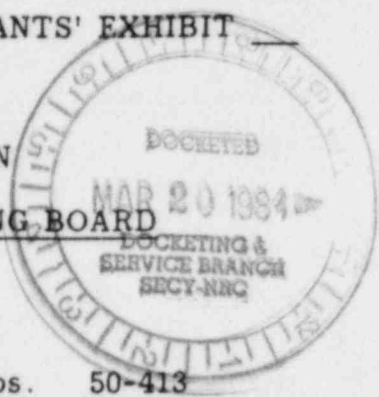


A-37
11/15/83

APPLICANTS' EXHIBIT

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD



In the Matter of)
DUKE POWER COMPANY, et al.)
(Catawba Nuclear Station,)
Units 1 and 2))

Docket Nos. 50-413
50-414

TESTIMONY OF SAMUEL W. DRESSLER, LARRY R. DAVISON AND
RICHARD S. ALEXANDER REGARDING QUALITY ASSURANCE
ALLEGATIONS RAISED BY MESSRS. MCAFEE AND HOOPINGARNER

1 Q. STATE YOUR NAMES, BUSINESS ADDRESSES, PRESENT JOB
2 POSITIONS WITH DUKE POWER COMPANY AND THE NATURE OF
3 YOUR JOBS AS THEY RELATE TO THIS TESTIMONY.
4 A. Mr. Dressler: My name is Samuel W. Dressler, and my business
5 address is Catawba Nuclear Station, PO Box 223, Clover, South
6 Carolina 29710. I am currently the Engineering Manager for the
7 Catawba Nuclear Station Construction Department at Duke Power
8 Company. In this position, one of my responsibilities is the
9 resolution of all construction related technical engineering problems
10 associated with civil engineering, mechanical engineering, electrical
11 engineering, instrumentation, and welding. My professional
12 qualifications are attached (Attachment A).
13 Mr. Davison: My name is Larry R. Davison, and my business
14 address is Catawba Nuclear Station, PO Box 223, Clover, South
15 Carolina 29710. I am currently the Project Quality Assurance
16 Manager responsible for Quality Assurance (QA) during construction
17 of the Catawba Nuclear Station for Duke Power. Quality Assurance
18 activities during construction consist of inspection of actual work,
19 review of materials used in construction of the plant, review and

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1 approval of construction procedures and review and approval of
2 documentation generated in the above activities. My professional
3 qualifications are attached (Attachment B).

4 Mr. Alexander: My name is Richard S. Alexander, and my
5 business address is Catawba Nuclear Station, PO Box 223, Clover,
6 South Carolina 29710. I am currently Personnel Manager for the
7 Construction Department, Catawba Nuclear Station, Duke Power
8 Company. In this position, one of my responsibilities includes
9 resolution of issues related to personnel safety. As such, I have
10 been involved with resolution of concerns raised by Mr.
11 Hoopingarner. My professional qualifications are attached
12 (Attachment C).

13 Q. WHAT IS THE PURPOSE OF THIS TESTIMONY?

14 This testimony is designed to address all but two of the allegations
15 of Messrs. McAfee and Hoopingarner regarding QA as admitted in
16 this proceeding by Board Memorandum and Order dated August 26,
17 1983. The allegations addressed are those related to electrical
18 cables (2a and 1f), quenching welds (2b), welding on scaffolds
19 (2c), communication with the NRC (2d), flooding of the diesel
20 generator rooms (2j), water on the control boards (2k and 1e),
21 pipes and rebar on the floor (2n), pouring concrete in the rain
22 (1a), waiver of concrete pouring requirements (1b), and
23 instructions regarding non-conformance items (1i). While the three
24 of us collectively sponsored this testimony, the initials of the
25 individual principally responsible for preparing the response for
26 each allegation is set forth in the margin.

27

1 (S.W.D.)

2 I. TESTIMONY REGARDING MESSRS.
3 HOOPINGARNER'S AND MCAFEE'S ALLEGATIONS
4 CONCERNING PROTECTION OF CABLES (2a and 1f)

5 Q. ARE YOU FAMILIAR WITH THE ALLEGATIONS RAISED BY MESSRS.
6 MCAFEE AND HOOPINGARNER REGARDING PROTECTION OF
7 ELECTRICAL CABLES DURING CONSTRUCTION AT CATAWBA?

