UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of	)	
	)	
CAROLINA POWER & LIGHT COMPANY and NORTH CAROLINA EASTERN MUNICIPAL POWER AGENCY	)	Docket No. 50-400 OL
	)	
	)	
(Shearon Harris Nuclear Power Plant)	)	

AFFIDAVIT OF N. J. CHIANGI

County of Wake	)	
	)	ss.
State of North Carolina	)	

N. J. CHIANGI, being duly sworn according to law, deposes and says as follows:

1. My name is N. J. Chiangi. My business address is P.O. Box 165, New Hill, North Carolina 27562. I am employed by Carolina Power & Light Company (CP&L) as Manager-Quality Assurance/Quality Control for the Shearon Harris Nuclear Power Plant. I have been employed by CP&L in QA/QC positions since 1973, and previously spent six years in quality compliance with Ebasco Services, Inc. A complete statement of my education, training and experience is provided as Attachment A to this affidavit.

2. My responsibilities as Manager of the QA/QC Harris Plant Section include the development and implementation of the

quality assurance program for design, construction and construction-related testing of the Harris plant. With respect to drug use or other drug activity among employees at the Harris site, I have been involved in the assessment of information on alleged drug activity by any QA or QC personnel, the process of confirming the validity of the work performed by any QA or QC personnel involved in drug activity, and determining whether or not reinspection is required of safety-related work performed by site employees reasonably suspected of involvement with, or determined to be involved in, drug use or other drug activity.

3. The purpose of my affidavit is to respond to the allegation in CCNC Contention WB-3 that Applicants have failed to reinspect all safety-related work done by known drug users. I will first describe the design/construction/testing Quality Assurance Program at the Harris Project and explain why that program provides reasonable assurance that any deficiencies in safety-related work by employees impaired by drug use have been identified and corrected. I will then discuss the extent to which employees with quality confirmation responsibilities have been involved in drug activity, and the steps taken to confirm the quality of their work.

4. The Quality Assurance Program at the Harris Project provides the necessary steps to ensure that a safe and reliable power plant is constructed in accordance with design requirements. Responsibility for achievement of quality lies with the

individual responsible for the accomplishment of the work. However, confirmation of that quality is accomplished by five basic groups. Namely:

a. First Line Craft Supervision;

b. Independent Inspection Organizations (Quality Control and Construction Inspection);

c. System Walkdowns and Start-Up Testing;

d. Surveillance and Auditing Organizations (Site Quality Assurance and Corporate Auditors); and

e. Outside Agencies (NRC, Authorized Nuclear Inspector (ANI), various assessment groups (e.g., CAT, SALP, ASME, etc.)).

This five-tier approach, which I describe in more detail below, provides sufficient checks and balances to conclude that reasonable assurance exists that plant construction meets design. In order to illustrate the application of the QA program, I have augmented my description of the program with a discussion of how it is implemented with respect to installation of piping systems.

5. The first line craft supervisor is responsible for supervising work activities within his scope of responsibility in accordance with the design requirements. Since he is directly responsible for production, it is important that the work being accomplished by his personnel be done correctly in order to meet cost and schedule requirements. He is responsible for assuring that his personnel have the proper training, materials and information necessary to perform their work correctly. Performance of the craft and first line craft

supervision is judged through the independent inspection program that is described below.

6. Safety related component installation is inspected for conformance with project design requirements by an inspection organization independent of the organization performing the work. At the Harris Project, this function is performed by the Quality Control (QC) Unit and the Construction Inspection (CI) Unit. These units now report to the Director - QA/QC Harris Plant, who in turn reports through the Manager - QA/QC Harris Plant Section (me) to the Manager - Corporate Quality Assurance Department. The CI Unit previously reported to the Project General Manager; however, this unit has always been independent of the construction line organization.

7. The inspection organizations have established training programs to assure that their personnel are trained and qualified in their respective areas of responsibility. Ongoing training is utilized to maintain performance proficiency. In addition, inspection supervision periodically assesses inspector performance to identify problems that may occur during the performance of their inspectors so that appropriate corrective action can be taken.

8. Each inspection is documented and the inspection results are reviewed by first line inspection supervision to assure that applicable requirements have been met. Deficiencies identified are forwarded to the craft for corrective action and tracked through satisfactory resolution.

9. Installation of a piping system provides a good example of the checks and balances provided by the independent inspection program. A piping system is comprised of piping, valves, supports (e.g., hangers) and mechanical equipment, such as pumps, tanks and heat exchangers.

