



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

PHILADELPHIA ELECTRIC COMPANY
DOCKET NO. 50-352
LIMERICK GENERATING STATION, UNIT 1
AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 54
License No. NPF-39

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Philadelphia Electric Company (the licensee) dated March 3, 1992, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. NPF-39 is hereby amended to read as follows:

Technical Specifications

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 54, are hereby incorporated into this license. Philadelphia Electric Company shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of its date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Charles J. Miller

Charles L. Miller, Director
Project Directorate I-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment:
Changes to the
Technical Specifications

Date of Issuance: May 11, 1992

ATTACHMENT TO LICENSE AMENDMENT NO. 54

FACILITY OPERATING LICENSE NO. NPF-39

DOCKET NO. 50-352

Replace the following pages of the Appendix A Technical Specifications with the attached pages. The revised pages are identified by Amendment number and contain vertical lines indicating the area of change. The overleaf page is provided to maintain document completeness.*

<u>Remove</u>	<u>Insert</u>
3/4 7-13	3/4 7-13
3/4 7-14	3/4 7-14
3/4 7-15	3/4 7-15
3/4 7-16	3/4 7-16
E 3/4 7-3	B 3/4 7-3
B 3/4 7-4	B 3/4 7-4*

SURVEILLANCE REQUIREMENTS (Continued)

e. Functional Tests

At least once per 18 months a representative sample of each type of snubber shall be tested using the following sample plans. The sample plan(s) shall be selected for each type prior to the test period and cannot be changed during the test period. The NRC Regional Administrator shall be notified in writing of the sample plan(s) selected for each type prior to the test period or the sample plan(s) used in the prior test period shall be implemented:

- 1) At least 10% of the total population of a snubber type shall be functionally tested. For each snubber of that type that does not meet the functional test acceptance criteria of Specification 4.7.4f., an additional sample of at least 1/2 the size of the initial sample shall be tested until the total number tested is equal to the initial sample multiplied by the factor, $1+C/2$, where C is the total number of unacceptable snubbers or until all the snubbers of that type have been tested; or
- 2) A representative sample of 37 snubbers of a snubber type shall be functionally tested in accordance with Figure 4.7.4-1. "C" is the total number of snubbers of that type found not meeting the acceptance requirements of Specification 4.7.4f. The cumulative number of snubbers of the type tested is denoted by "N". If at any time the point plotted falls in the "Accept" region, testing of snubbers of that type may be terminated. When the point plotted lies in the "Continue Testing" region, additional snubbers of that type shall be tested until the point falls in the "Accept" region, or all the snubbers of that type have been tested.

SURVEILLANCE REQUIREMENTS (Continued)

The representative sample selected for the function test sample plans shall be randomly selected from the snubbers of each type and reviewed before beginning the testing. The review shall ensure as far as practical that they are representative of the various configurations, operating environments, range of size, and capacity of snubbers of that type. Snubbers placed in the same locations as snubbers which failed in the previous functional test period shall be retested at the time of the next functional test period but shall not be included in the sample plan, and failure of this functional test shall not be the sole cause for increasing the sample size under the sample plan. Testing equipment failure during functional testing may invalidate the day's testing and allow that day's testing to resume anew at a later time provided all snubbers tested with the failed equipment during the day of equipment failure are retested.

If during the functional testing, additional testing is required due to failure of snubbers, the unacceptable snubbers may be categorized into failure mode group(s). A failure mode group shall include all unacceptable snubbers that have a given failure mode and all other snubbers subject to the same failure mode. Once a failure mode group has been established, it can be separated for continued testing apart from the general population of snubbers. However, all unacceptable snubbers in the failure mode group shall be counted as one unacceptable snubber for additional testing in the general population. Testing in the failure mode group shall be based on the number of unacceptable snubbers and shall continue in accordance with the sample plan selected for the type or until all snubbers in the failure mode group have been tested. Any additional unacceptable snubbers found in the failure mode group shall be counted for continued testing only for that test failure mode group. In the event that a snubber(s) becomes included in more than one test failure mode group, it shall be counted in each failure mode group and shall be subject to the corrective action of each test failure mode group.

