for the Asiatic clams in the intake canals and intake structures is scheduled to continue.

100

101

102

103

104

105

106

107

108

109

110

111

112

113

114

115

116

117

118

119

120

121

122

123

124

125

126

127

128

129

130

Since 1988 hydrilla *Hydrilla verticillata*, a nonnative aquatic weed, has been established in Harris Lake. A survey made during the fall of 1991 revealed that hydrilla was established in water less than 9 feet deep in all major arms of the lake except for the Buckhorn Creek arm (the southernmost). The total areal coverage was estimated to be approximately 1050 acres. Hydrilla was not observed growing in the auxiliary reservoir. No impacts to Harris Plant operations have occurred nor are they expected because of the low velocity of water drawn into the cooling tower makeup water intake structure. In the spring of 1991, Company biologists met with members of several state and federal environmental regulatory agencies to form the Harris Lake Hydrilla Task Force at the request of the chairman of the North Carolina Interagency Council on Aquatic Weeds. The consensus of the task force was that if hydrilla needs to be eliminated from Harris Lake, stocking grass carp would probably be the method of choice. That would possibly lead to the elimination of all vegetation from the lake for several years, and the potential negative effects of that condition on native fish populations would probably outweigh the positive effects. Thus, the task force concluded that a major program to eliminate hydrilla from Harris Lake should not be undertaken at this time. The Company has committed to chemically controlling hydrilla around the two public boat ramps to reduce the chance of it being transported on or in boats to other water bodies.

2.2 Terrestrial Monitoring

Terrestrial monitoring is not required.

2.3 Noise Monitoring

Noise monitoring is not required.

3.0 UNUSUAL OR IMPORTANT ENVIRONMENTAL EVENTS [EPP Section 4.1]

No occurrence of an unusual or important environmental event that would indicate or could result in a significant environmental impact causally related to plant operation occurred during the reporting period.

4.0 PLANT CONSISTENCY REQUIREMENTS [EPP Section 3.0]

4.1 Plant Design and Operation

There were no changes in plant design or operation plans, and there were no tests or experiments performed which were considered to involve an unreviewed environmental question during the reporting period.

4.2 Reporting Related to the NPDES Permit

All required NPDES monitoring data were submitted to NCDEM via monthly discharge monitoring reports and separate correspondence as warranted.



82
1
2
3
4

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
100

5.0 PLANT REPORTING REQUIREMENTS

[EPP Section 5.4]

5.1 EPP Noncompliances

There were no EPP noncompliances identified during the reporting period.

5.2 Changes in Station Design

There were no changes in plant design or operation plans, and there were no tests or experiments performed which involved a potentially significant unreviewed environmental question during the reporting period.