10. During piping installation, pressure boundary connections, such as welds and mechanical joints, are inspected by QC personnel. Welds are visually examined for compliance with specification and Code requirements. When required by specifications/Code, welds are also nondestructively examined by either QC or NDE personnel. (The NDE Unit reports directly to the Manager - QA/QC Harris Plant Section.) Verification that the correct material was installed, along with several other attributes, such as welder qualification, are also confirmed as being acceptable. Mechanical joints are visually examined during in-process installation and during a final inspection for attributes such as alignment, thread engagement, material used and application of correct torque. Valves are inspected by QC for quality attributes such as damage, correct orientation, flow direction and correct valve operator. Piping installations are further subjected to random inspections and monitoring by the ANI. Pipe supports are inspected by CI for quality attributes, such as geometry, location, configuration and material, with a visual examination of the welds being performed by QC. Equipment installations are inspected by CI for quality attributes, such as correct mounting, structural

integrity, alignment and proper orientation; QC performs the weld inspection. Once the installation is complete, a pressure test is performed to verify system integrity. This test is witnessed by QC personnel who examine pressure boundary joints for leakage. The ANI also witnesses these pressure tests and monitors the inspections performed by QC. On most tests, he will also select a random sample of joints to examine himself.

11. In addition to inspections, there are several other programs in place at the Harris Project that provide assurance that the plant is constructed in accordance with design. These are:

a. System walkdowns by Construction, Start-Up and QA to verify the system is complete and no obvious deficiencies exist. QA also confirms records required to substantiate that the system has been installed correctly are available and on file.

b. Start-Up testing to verify the system will function as designed during operation.

c. On piping systems, trained field surveyors, who work for construction but are independent of the personnel who installed the pipe, physically map and record the as-installed configuration of the pipe. This data is then provided to Engineering for evaluation to ensure the as-installed condition satisfies the design.

12. The Quality Assurance Sub-Unit, which reports to the Director - QA/QC, is responsible for performing surveillances of construction and inspection activities to assure conformance with site procedures and design. This is accomplished via a planned and systematic review of the documentation and checks of inprocess and completed work. Unacceptable performance/work

is identified to the appropriate organization for corrective action and tracked through resolution.

13. The Performance Evaluation Unit (PEU), which reports through the Manager - QA Services Section to the Manager - Corporate Quality Assurance Department, performs systematic audits of the construction site to assure compliance with established programs and procedures. The audits typically include review of documentation, personnel qualification and observation of inprocess and completed work. Written audit reports provide management with the results of the audit and identify any nonconformances noted. Each audit which identifies a nonconformance is then followed up by the PEU to verify completion of corrective action.

14. There are various agencies outside of the CP&L organization which regularly assess the quality of construction at the project. The Nuclear Regulatory Commission has a systematic process through their inspection program of continually assessing the effectiveness and implementation of CP&L's Quality Assurance Program.

15. For piping systems designed and constructed in accordance with the ASME Code Section III, the services of an Authorized Nuclear Inspector (ANI) are required. The ANI, who represents the State of North Carolina, is actively involved in the installation, inspection and testing of this work. He accomplishes this through review of documentation and inspection of the hardware.

16. There are several outside organizations which have performed major audits/evaluations of the construction site. The audits/evaluations and the organization that performed them were:

a. The Systematic Assessment of Licensee Performance (SALP) - NRC;

b. Construction Apraisal Team (CAT) - NRC;

c. The Construction Project Evaluation - INPO; and

d. The ASME "N" Stamp Certification Surveys - ASME.

17. The results of these audits/evaluations demonstrate that CP&L has an excellent QA program. For example, the Harris Project had the lowest number of findings of any CAT audit in the country and the most recent SALP evaluation of the Harris Plant quality programs found that the programs had undergone significant improvement in staffing and organization leading to increased strength and effectiveness in the programs. Also, the Harris Project has been subject to three major ASME Code surveys. In each case, CP&L has successfully passed these surveys and has had the required "N" stamps to perform Code work renewed.

18. In summary, first line craft supervision directs work to assure it is done in a quality manner to meet the requirements of design. The independent inspection organizations perform inprocess/final inspections of that work. System walkdowns identify obvious discrepancies and Start-Up testing demonstrates the systems will function as designed. The

surveillance/auditing organizations/outside agencies rely on statistical/random sampling to assess the effectiveness of the overall construction, inspection and testing program. This five-tier approach provides reasonable assurance that the plant has been constructed in a safe and reliable manner.