f. Functional Test Acceptance Criteria

The snubber functional test shall verify that:

- 1) Activation (restraining action) is achieved within the specified range in both tension and compression;
- 2) Snubber bleed, or release rate where required, is present in both tension and compression, within the specified range (hydraulic snubbers only);
- 3) For mechanical snubbers, the force required to initiate or maintain motion of the snubber is within the specified range in both directions of travel; and
- 4) For snubbers specifically required not to displace under continuous load, the ability of the snubber to withstand load without displacement.

SURVEILLANCE REQUIREMENTS (Continued)

Testing methods may be used to measure parameters indirectly or parameters other than those specified if those results can be correlated to the specified parameters through established methods.

g. Functional Test Failure Analysis

An engineering evaluation shall be made of each failure to meet the functional test acceptance criteria to determine the cause of the failure. The results of this evaluation shall be used, if applicable, in selecting snubbers to be tested in an effort to determine the OPERABILITY of other snubbers irrespective of type which may be subject to the same failure mode.

For the snubbers found inoperable, an engineering evaluation shall be performed on the components to which the inoperable snubbers are attached. The purpose of this engineering evaluation shall be to determine if the components to which the inoperable snubbers are attached were adversely affected by the inoperability of the snubbers in order to ensure that the component remains capable of meeting the designed service.

h. Functional Testing of Repaired and Replaced Snubbers

Snubbers which fail the visual inspection or the functional test acceptance criteria shall be repaired or replaced. Replacement snubbers and snubbers which have repairs which might affect the functional test result shall be tested to meet the functional test criteria before installation in the unit. Mechanical snubbers shall have met the acceptance criteria subsequent to their most recent service, and the freedom-of-motion test must have been performed within 12 months before being installed in the unit.

i. Snubber Service Life Replacement Program

The service life of all snubbers shall be monitored to ensure that the service life is not exceeded between surveillance inspections. The maximum expected service life for various seals, springs, and other critical parts shall be extended or shortened based on monitored test results and failure history. Critical parts shall be replaced so that the maximum service life will not be exceeded during a period when the snubber is required to be OPERABLE. The parts replacements shall be documented and the documentation shall be retained in accordance with Specification 6.10.3.