8 A. Yes. I have reviewed the deposition testimony of Messrs. McAfee
9 and Hoopingarner regarding this allegation. The deposition
10 testimony reflects that both Messrs. McAfee and Hoopingarner allege
11 that in many instances cables being pulled at Catawba were
12 subjected to abusive treatment such as being placed on the floor in
13 water with boards and pipes on them. MD Tr., pp. 18, 88-90; HD
14 Vol. 1 Tr., pp. 20, 33-35 and Vol. 2 Tr., p. 67.

15 Q. PLEASE EXPLAIN THE ACTIONS NORMALLY FOLLOWED FOR
16 PROTECTION OF CABLE.

17 A. Procedure M-41B, serial #9, in effect at the time of these
18 allegations, states that cable is to be protected from damage due to
19 construction activities and water. With regard to construction
20 activities, cables are stored in areas free from construction
21 equipment and heavy traffic which could result in damage. To
22 protect from water, the ends of the cables are taped to keep
23 excessive moisture out.

24
25 Q. DID YOU CONDUCT AN INVESTIGATION TO DETERMINE IF
26 ALLEGATIONS MADE CONSTITUTED VIOLATIONS OF THESE
27 PROTECTIVE ACTIONS?

28 A. Yes. I directed that a review of this allegation be made to
29 determine if there was any indication that violation of cable storage
30 requirements was widespread as alleged by Messrs. McAfee and

1 Hoopingarner. As a results of the review of Nonconforming Item
2 Reports ("NCIs") and discussions with other inspectors, only a few
3 instances of failure to properly store cables have been detected,
4 and each of these were minor and corrected. Thus, I can only
5 conclude that the allegations may illustrate isolated and minor
6 instances of violations of procedure, but are not reflective of a
7 major problem as implied in the allegation. This conclusion is
8 supported by the fact that during this time, on two separate
9 occasions Mr. Hoopingarner personally showed these alleged
10 numerous deficiencies involving many cables to different NRC
11 inspectors, and, out of all the alleged violations made by Mr.
12 Hoopingarner, the inspectors found only one safety-related cable in
13 violation of procedures. NRC Inspection Report 50-413/80-19,
14 50-414/80-19. Corrective action, taken immediately, consisted of
15 simply moving the cable.

16 In this regard, when cable is being pulled, in virtually all
17 instances there are large segments of cable at the ends of the runs
18 which are not used and are ultimately discarded. This cable,
19 ranging in segments from around 10 up to more than 30 feet, may
20 remain on the floor while the job is in progress. Further, an
21 additional 1½ - 10 feet of cable above that to be discarded is
22 stripped of insulation to facilitate connections. In short, when
23 cable is being pulled, there is a great deal of cable at the ends of
24 the runs that will ultimately be discarded or stripped which is lying
25 on the floor. This may give the appearance of cable which is
26 unprotected contrary to applicable procedures, but in reality is
27 only normal and correct work practices.

1 It should be noted that personnel at Catawba who handle
2 electrical cable are well aware of actions necessary to assure the
3 protection of this cable. These individuals are well motivated and,
4 based on my experience, are diligent in doing their job. Further,
5 QA inspectors monitor plant activities to provide further assurance
6 that cable is properly protected.

7 Q. EVEN IF VIOLATIONS OF PROCEDURES DID OCCUR, WHAT
8 ASSURANCE IS THERE THAT THIS WILL NOT EFFECT SAFE
9 OPERATION OF THE PLANT?

10 A. It should be noted that the cable Duke uses at Catawba provides a
11 great deal of assurance that damage will not occur. All
12 safety-related cable pulled during the period of concern in the
13 allegation is interlocked or braided armored cable, which is
14 electrical cable wrapped in steel, or is protected in conduit. The
15 cables in the conduit cannot contact the ground and, of course, are
16 protected by the conduit. I should note that only six of the
17 safety-related cables pulled during this time were not armored.
18 These six were all in conduit. Therefore, absent major abuse,
19 such as running over the cable with construction equipment, the
20 potential for physical damage is minimal.

21 Further, the procurement specifications designate that cable
22 with filler material must be non-wicking (i.e., it does not absorb
23 and transmit moisture). Thus, the likelihood of water damage is
24 remote even if the ends of the cables are left untaped. In this
25 regard, it should be noted that neither Messrs. McAfee or
26 Hoopingarner allege that the ends of the cables were unprotected so
27 as to give rise to concerns regarding moisture in the cables.

1 In addition, it should be emphasized that when damage to
2 electrical cable has occurred or is suspected, the cable will be
3 inspected, and if necessary a megger or high potential test will be
4 done. If either the inspection or test so indicates, the cable will
5 be replaced or repaired, as necessary. The megger or
6 high-potential test performed when physical damage is suspected
7 will detect deteriorated insulation.