19. Throughout the life of the project, site management has performed evaluations of the performance of individuals whose qualifications or ability have been questioned. The questions relating to a person's qualifications have come from several directions, including allegations that previously inspected work was not acceptable and also from drug allegations. The evaluations have been essentially limited to previous work of inspectors. Craftsmen were not normally subjected to an evaluation because their work is controlled by the QA program and inspected as indicated above in paragraphs 4 through 18.

20. During the early phase of the project, we reinspected a person's work if an allegation was substantiated. As a result of increased allegations in late 1982, most of them directed toward welding inspectors, a procedure was developed to formalize the evaluation process. The procedure, AP-IX-08, entitled "Evaluation of Inspector or Vendor Weld Visual Inspection Performance on Welded Structural Fabrications," was approved for use in December 1982. It was used when allegations occurred or isolated defects were found in previously accepted work. It provided a formal method for judging an inspector's or vendor's performance. The procedure further provided a

means to protect an inspector from exposure of allegation (and resulting intimidation) based on insignificant items overlooked. The management practice was to apply AP-IX-08 to welding inspectors only.

21. Because of increasing numbers of allegations industry wide and because of our encouragement to site people to bring forth concerns through the Quality Check program, an additional procedure, CQA-7, entitled "Evaluation of Program Effectiveness," was developed and implemented in June 1984. A copy of the procedure is provided as Attachment B to this affidavit. This procedure formalized a method for evaluating past work when concerns were expressed. It established sampling techniques and acceptance criteria, which are based upon Mil-Std-105-D. In practice, it has been used "at the discretion of Management" to evaluate performance of individuals. A judgment was made of the criticality of the work in question, whether the work involved had in-process inspection and/or final inspection, and the number of people involved in the work (individual vs. more than one). The test was whether or not the results of the work in question was used in any way to support a final determination of plant quality. To date, this has led to application of the procedure for the most part to inspection personnel. However, the procedure was utilized to perform a technical evaluation of the work by five checkers of design work who were removed from the job for suspected drug activity. Their work was determined to meet design requirements.

22. As discussed by Mr. Hindman and Mr. King, 173 site employees have been terminated at least in part because of suspected or confirmed involvement with drugs. The QA, QC and CI organizations have not been immune from this phenomenon, and the 173 figure includes 11 QC and 7 CI inspectors. I will review below the basis for confirming the quality of the work performed by these inspection personnel.

23. Within the QC organization, three NDE (non-destructive examination) inspectors have been terminated because of positive drug screen test results, and two have been terminated for refusing to take the test. Re-inspection of the Liquid Penetrant and Magnetic Particle examinations done by these NDE inspectors has been completed in accordance with CQA-7, and the results confirmed the proficiency and reliability of the inspectors' work, so that per the procedure an expanded re-inspection beyond the sample was not required. The Radiographic Examination (RT) work done by three of the inspectors has not been re-inspected, for the following reasons. Certified as Level II-Limited (Shooter Only) in RT, these three inspectors participated as a member of a two-man team in making radiographic set-ups and film exposures, but not in performing interpretations of RT film for final acceptance or rejection of the items radiographed. RT film is subject to two separate reviews/interpretations by other Level II personnel qualified for film interpretation.

24. Two QC seismic weld inspectors have been terminated: one volunteered association with drugs, and one refused to take the drug screen test. Samples of the work of these inspectors have been re-inspected, and the results confirmed the proficiency and reliability of the inspector's work. (A QC employee in training for seismic weld inspection was terminated for positive drug screen test results before certification as an inspector. Thus this employee was not included in the total of 11 QC inspectors discussed above.)

25. One pipe weld inspector has been terminated for positive drug screen test results. A sample of the welds have been re-inspected and no discrepancies were found.

26. One QC employee assigned to mechanical inspection was removed from the job for suspected drug use based on information provided by a reliable source. A sample of his inspections were re-inspected, and no deficiencies were found.

27. A QC field concrete tester who also performed rebar and cadweld tensile testing, sieve analysis and grout testing, was removed from the job for suspected drug use based on information provided by a reliable source. There are no safety concerns with the employee's assignments in field testing concrete, grout testing or sieve analysis, since final acceptance of concrete and grout is based on meeting the required design strength as determined by later testing. Because of the high success rate of tensile tests of rebar and cadweld splices and the large margin by which those test results exceed

requirements, it was concluded that any misinterpretation of test results by this employee while performing these tests would have no safety significance. In addition, there have been 30 supervisory audits of this employee's work, with no problems or concerns identified. Consequently, no re-inspection has been performed. Another QC employee who field tested concrete, and performed sieve analysis, grout testing and cadweld inspections was terminated for positive drug screen test results. For the reasons discussed above, there are no safety concerns with this employee's work in concrete and grout testing or sieve analysis. A specified testing plan was pursued, however, for the tensile strength of a sample of the mechanical splices in concrete reinforcing steel bars subjected to his cadweld inspections. The tests indicate that the splices were made and inspected according to approved procedures.