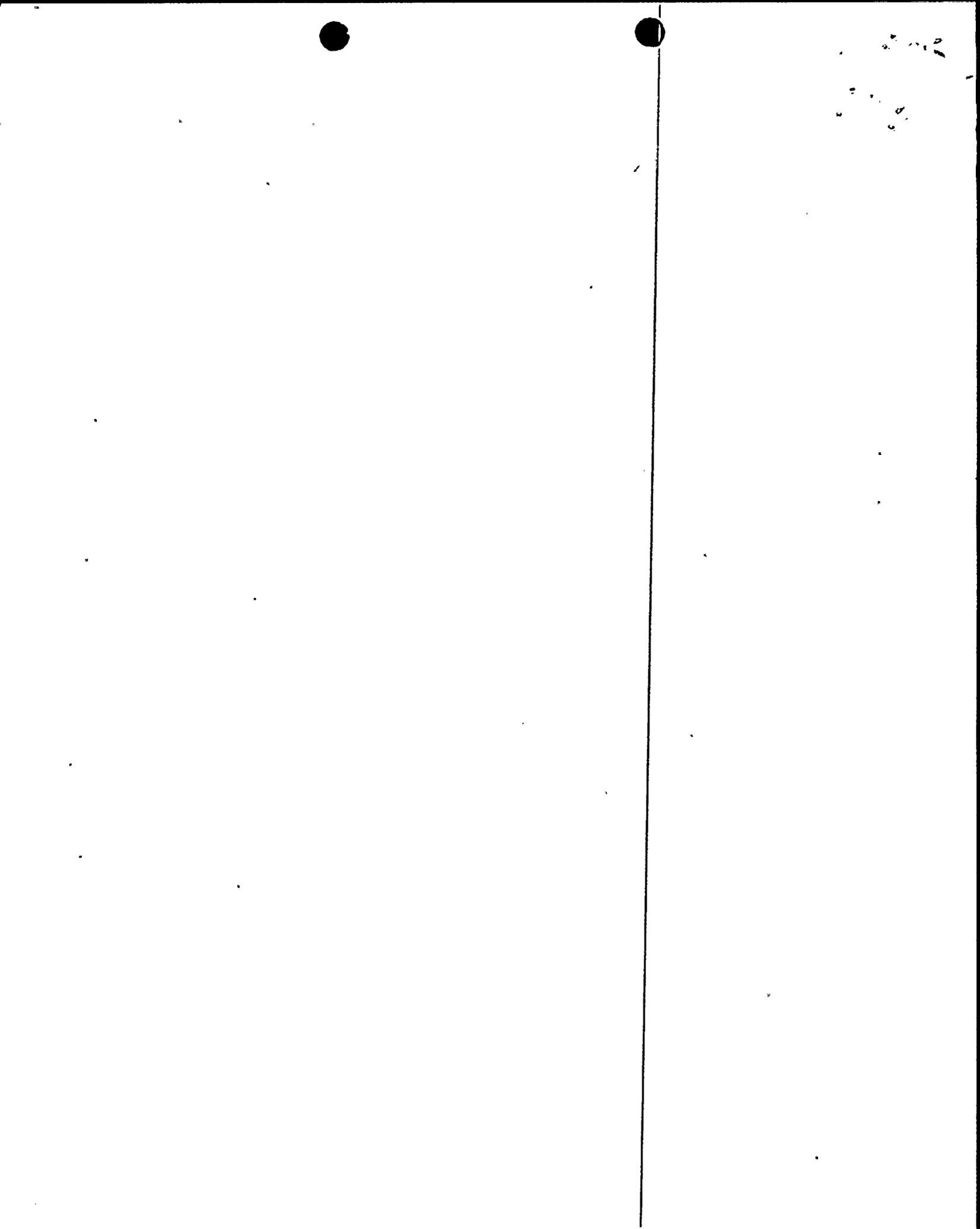
5.3 Nonroutine Reports

There was one EPP nonroutine report submitted to the NRC during the reporting period. A copy of the report to the NCDEM concerning the March 10, 1991, event discussed in Section 2.1.1 A. was transmitted to the NRC pursuant to Appendix B, Section 5.4.2 of the Harris Plant's operating license.

6.0 EPP AUDIT

[EPP Section 5.1]

An audit conducted by an independent corporate entity was performed to ensure that the conditions and activities described in this annual environmental operating report were undertaken, fulfilled, and evaluated. The results of that audit are summarized in the attached statement.



SUMMARY AUDIT REPORT

SHNPP Annual Environmental (Nonradiological) Operating Report

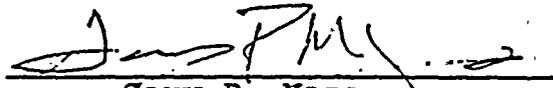
Purpose and Scope

An audit of the Shearon Harris Nuclear Power Plant Unit 1 (SHNPP) Annual Environmental (Nonradiological) Operating Report was performed for the period January 1, 1991, through December 31, 1991. The principal audit objective was to review the controls and procedures that ensure SHNPP is in compliance with the reporting requirements to the U.S. Nuclear Regulatory Commission (NRC) established in Appendix B, the Environmental Protection Plan (Nonradiological), of the SHNPP Facility Operating License No. NPF-63.

The scope of our work was limited to a review of the controls, procedures and supporting documentation related to the Annual Environmental (Nonradiological) Operating Report and interviews with the appropriate personnel.

Audit Results

In our opinion, based on the audit procedures performed, the Annual Environmental (Nonradiological) Operating Report is correct and complies with the NRC reporting requirements.



Gary P. Mazo
Senior Auditor



John W. Griffith
Director - Audit Projects
Audit Services Department
Carolina Power & Light Company

