



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 44 TO FACILITY OPERATING LICENSE NO. NPF-69

NIAGARA MOHAWK POWER CORPORATION

NINE MILE POINT NUCLEAR STATION, UNIT 2

DOCKET NO. 50-410

1.0 INTRODUCTION

On January 25, 1988, the NRC issued Generic Letter (GL) 88-01, "NRC Position on IGSCC (Intergranular Stress Corrosion Cracking) in BWR Austenitic Stainless Steel Piping." Niagara Mohawk Power Corporation (NMPC or the licensee) responded to the GL for Nine Mile Point Nuclear Station, Unit 2 (NMP-2) in letters dated July 28, 1988, November 1, 1989, and December 14, 1989. The NRC staff provided its Safety Evaluation (SE) for these licensee submittals by letter dated August 17, 1990. As discussed in that SE, the staff concluded that the NMPC submittals were acceptable with the exception of five items. The five unacceptable items were related to the licensee's positions concerning GL 88-01 leakage detection requirements; classification of welds in the Reactor Recirculation System, Residual Heat Removal System, and Reactor Pressure Vessel; inspection plans for welds that had been incorrectly classified as IGSCC Category A and the omission of inspection plans for welds in the Reactor Water Cleanup (RWCU) System piping outboard of the isolation valves; omission of appurtenances to components from inspection plans; and the classification of solution treated, Type 316L welds in the RWCU System.

The licensee responded to the NRC's SE of August 17, 1990, in a letter dated November 20, 1990. The NRC staff provided its SE for this NMPC submittal in an enclosure to a letter dated June 24, 1991. The staff found that the licensee's response of November 20, 1990, resolved all open GL 88-01 issues for NMP-2 with the exception of the licensee's position on the classification of solution treated, Type 316L welds in the RWCU System. The staff's SE stated that NMPC should perform in-situ metallography on the subject welds to demonstrate resistance to sensitization and thereby support their classification as IGSCC Category A welds. In the event that the licensee could not perform in-situ metallography, the staff recommended that the welds be reclassified so that they would be inspected more frequently. The NRC staff's SE of June 24, 1991, noted that the licensee committed to adhere to the NRC staff positions on leakage detection and intended to submit a technical specification (TS) amendment request to incorporate these requirements.

By letter dated July 25, 1991, NMPC responded to the NRC staff's SE of June 24, 1991. The licensee indicated that most of the welds in the RWCU System within the scope of GL 88-01 were shop fabricated and solution treated,

9308110377 930721  
PDR ADDOCK 05000410  
PDR



1950

and could be classified as IGSCC Category A without further testing for resistance to sensitization. The licensee also stated that the remaining welds within the scope of GL 88-01 were field fabricated and had been reclassified from IGSCC Category A to Category D.

In a letter dated June 25, 1991, the licensee advised the NRC staff that the submittal of a TS amendment request to incorporate the NRC staff positions on leakage detection in GL 88-01 would be delayed. The licensee had originally intended to submit the appropriate amendment request by June 30, 1991. However, in view of the impending issuance of a supplement to GL 88-01 by the NRC and the formation of an ad hoc BWR Owners Group (BWROG) committee to present a response to GL 88-01, NMPC elected to temporarily delay the submittal of a TS amendment request. The licensee stated at that time that an acceptable date for submittal of a TS amendment request would be established once all issues related to leak detection had been resolved.

On February 4, 1992, the NRC issued Supplement 1 to GL 88-01 which provided acceptable alternative NRC staff positions to some of those delineated in the original GL. By letter dated February 13, 1992, NMPC advised the NRC staff that it had revised its position on the classification of shop-fabricated welds in the RWCU System. The licensee indicated that these welds had been reclassified as Category D. This change in position resolved the remaining GL 88-01 issue concerning the classification of solution treated, Type 316L welds in the RWCU System. Although all GL 88-01 issues were resolved at that time, NRC staff review of NMPC responses to the GL remained open pending the submittal of a TS amendment request that incorporated the NRC staff positions on leakage detection.