28. Seven CI inspectors -- six certified in cable pulls and/or cable terminations, and one CI inspector certified in drilled-in expansion anchors -- have been terminated and/or removed from the job for positive drug screen test results (two), refusal to take the test (four) and suspected drug activity based on information from a reliable source (one). A sample of the work of these inspectors has been reinspected pursuant to CQA-7, and the results were acceptable under the procedure.

29. In that approximately eleven hundred QA/QC and CI personnel have been employed at the Harris Project since 1981,

I do not consider 18 inspectors identified as confirmed or suspected of involvement with drugs to reflect a programmatic safety problem. Rather, the identification of these employees indicates that our stringent program for pursuing any allegations of drug activity among quality personnel is working. In addition, as I discussed above in some detail in paragraphs 11 through 17, the inspectors' work is subject to yet further checks under the Quality Assurance Program, including: QA surveillances of inspection activities, QA audits, audits/evaluations/inspections by outside agencies, system walkdowns and start-up testing. The results of the re-inspections undertaken support my conclusion that the QA/QC and CI personnel are performing effectively in their role in the overall five-tier Quality Assurance program I described earlier.

30. The remainder of the 173 site employees were craft workers, some of whom were not involved in safety-related work. For those involved in safety-related work, I am confident that the multiple checks of the detailed Quality Assurance Program I described would identify any safety-significant deficiencies.

N. J. Chiangi

Sworn to and subscribed before me
this 11 day of July, 1985.

Notary Public

My commission expires: 11/6/89

ATTACHMENTS TO AFFIDAVIT OF N. J. CHIANGI

Attachment A: Resume of N. J. Chiangi

Attachment B: Evaluation of Program Effectiveness

Nathaniel J. Chiangi
Manager - Quality Assurance/Quality Control
Harris Plant

I. Date of Birth

February 28, 1930

II. Education and Training

A. Graduate of Norwich Free Academy, Norwich, Connecticut

B. Special Schools: Nuclear Submarine Systems, Navyships 250-1500-1, Mil Std 271 D - 271A, Navy ships 250-693-3 (Structural), Health Physics Monitoring, Management Schools-Electric Boat Company, Electronics School-U.S. Navy, Welding School-EBC, Liquid Penetrant Test School-EBC, Ultra Sonic Testing Classes-EBC, Eastman Kodak School for utomatic Film Processing Equipment, Job Cost Estimating-EBC

C. Qualified: AEC Licensed Radiographer and Radiographer Supervisor

III. Experience

A. U. S. Navy

1. 1947 - 1952

a. Sonar/Radar Man

B. Electric Boat Company, Groton, Connecticut

1. 1952 - 1954

a. Welding/Field Work/Piping/Structural

2. 1954 - 1967

a. Lead Supervisor - Radiography Department

C. Ebasco Services, Inc., New York, New York

1. 1967 - 1970

a. Quality Compliance/Quality Control Supervisor

2. 1970 - 1972

a. Site Quality Compliance Supervisor

3. 1972 - October 1973

a. Senior Quality Compliance Engineer

D. Carolina Power & Light Company

1. October 1973 employed as a Quality Assurance Manager - Construction in the Quality Assurance Section of the Power Plant Construction Department. Located in the General Office.

   a. November 1976 transferred and promoted as Manager - Engineering & Construction Quality Assurance Section of the Technical Services Department. Located in the General Office.

   b. March 1981 transferred and reclassified as Manager - Engineering & Construction Quality Assurance/Quality Control Section of the Corporate Quality Assurance Department. Located in the General Office.

   c. February 1983 - SECTION NAME CHANGE - transferred and reclassified as Manager - Quality Assurance/Quality Control Harris Plant Section of the Corporate Quality Assurance Department. Located at the Harris site, New Hill, North Carolina.