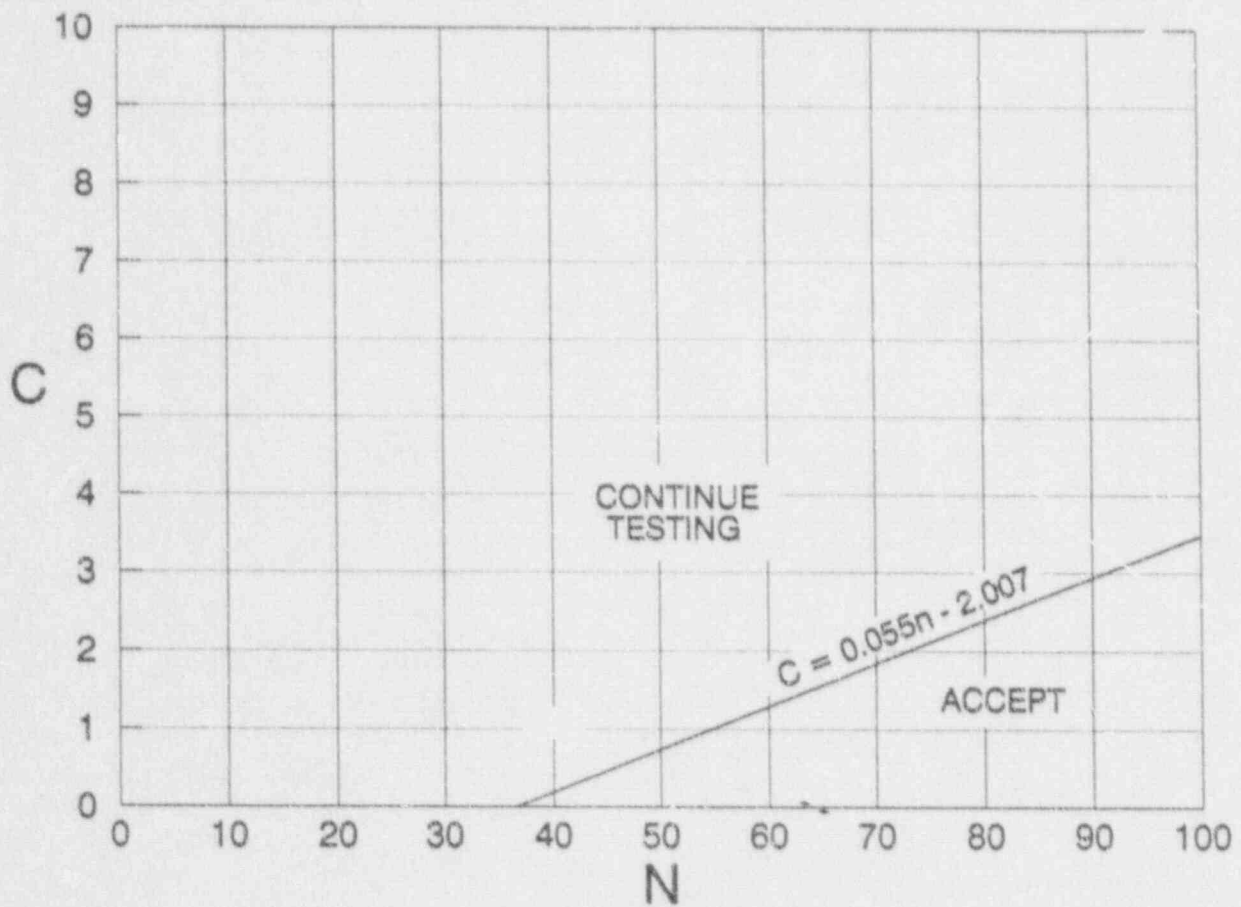


Figure 4.7.4-1

SAMPLE PLAN 2) FOR SNUBBER FUNCTIONAL TEST

BASES

SNUBBERS (Continued)

To provide assurance of snubber functional reliability one of two functional testing methods is used with the stated acceptance criteria:

1. Functionally test 10% sample of a type of snubber with an additional 1/2 sample tested for each functional testing failure, or
2. Functionally test 37 snubbers and determine sample acceptance using Figure 4.7.4-1.

Functional Testing sample plans are based on ASME/ANSI OMc-1990 Addenda to ASME/ANSI OM-1987, Part 4.

Figure 4.7.4-1 was developed using "Wald's Sequential Probability Ratio Plan" as described in "Quality Control and Industrial Statistics" by Acheson J. Duncan.

Permanent or other exemptions from the surveillance program for individual snubbers may be granted by the Commission if a justifiable basis for exemption is presented and, if applicable, snubber life destructive testing was performed to qualify the snubbers for the applicable design conditions at either the completion of their fabrication or at a subsequent date. Snubbers so exempted shall be listed in the list of individual snubbers indicating the extent of the exemptions.

The service life of a snubber is evaluated via manufacturer input and information through consideration of the snubber service conditions and associated installation and maintenance records (i.e., newly installed snubber, seal replaced, spring replaced, in high radiation area, in high temperature area, etc.). The requirement to monitor the snubber service life is included to ensure that the snubbers periodically undergo a performance evaluation in view of their age and operating conditions. These records will provide statistical base for future consideration of snubber service life.