In a letter dated September 16, 1992, NMPC advised the NRC staff that it would submit a TS amendment request to incorporate the NRC staff positions on leakage detection delineated in GL 88-01 no later than December 31, 1992. The licensee indicated at that time that the BWROG ad hoc committee had completed its work on leakage detection requirements and made no recommendations that challenged the NRC staff positions delineated in GL 88-01 or in Supplement 1 to that GL. The licensee submitted the related TS change request by letter dated December 30, 1992.

By letter dated May 19, 1993, the licensee supplemented its submittal of December 30, 1992. The letter of May 19, 1993, modified the description of the alternate method to be used to monitor the drywell floor drain tank fill rate and forwarded two proposed changes to the TS Bases. The May 19, 1993, letter did not change the initial proposed no significant hazards consideration determination.

## 2.0 EVALUATION

The NRC staff has evaluated NMPC's license amendment request of December 30, 1992, as supplemented May 19, 1993.



The licensee has proposed to modify TS 3.4.3.1 to read as follows:

Limiting Conditions for Operation

3.4.3.1 The following reactor coolant system leakage detection systems shall be OPERABLE:

- a. The primary containment airborne particulate radioactivity monitoring system,
- b. The primary containment airborne gaseous radioactivity monitoring system,
- c. The drywell floor drain tank fill rate monitoring system; and
- d. Drywell equipment drain tank fill rate monitoring system.

ACTION:

- a. With the primary containment airborne particulate radioactivity monitoring system or the primary containment airborne gaseous radioactivity monitoring system inoperable, operation may continue for up to 30 days provided grab samples of the containment atmosphere are obtained and analyzed at least once per 12 hours; otherwise, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
- b. With the drywell equipment drain tank fill rate monitoring system inoperable, operation may continue for up to 30 days provided that the drywell equipment drain tank fill rate is determined via alternate methods; otherwise, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
- c. With the drywell floor drain tank fill rate monitoring system inoperable, operation may continue for up to 30 days provided that the drywell floor drain tank fill rate is determined via alternate methods; otherwise, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
- d. With both drywell floor drain and the drywell equipment drain tank fill rate monitoring systems inoperable, restore either system to OPERABLE status within 24 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

The proposed modifications to TS 3.4.3.1 essentially involve four distinct changes. The first two changes would allow for a 30-day out-of-service time for the drywell floor drain tank or the drywell equipment drain tank fill rate monitoring systems provided that a manual method of determining the fill rate is employed. An orderly shutdown would be required if the inoperable fill rate monitoring system is not restored within 30 days. This would ensure that



the plant will not operate indefinitely in a condition in which the ability to detect an increase in drywell leakage has degraded. The NRC staff has reviewed these proposed changes and finds that they are acceptable since they are consistent with staff position (3) in Supplement 1 to GL 88-01.

The third proposed change to TS 3.4.3.1 would require an orderly shutdown after a 24 hour out-of-service time if the normal drywell floor drain tank and drywell equipment drain tank fill rate monitoring systems are simultaneously inoperable. The NRC staff has reviewed this proposed change and finds it to be acceptable since it would conservatively restrict continued plant operations if both monitoring systems are inoperable.

The fourth proposed change to TS 3.4.3.1 would correct a discrepancy between TS 3.4.3.1 and TS 4.4.3.2.1.a. TS 4.4.3.2.1.a states that the required frequency for the monitoring of containment airborne radioactivity is at least once per 12 hours. TS 3.4.3.1 currently states that if any containment airborne radioactivity monitoring system is inoperable, operation may continue for up to 30 days provided that a grab sample is taken and analyzed at least once per 24 hours. The proposed change to TS 3.4.3.1 would require grab sampling at least once per 12 hours and establish consistency with TS 4.4.3.2.1.a. The NRC staff has reviewed this proposed change and finds it to be acceptable since it provides for more frequent grab sampling when the automatic systems are inoperable and resolves the conflict between the requirements of TS 3.4.3.1 and TS 4.4.3.2.1.a.