IV. Professional Societies

A. ASNT - ASME

B. Qualified ANST - Level III - 2/4/77
   Radiographic - Magnetic Particle - Liquid Penetrant

C. Professional Engineer - State of California - January, 1977

CAROLINA POWER & LIGHT COMPANY

HARRIS NUCLEAR PLANT PROJECT

QUALITY ASSURANCE AND CONSTRUCTION SECTIONS

FOR INFORMATION ONLY

EVALUATION OF PROGRAM EFFECTIVENESS

PROCEDURE NUMBER:		INITIAL ISSUE DATE:
CQA-7		June 20, 1984

CONTROLLED DOCUMENT

CAROLINA POWER & LIGHT COMPANY
HARRIS NUCLEAR PLANT PROJECT
QUALITY ASSURANCE AND CONSTRUCTION SECTIONS

FOR INFORMATION ONLY

NUMBER	REVISION	DATE
CQA-7	1	4/5/85

TITLE: EVALUATION OF PROGRAM EFFECTIVENESS

REVISION APPROVAL RECORD

THIS REVISION APPROVAL SHEET IS TO BE RETAINED BEHIND THE TITLE PAGE OF THE PROCEDURE UNTIL A SUBSEQUENT REVISION IS ISSUED.

RECOMMENDED FOR APPROVAL BY:

G L Forehand — DIRECTOR - QA/QC HARRIS PLANT — 4/1/85 DATE

RECOMMENDED FOR APPROVAL BY:

W R Co — MANAGER - CONSTRUCTION INSPECTION — 4/1/85 DATE

APPROVAL BY:

R J Chiesa — MANAGER - QA/QC HARRIS PLANT — 4/2/85 DATE

APPROVAL BY:

C W Wagner — PROJECT GENERAL MANAGER - CONSTRUCTION — 4/1/85 DATE

APPROVAL BY:

R A Watson — PLANT GENERAL MANAGER — 4/4/85 DATE

APPROVAL BY:

S R Zimmerman — MANAGER - HARRIS PLANT ENGINEERING — 4/2/85 DATE

APPROVAL BY:

R M Parsons — PROJECT GENERAL MANAGER COMPLETION ASSURANCE — 4/1/85 DATE

REVISION RECORD

The following is a list of the pages and paragraphs affected by this revision. Changes or additions are indicated by a vertical bar in the right-hand margin of the revised page(s). Manual holder is to replace affected pages only. This record is to be retained behind the title page of the procedure until a subsequent revision is issued.

Page(s)	Paragraph(s)
1	1.1; 1.3
2	3.2; 4.1; 5.1
3	5.1.4; 5.2.1; 5.2.1.1; 5.2.1.3
4	5.2.1.4; 5.3.1; 5.3.1.1; 5.3.1.2; 5.3.1.3; 5.3.2
5	5.4; 5.4.1; 5.5; 5.5.1; 5.5.1.1
6	5.5.1.2; 5.5.1.3
Revised Appendix A	
Added Appendix B	

NUMBER	REVISION
CQA-7	1

TITLE: EVALUATION OF PROGRAM EFFECTIVENESS

LIST OF EFFECTIVE PAGES

Page No.	Rev. No.
1	1
2	1
3	1
4	1
5	1
6	1
Appendix A	1
Appendix B	0

TITLE: EVALUATION OF PROGRAM EFFECTIVENESS

1.0 SCOPE

1.1 This procedure defines, or gives guidance to, the methods to be used to evaluate the effectiveness of the overall program (or segments) or personnel performance in fabrication, installation, inspection, and field data collection/verification activities.

1.2 At the discretion of management, the procedure may be used when there are allegations or audit findings (NRC/CQAA) directed at the effectiveness of program or personnel performance, or as a management tool at anytime desired.

1.3 In addition to ascertaining the quality status of the product, this procedure provides a means to protect fabrication, installation, inspection and field data collection/verification personnel from exposure of allegations (and resulting intimidation) based upon insignificant attributes that might have been overlooked and later found to be deficient.

2.0 REFERENCES

2.1 CQA-3, Nonconformance Control

2.2 AP-IX-08, Evaluating Inspector or Vendor Weld Visual Inspection Performance on Welded Structural Fabrications

3.0 DEFINITIONS

The following terms appear in this procedure and are used in the manner described:

3.1 Inspection This is the verification of a single quality attribute. These attributes will be identified in the process of establishing parameters for a sampling inspection plan. The attributes will be those found in project drawings, specifications and procedures, and which are related to quality of fabrication, installation or inspection activities.

3.2 Field Data Collection/Verification Those activities necessary to document the as-constructed condition.

3.3 Objective Attribute This is an attribute that is measurable and can result in a quantifiable record (e.g. member dimensions, elevations, etc.). Repeatability for objective inspections is expected to be high (at least 95% for a proficient inspector).