3/4.7.5 SEALED SOURCE CONTAMINATION

The limitations on removable contamination for sources requiring leak testing, including alpha emitters, is based on 10 CFR 70.39(c) limits for plutonium. This limitation will ensure that leakage from byproduct, source, and special nuclear material sources will not exceed allowable intake values. Sealed sources are classified into three groups according to their use, with surveillance requirements commensurate with the probability of damage to a source in that group. Those sources which are frequently handled are required to be tested more often than those which are not. Sealed sources which are continuously enclosed within a shielded mechanism, i.e., sealed sources within radiation monitoring devices, are considered to be stored and need not be tested unless they are removed from the shielded mechanism.

PLANT SYSTEMS

BASES

3/4 7.6 FIRE SUPPRESSION SYSTEMS

The OPERABILITY of the fire suppression systems ensures that adequate fire suppression capability is available to confine and extinguish fires occurring in any portion of the facility where safety-related equipment is located. The fire suppression system consists of the water system, spray and/or sprinkler systems, CO₂ systems, Halon systems, and fire hose stations. The collective capability of the fire suppression systems is adequate to minimize potential damage to safety-related equipment and is a major element in the facility fire protection program.

In the event that portions of the fire suppression systems are inoperable, alternate backup fire fighting equipment is required to be made available in the affected areas until the inoperable equipment is restored to service. When the inoperable fire fighting equipment is intended for use as a backup means of fire suppression, a longer period of time is allowed to provide an alternate means of fire fighting than if the inoperable equipment is the primary means of fire suppression.

The surveillance requirements provide assurances that the minimum OPERABILITY requirements of the fire suppression systems are met. An allowance is made for ensuring a sufficient volume of Halon in the Halon storage tanks by verifying the weight and pressure of the tanks.

The source of water for the fire protection system is two cooling tower basins that have a capacity of 7,200,000 gallons each, for a total capacity of 14,400,000 gallons. For a system pumping capacity of 5000 gpm, this allows continuous operation of both fire pumps for 48 hours. If one cooling tower basin or supply line is not available, the remaining water source provides both fire pumps with a 24-hour supply of water. Water for the fire pumps is taken from either Unit 1 or Unit 2 cooling tower water basins through connections to the circulating water lines. One cooling tower will be out of service for up to 30 days each refueling outage on each unit, to remove the accumulated mud deposits.

The minimum contained volume of 311,000 gallons is based on the CMEB BTP 9.5-1 requirement of 500 gpm for manual hose streams plus the largest design demand of any sprinkler or deluge system for a period of 2 hours. The largest plant sprinkler system flow is 2090 gpm for the turbine condenser compartment.

The minimum fuel supply of 330 gallons for the diesel driven fire pump is based on providing fuel for 24 hours of full load operation.

In the event the fire suppression water system becomes inoperable, immediate corrective measures must be taken since this system provides the major fire suppression capability of the plant.

3/4.7.7 FIRE RATED ASSEMBLIES

The OPERABILITY of the fire barriers and barrier penetrations ensure that fire damage will be limited. These design features minimize the possibility of a single fire involving more than one fire area prior to detection and extinguishment. The fire barriers, fire barrier penetrations for conduits, cable trays and piping, fire windows, fire dampers, and fire doors are periodically inspected to verify their OPERABILITY.



UNITED STATES
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PHILADELPHIA ELECTRIC COMPANY
DOCKET NO. 50-353
LIMERICK GENERATING STATION, UNIT 2
AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 19
License No. NPF-85

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Philadelphia Electric Company (the licensee) dated March 3, 1992, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. NPF-85 is hereby amended to read as follows:

Technical Specifications

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 19, are hereby incorporated into this license. Philadelphia Electric Company shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of its date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Charles L. Miller

Charles L. Miller, Director
Project Directorate I-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment:
Changes to the
Technical Specifications

Date of Issuance: May 11, 1992

ATTACHMENT TO LICENSE AMENDMENT NO. 19

FACILITY OPERATING LICENSE NO. NPF-85

DOCKET NO. 50-353

Replace the following pages of the Appendix A Technical Specifications with the attached pages. The revised pages are identified by Amendment number and contain vertical lines indicating the area of change.