The licensee has proposed to make additions to TS 3.4.3.2 that would read as follows:

Limiting Condition for Operation 3.4.3.2.e

Reactor coolant system leakage shall be limited to:

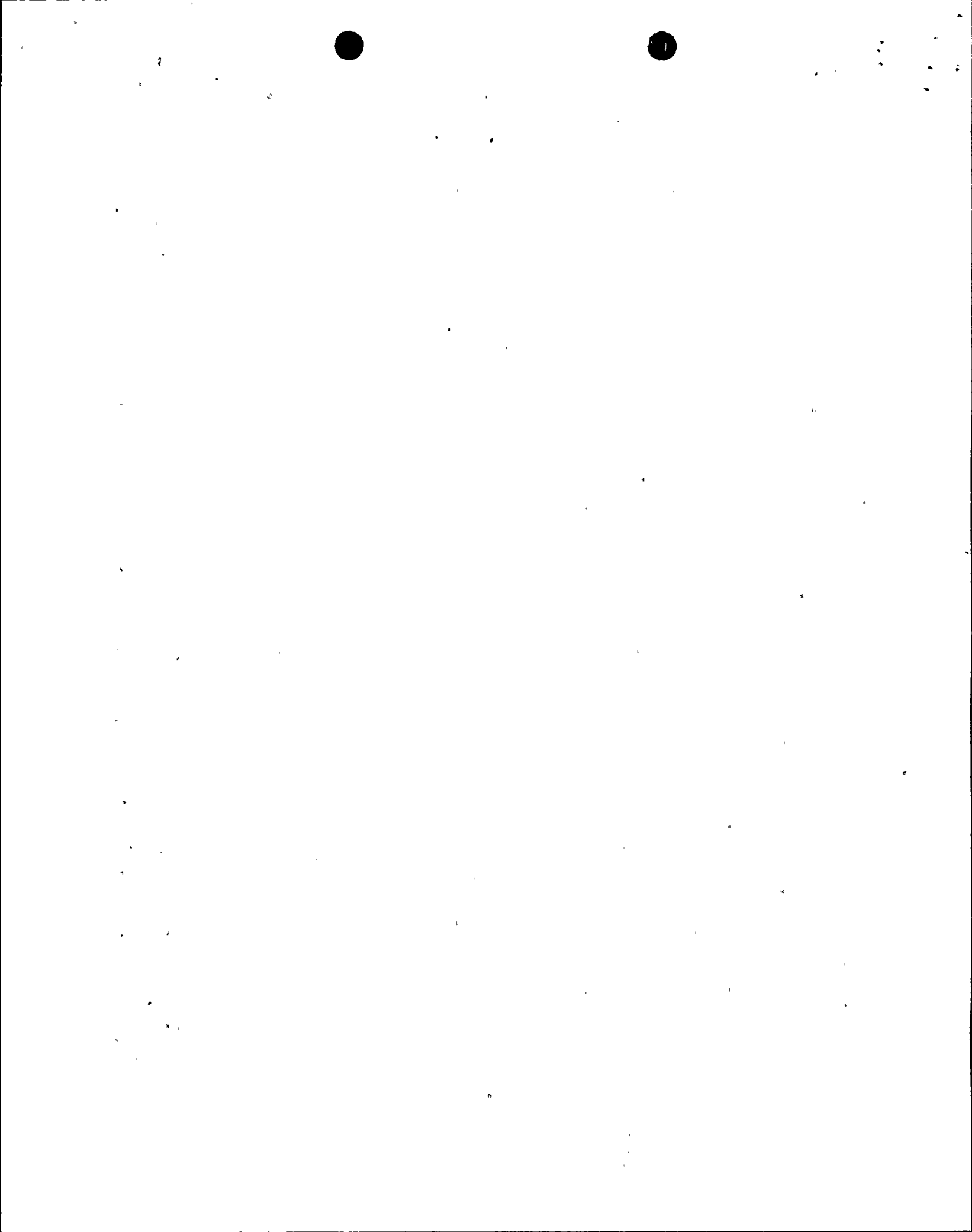
- e. 2 gpm increase in UNIDENTIFIED LEAKAGE within any 24-hour period in Mode 1.