3.4 Subjective Attribute This is an attribute that is qualitative in nature and subject to interpretation, and results in a qualitative record (e.g. weld overlap, surface profile comparitor). Repeatability for subjective inspections is expected to be high, but somewhat lower than for objective inspections (at least 90% for a proficient inspector).

4.0 GENERAL

4.1 The cognizant Resident Engineer/Unit Manager and the cognizant QA/QC/CI Unit Supervisor, in consultation, as necessary, with the Manager - Harris Plant Engineering Section are responsible for administering this procedure. (See Appendix A for flow chart.)

4.2 The Harris project, especially during the construction phase, may be the target of criticism that individual personnel performance, or the overall program, is ineffective. This criticism may be based upon inspection reject rates, nonconformance history, or deficiencies discovered after an item has been inspected and judged to be acceptable. The criticism may be directed at the overall program, a segment of the program, individual inspectors/craftsmen, or specific groups of inspectors/craftsmen.

5.0 PROCEDURE

5.1 Defining the Area to Be Evaluated

Upon direction by management to implement this procedure, assigned personnel shall initiate an investigation to establish the scope and limits of the evaluation. Consideration shall be given, but not limited, to the following:

5.1.1 Work/inspection history of individual/groups of inspectors/craftsmen to attempt a correlation with other work by the same personnel.

5.1.2 Training records of the personnel to attempt a correlation with dates of training (basic and additional).

5.1.3 History of the governing procedures to determine if improvements in the work/inspection process could have improved performance after a given time.

5.1.4 Time, type, method, procedures, etc. of fabrication installation, inspection and field data collection/verification activities.

5.2 Establish Parameters for Data Collection

5.2.1 When the evaluation area has been defined, assigned personnel will implement a sampling plan designed to capture data that is representative of the condition. The following shall be the basis for the sampling plan, unless special circumstances suggest an alternate plan. Any alternate plan will be developed in collaboration with the Industrial Engineering Unit or the QA Engineering Unit.

5.2.1.1 The sample size meets or exceeds that defined in Appendix B.

5.2.1.2 The sample population includes activities performed early-on following qualification of personnel.

5.2.1.3 The samples will be selected at random; except that suspect performance, conditions, etc. (as determined through bracketing, above) will be included in the samples. There may be situations, in which due to accessibility problems, the requiements of randomness in choice of samples cannot be totally satisfied. In such cases, suitable justification will be provided regarding the choice of samples and analysis of the results.

5.2.1.4 Individual attributes of the fabrication, installation, inspection or field data collection/verification involved that are related to quality shall be identified. These attributes will be categorized as either objective or subjective; or not categorized (see 5.5.1.3 note).

5.3 Field Evaluation and Data Collection

5.3.1 The cognizant Resident Engineer/Unit Manager and QA/QC/CI Unit Supervisor shall designate an evaluation team to collect existing data and/or perform/lead an inspection/evaluation of the selected samples. The following shall be the basis for performing the sampling inspection:

5.3.1.1 The evaluation team shall not consist of any member that is implicated in the audit finding/allegation.

5.3.1.2 The evaluation team members shall be qualified through certification for the activity involved, or through education, experience and any special instructions deemed necessary.

5.3.1.3 Detailed records of the sampling inspection measurable results shall be kept to permit comparison to the results of prior inspections (if conducted). These records are not considered QA Records unless they are included as part of a package which will become a QA Record (e.g. NCR closeout). In this case, control and review of the QA Records shall be in accordance with applicable site procedures.

5.3.2 The evaluation team shall ensure defects identified during sampling inspections are processed in accordance with Reference 2.1

5.4 Evaluation of Sampling Results for Significance to Nuclear Safety

5.4.1 The cognizant Resident Engineer/Unit Manager or the QA/QC/CI Unit Supervisor in collaboration, as necessary with HPES shall initiate/perform an evaluation of the sampling inspection results to reach one of the following conclusions:

5.4.1.1 Defects identified have no significance to nuclear safety, and are acceptable as-is (not reportable).

5.4.1.2 Defects identified have no significance to nuclear safety, but will be repaired/reworked to restore design safety margin (not reportable).

5.4.1.3 Defects identified have significance to nuclear safety, and require rework/repair to meet design requirements (reportable).