Remove

3/4 7-13
3/4 7-14

3/4 7-15
3/4 7-16

B 3/4 7-3

Insert

3/4 7-13
3/4 7-14

3/4 7-15
3/4 7-16

B 3/4 7-3

SURVEILLANCE REQUIREMENTS (Continued)

e. Functional Tests

At least once per 18 months a representative sample of each type of snubber shall be tested using the following sample plans. The sample plan(s) shall be selected for each type prior to the test period and cannot be changed during the test period. The NRC Regional Administrator shall be notified in writing of the sample plan(s) selected for each type prior to the test period or the sample plan(s) used in the prior test period shall be implemented:

- 1) At least 10% of the total population of a snubber type shall be functionally tested. For each snubber of that type that does not meet the functional test acceptance criteria of Specification 4.7.4f., an additional sample of at least 1/2 the size of the initial sample shall be tested until the total number tested is equal to the initial sample multiplied by the factor, $1+C/2$, where C is the total number of unacceptable snubbers or until all the snubbers of that type have been tested; or
- 2) A representative sample of 37 snubbers of a snubber type shall be functionally tested in accordance with Figure 4.7.4-1. "C" is the total number of snubbers of that type found not meeting the acceptance requirements of Specification 4.7.4f. The cumulative number of snubbers of the type tested is denoted by "n". If at any time the point plotted falls in the "Accept" region, testing of snubbers of that type may be terminated. When the point plotted lies in the "Continue Testing" region, additional snubbers of that type shall be tested until the point falls in the "Accept" region, or all the snubbers of that type have been tested.

SURVEILLANCE REQUIREMENTS (Continued)

The representative sample selected for the function test sample plans shall be randomly selected from the snubbers of each type and reviewed before beginning the testing. The review shall ensure as far as practical that they are representative of the various configurations, operating environments, range of size, and capacity of snubbers of that type. Snubbers placed in the same locations as snubbers which failed in the previous functional test period shall be retested at the time of the next functional test period but shall not be included in the sample plan, and failure of this functional test shall not be the sole cause for increasing the sample size under the sample plan. Testing equipment failure during functional testing may invalidate the day's testing and allow that day's testing to resume anew at a later time provided all snubbers tested with the failed equipment during the day of equipment failure are retested.

If during the functional testing, additional testing is required due to failure of snubbers, the unacceptable snubbers may be categorized into failure mode group(s). A failure mode group shall include all unacceptable snubbers that have a given failure mode and all other snubbers subject to the same failure mode. Once a failure mode group has been established, it can be separated for continued testing apart from the general population of snubbers. However, all unacceptable snubbers in the failure mode group shall be counted as one unacceptable snubber for additional testing in the general population. Testing in the failure mode group shall be based on the number of unacceptable snubbers and shall continue in accordance with the sample plan selected for the type or until all snubbers in the failure mode group have been tested. Any additional unacceptable snubbers found in the failure mode group shall be counted for continue testing only for that test failure mode group. In the event that a snubber(s) becomes included in more than one test failure mode group, it shall be counted in each failure mode group and shall be subject to the corrective action of each test failure mode group.

f. Functional Test Acceptance Criteria

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SURVEILLANCE REQUIREMENTS (Continued)

Testing methods may be used to measure parameters indirectly or parameters other than those specified if those results can be correlated to the specified parameters through established methods.

g. Functional Test Failure Analysis

An engineering evaluation shall be made of each failure to meet the functional test acceptance criteria to determine the cause of the failure. The results of this evaluation shall be used, if applicable, in selecting snubbers to be tested in an effort to determine the OPERABILITY of other snubbers irrespective of type which may be subject to the same failure mode.