8 Further, other tests of cables and electrical systems, both
9 before and after operation, provide further assurance of plant
10 safety. For example, before fuel load, all medium voltage cables in
11 the plant receive a high potential test to determine the integrity of
12 the insulation. Further, at the time of system checkout,
13 Construction Procedure CP-466 requires testing of all electrical
14 systems to insure circuit continuity. This functional testing
15 insures the integrity of the circuits and the cables. In addition,
16 during start-up and operation, periodic testing provides assurance
17 that electrical systems will continue to function as required.

18 In sum, the combination of protection afforded by inspectors
19 and personnel handling the cable, the cable itself and the numerous
20 tests and inspections conducted on the cable and electrical systems
21 provides assurance that the cables in the plant will perform their
22 intended function.

23 Q. WHAT IS YOUR CONCLUSION WITH RESPECT TO THIS
24 ALLEGATION?

25 A. My conclusion is that for the following reasons the allegations does
26 not raise a question of safe operation at Catawba. First, as I
27 explained above, the alleged activity is not common practice.
28 Second, any safety related cable in question concerning the

1 allegation is armored or protected in conduit with non-wicking filler
2 material, which in itself provides inherent moisture protection.
3 Third, the ends of the cables are taped to provide assurance that
4 water damage does not occur. Fourth, the cables, if damage is
5 suspected, are inspected and, as appropriate, tested. If damage is
6 found, an evaluation is made and the cable is replaced or repaired.
7 Finally, as I explained, each circuit in the plant is tested and
8 verified numerous times before and after operation of the plant.
9 For these reasons, I conclude that this allegation does not present
10 a question of safe operation of the plant.

11 (S.W.D.) II. TESTIMONY REGARDING MR. HOOPINGARNER'S
12 ALLEGATION CONCERNING QUENCHING WELDS (2b)
13

14 Q. ARE YOU FAMILIAR WITH THE ALLEGATION RAISED BY MR.
15 HOOPINGARNER WITH RESPECT TO AN INCIDENT IN WHICH HE
16 ALLEGES THAT HE OBSERVED A WELDER IMPROPERLY QUENCH A
17 WELD WITH A DAMP CLOTH?

18 A. Yes. I have reviewed the deposition testimony of Mr.
19 Hoopingarner. Mr. Hoopingarner alleges that he came out of the
20 penetration room one day and saw a welder who he said was Henry
21 Knox quench a "red hot spot" on a weld with a damp rag. Mr.
22 Hoopingarner alleges that the welder told him that to do this was
23 contrary to procedures, but that "he had to do [it] to get the pipe
24 right." HD Vol. 1 Tr., p. 22; Vol. 2 Tr., p. 70. Mr.
25 Hoopingarner further states that this was a weld on a stainless
26 steel pipe. HD Vol. 2 Tr., p. 71.

27 Q. HAVE YOU INVESTIGATED THIS INCIDENT?

28 A. Yes, under my direction an investigation was conducted. Our
29 investigation showed that Duke has never employed a welder named

1 Henry Knox. However, a welder named Henry Hodges worked in
2 the area where Mr. Hoopingarner alleges the damp rag was applied.
3 It was determined that while Mr. Hodges was apparently the person
4 accused by Mr. Hoopingarner, Mr. Hodges states that in fact he
5 did not apply wet rags to any stainless steel pipe while welding. It
6 should be noted, however, that welding inspectors at Duke in
7 performing liquid penetrant, non-destructive examinations use a red
8 dye which, in use, may give the appearance of a "red hot-spot" on
9 the weld. This material is wiped from the weld using a rag.

10 Q. IS USING A DAMP RAG TO QUENCH A WELD AGAINST
11 PROCEDURES?

12 A. No, not if prior approval is obtained for such a welding procedure.
13 If such quenching is needed, controls exist in the Welding Process
14 Specifications to assure Technical Support provides detailed
15 information to the craft before they employ this technique.
16 However, absent prior approval, quenching a weld with a damp rag
17 would be contrary to procedures. In this regard, welders at
18 Catawba are required to perform welding in accordance with specific
19 procedures on which they are well trained and certified. In
20 addition, welding inspectors monitor the activities of these welders
21 to provide additional assurance that these procedures are followed.