5.5 Evaluation of Sampling Results for Effectiveness of Program/Personnel

5.5.1 The cognizant Resident Engineer/Unit Manager and QA/QC/CI Unit Supervisor in collaboration with HPES, as necessary, shall perform an evaluation of the sampling inspection results to determine effectiveness of the program/personnel. Effectiveness shall be judged to be satisfactory provided that all of the following determinations can be made (as applicable to the evaluation):

5.5.1.1 There were no defects identified that are significant to nuclear safety (i.e. those defects reported on subordinant nonconformance documents and NCP's evaluated as not reportable in accordance with Reference 2.1)

5.5.1.2 The inspection/verification proficiency was not less than 95% for objective attributes; and not less than 90% for subjective attributes.

5.5.1.3 The fabrication/installation proficiency was not less than 80% for objective attributes; and not less than 75% for subjective attributes.

Notes: 1. In cases where attributes have not been categorized as either objective or subjective, the most conservative acceptance criteria shall be utilized (i.e. 95% for inspection/verification and 80% for craft).

2. Proficiency shall be calculated using the results of the sampling inspection, as follows:

$$\frac{\text{ACCEPTABLE ATTRIBUTES}}{\text{ATTRIBUTES SAMPLED}} = \text{PROFICIENCY}$$

5.5.2 The inspection team shall initiate nonconformance reports in accordance with Reference 2.1 when the effectiveness of the program/personnel has been judged to be unsatisfactory.

5.6 Evaluation Reporting

5.6.1 The cognizant Resident Engineer/Unit Manager and QA/QC/CI Unit Supervisor shall provide copies of the evaluation report to site management of construction, engineering, operations, QA/QC and CI, as appropriate, for use in:

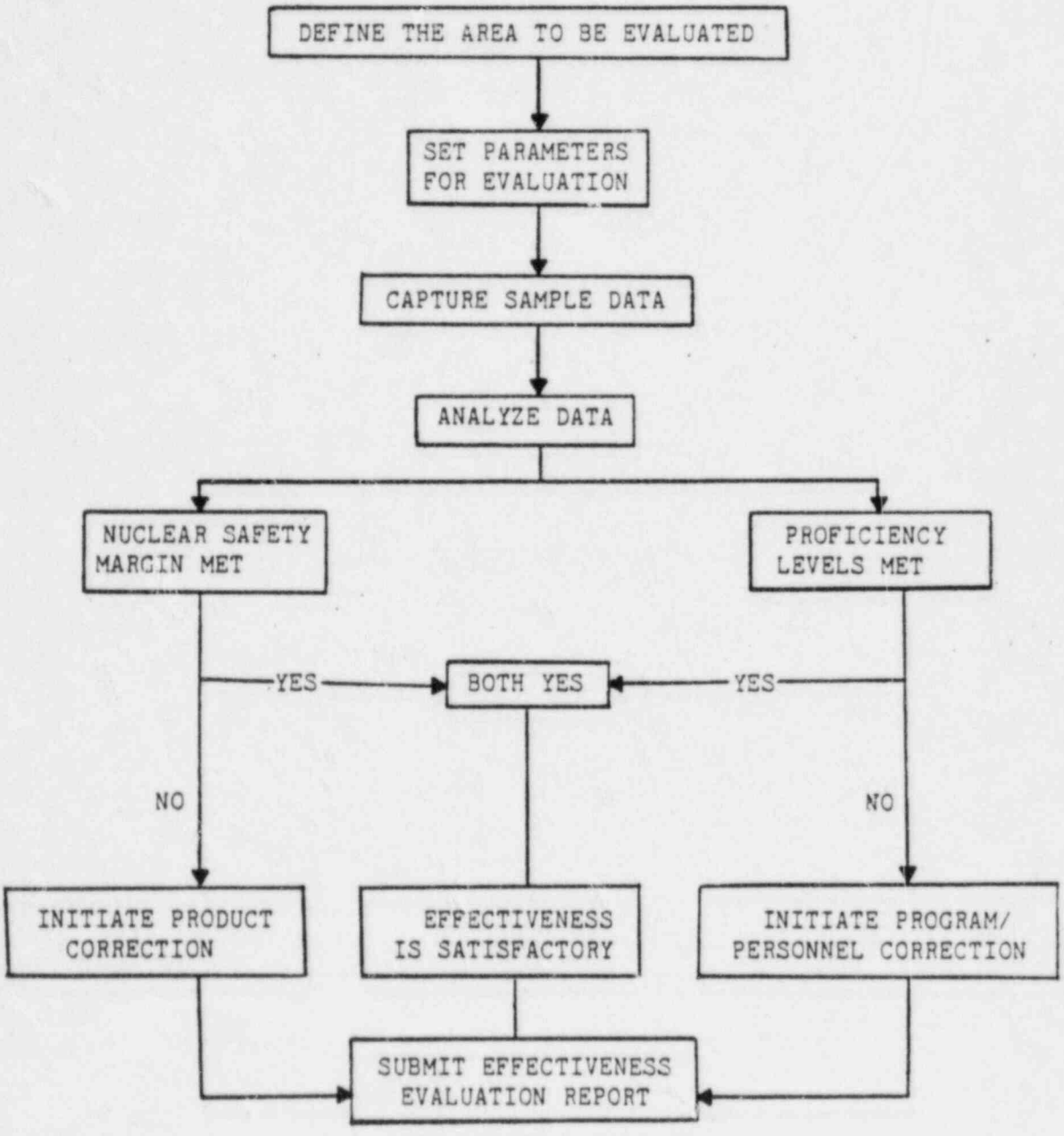
5.6.1.1 Responding to audit findings/allegations.