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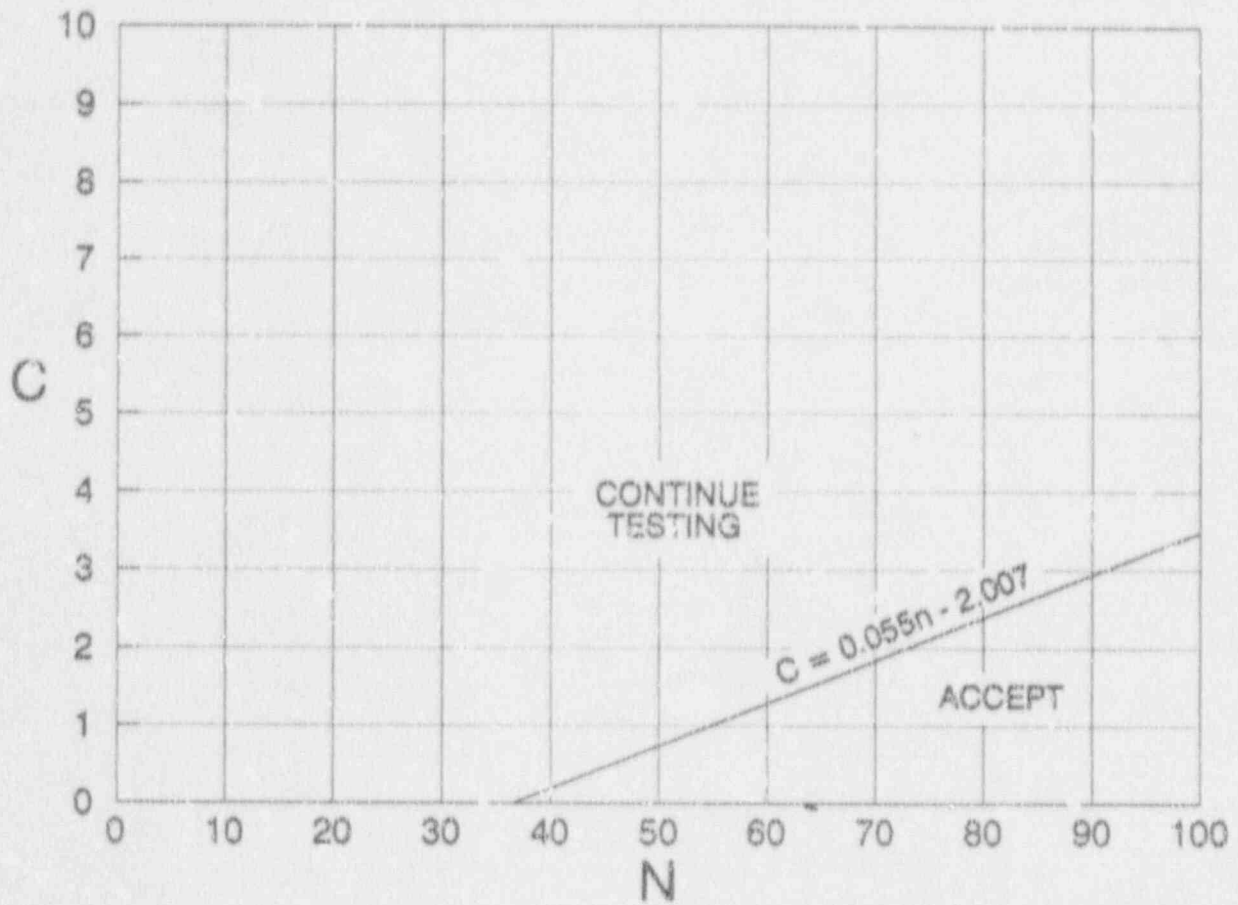


Figure 4.7.4-1
 SAMPLE PLAN 2) FOR SNUBBER FUNCTIONAL TEST

BASES

SNUBBERS (Continued)

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1. Functionally test 10% sample of a type of snubber with an additional 1/2 sample tested for each functional testing failure, or
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3/4.7.5 SEALED SOURCE CONTAMINATION

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