ACTION 3.4.3.2.f.

With any reactor coolant system leakage greater than the limit in 3.4.3.2.e above, identify the source of leakage within 4 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

This change would establish a limit on the rate of increase in unidentified leakage during Mode 1 operations and require initiation of a plant shutdown if such leakage increases by 2 gpm within any 24-hour period. The NRC staff has reviewed the proposed change to TS 3.4.3.2 and finds it to be acceptable since it is consistent with staff position (1) on leak detection delineated in GL 88-01.

The licensee has proposed to modify the surveillance requirement in TS 4.4.3.2.1.b. to read as follows:





Surveillance Requirement 4.4.3.2.1.b.

The RCS leakage shall be demonstrated to be within each of the above limits by:

- b. Monitoring the drywell floor drain tank and equipment tank fill rate at least once per 8 hours,

This change would decrease the surveillance interval for monitoring the primary containment drywell floor drain tank and equipment drain tank fill rate from at least once per 12 hours to at least once per 8 hours. The NRC staff has reviewed the proposed change to TS 4.4.3.2.1.b and finds it to be acceptable since it consistent with staff position (1) in Supplement 1 to GL 88-01.

The licensee has also proposed two changes to the TS Bases. Specifically, Bases Section 3/4.4.3.1, "Leakage Detection Systems," would be expanded to describe acceptable alternate methods for determining the drywell floor drain tank fill rate. An addition would be made to Bases Section 3/4.4.3.2, "Operational Leakage," to explain why the increase in unidentified leakage is limited to 2 gpm within a 24-hour period in Mode 1. The NRC staff has no objections to the proposed Bases changes.

3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the New York State official was notified of the proposed issuance of the amendment. The State official had no comments.

4.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and changes surveillance requirements. The NRC staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendment involves no significant hazards consideration, and there has been no public comment on such finding (58 FR 8774). Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.



## 5.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor:  
John E. Menning

Date: July 21, 1993



July 21, 1993

Mr. B. Ralph Sylvia  
Executive Vice President, Nuclear  
Niagara Mohawk Power Corporation  
301 Plainfield Road  
Syracuse, New York 13212

Dear Mr. Sylvia:

SUBJECT: ISSUANCE OF AMENDMENT FOR NINE MILE POINT NUCLEAR STATION,  
UNIT 2 (TAC NO. M85322)

The Commission has issued the enclosed Amendment No. 44 to Facility Operating License No. NPF-69 for the Nine Mile Point Nuclear Station, Unit 2. The amendment consists of changes to the Technical Specifications (TSs) in response to your application transmitted by letter dated December 30, 1992, as supplemented May 19, 1993.

The amendment revises TS 3.4.3.1, 3.4.3.2, and 4.4.3.2.1.b. and associated Bases to incorporate the NRC staff positions on reactor coolant system leakage detection delineated in Generic Letter 88-01, "NRC Position on IGSCC in BWR Austenitic Stainless Steel Piping."

A copy of the related Safety Evaluation is enclosed. A Notice of Issuance will be included in the Commission's next regular biweekly Federal Register notice.

Sincerely,  
Original signed by:

John E. Menning, Project Manager  
Project Directorate I-1  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 44 to NPF-69
2. Safety Evaluation

cc w/enclosures:  
See next page

OFFICE	PDI-1:LA	PDI-1:PM	NRR/DE <i>H</i>	OGC <i>GH</i>	PDI-1:D
NAME	CVogan <i>W</i>	JMenning <i>SM</i>	JStrosnider <i>LS</i>	E HOLLER	RACapra <i>ROE</i>
DATE	6/1/93	6/7/93	7/1/93	7/9/93	7/21/93

OFFICIAL RECORD COPY  
FILENAME: G:\NMP2\NM285322.AMD



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