5.6.1.2 Nonconformance disposition and corrective action (Reference 2.1).

5.6.1.3 10 CFR Part 21 and 50 reportable item processing (Reference 2.1).

CAROLINA POWER & LIGHT COMPANY
SHEARON HARRIS NUCLEAR POWER PLANT

FLOW CHART



CAROLINA POWER & LIGHT COMPANY
SHEARON HARRIS NUCLEAR POWER PLANT

LOT OR BATCH SIZE	SAMPLE SIZE
2 to 8	2
9 to 15	3
16 to 25	5
26 to 50	8
51 to 90	13
91 to 150	20
151 to 280	32
281 to 500	50
501 to 1200	80
1201 to 3200	125
3201 to 10000	200
10001 to 35000	315
35001 to 150000	500
150001 to 500000	800
500001 and over	1250

(1) Based on Military Standard - 105D, General Inspection Level II

July 12, 1985

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CAROLINA POWER & LIGHT COMPANY	)	
and NORTH CAROLINA EASTERN	)	Docket No. 50-400 OL
MUNICIPAL POWER AGENCY	)	
	)	
(Shearon Harris Nuclear Power	)	
Plant)	)	

CERTIFICATE OF SERVICE

I hereby certify that copies of "Applicants' Motion for Summary Disposition of CCNC Contention WB-3 (Drug Abuse During Construction)," "Applicants' Statement of Material Facts as to Which There is No Genuine Issue to be Heard (CCNC Contention WB-3)," "Affidavit of Peter B. Bensinger," "Affidavit of Michael W. King," "Affidavit of John D. Ferguson," "Affidavit of William J. Hindman, Jr.," "Affidavit of A. Reid Pannill and Garry W. Flowers," and "Affidavit of N. J. Chiangi" were served this 12th day of July, 1985, by deposit in the U.S. mail, first class, postage prepaid, to the parties on the attached Service List.

Thomas A. Baxter

Thomas A. Baxter, P.C.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of	)	
	)	
CAROLINA POWER & LIGHT COMPANY and NORTH CAROLINA EASTERN MUNICIPAL POWER AGENCY	)	Docket Nos. 50-400 OL
	)	
(Shearon Harris Nuclear Power Plant)	)	

SERVICE LIST

James L. Kelley, Esquire
Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

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

Dr. James H. Carpenter
Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Charles A. Barth, Esquire
Janice E. Moore, Esquire
Office of Executive Legal Director
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

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

Mr. Daniel F. Read, President
CHANGE
P.O. Box 2151
Raleigh, North Carolina 27602

John D. Runkle, Esquire
Conservation Council of
North Carolina
307 Granville Road
Chapel Hill, North Carolina 27514

M. Travis Payne, Esquire
Edelstein and Payne
P.O. Box 12607
Raleigh, North Carolina 27605

Dr. Richard D. Wilson
729 Hunter Street
Apex, North Carolina 27502

Mr. Wells Eddleman
718-A Iredell Street
Durham, North Carolina 27705

Richard E. Jones, Esquire
Vice President and Senior Counsel
Carolina Power & Light Company
P.O. Box 1551
Raleigh, North Carolina 27602

Dr. Linda W. Little
Governor's Waste Management Board
513 Albemarle Building
325 North Salisbury Street
Raleigh, North Carolina 27611

Bradley W. Jones, Esquire
U.S. Nuclear Regulatory Commission
Region II
101 Marrietta Street
Atlanta, Georgia 30303

Mr. Robert P. Gruber
Executive Director
Public Staff - NCUC
P.O. Box 991
Raleigh, North Carolina 27602

Administrative Judge Harry Foreman
Box 395 Mayo
University of Minnesota
Minneapolis, Minnesota 55455