22 Q. IF THIS INCIDENT DID OCCUR, WOULD IT HAVE HAD AN
23 ADVERSE EFFECT ON THE WELD?

24 A. No. To explain, the major concern regarding cooling of stainless
25 steel welds in the temperatures of concern is the possible formation
26 of compounds which would enhance corrosion. Heating or cooling
27 stainless steel material in the range of 800°F to 1400°F causes
28 carbon in the pipe to precipitate out (mainly at the grain

1 boundaries). This carbon unites with chromium to form chromium -
2 rich carbides, which reduces the corrosion resistance at the grain
3 boundaries. This is known as carbide precipitation. The amount
4 of carbide precipitation may be decreased by promoting faster
5 cooling through this range of temperatures (i.e., 800°F-1400°F),
6 such as may be the case if a damp rag was used on the weld. In
7 short, using a damp rag to more rapidly cool a stainless steel weld
8 will not adversely affect the weld.

9 Q. WHAT IS YOUR OPINION WITH REGARD TO THIS ALLEGATION
10 RAISED BY MR. HOOPINGARNER?

11 A. We are unable to confirm that the incident occurred. However, if it
12 did occur, as I explained above, the quality of the stainless steel
13 material would not have been compromised. Therefore, I have
14 concluded that this allegation does not present a question with
15 respect to public health and safety.

16 (L.R.D.) III. TESTIMONY REGARDING MR. HOOPINGARNER'S
17 ALLEGATION CONCERNING WELDING ON SCAFFOLDS (2c)
18

19 Q. ARE YOU FAMILIAR WITH MR. HOOPINGARNER'S ALLEGATION
20 REGARDING THE ABILITY OF WELDERS TO MAKE WELDS BECAUSE
21 OF UNSAFE SCAFFOLDS?

22 A. Yes. I have reviewed the deposition testimony of
23 Mr. Hoopingarner. He alleges that because scaffolds were poorly
24 built, welders were unable to properly weld when they were
25 standing on them. Mr. Hoopingarner alleges that he was told by
26 welders that they just "filled a gap" while on these scaffolds, which
27 Mr. Hoopingarner believes means that the welds are improper. HD
28 Vol. 1, Tr. p. 13; Vol. 2 Tr., pp. 5,9,11-13. However,

1 Mr. Hoopingarner is not a welder, and was unable to state if the
2 subject welds were improper. HD Vol. 2, Tr. pp. 13,61.

3 Q. WERE YOU ABLE TO INVESTIGATE THIS ALLEGATION?

4 A. Yes, but only to a limited extent for two reasons. First, Mr.
5 Hoopingarner could not identify specific welders or locations
6 involved with his concerns; and, second the term "filled the gap" is
7 not a common welding term and is not defined.

8 Q. WHAT DO YOU THINK "FILL THE GAP" MEANS?

9 A. While the term lacks definition, "fill the gap" is most likely used
10 by the welder as "slang" for completing the weld. The use of the
11 terminology in this fashion could be misleading to a person not
12 trained in welding and only associating with welders on an
13 informal/casual basis. A statement such as this may have been a
14 "boast" by the welder indicating that he welded the joint quickly.
15 We believe this is probably the most likely interpretation to put on
16 the statement by Mr. Hoopingarner, i.e., that the welder was
17 welding quickly so he could get out of an undesirable situation.

18 Q. EVEN ASSUMING "FILLED THE GAP" COULD MEAN ANYTHING
19 OTHER THAN COMPLETING THE WELD, WOULD THERE BE A
20 DETRIMENTAL EFFECT ON THE SYSTEM?

21 A. No. All pipe welds are extensively inspected and tested. In order
22 to place this in perspective, it must be understood that there are
23 five classes of safety-related pipe, Classes A through F, with Class
24 A being the highest class. Each piping weld, regardless of class,
25 is inspected, with Classes A and B receiving the most inspections,
26 consistent with their station as more important piping systems. All
27 Class A and B welds receive a fit-up inspection, a final visual
28 inspection, NDE-Penetrant Testing (PT) or Magnetic Particle

1 Testing (MT), and, in addition, circumferential butt welds are
2 radiographed. All Class C welds receive a fit-up inspection and a
3 final visual inspection. All Class E and F welds receive a final
4 visual inspection.

5 It is also important to note that it is our practice to check
6 welders' qualifications during inspections for Class A, B, C, E, and
7 F pipe welds. Thus, qualifications of the welder to the appropriate
8 Field Weld Data Sheets (FWDSs) are verified for the weld being
9 made. The welding inspectors selectively monitor the welding
10 process in their assigned areas to assure compliance with FWDSs
11 also. As noted, the relative system importance is denoted by Class
12 with Class A being the highest class. Thus, more inspections are
13 performed for the more important and/or critical systems. It also
14 should be noted that following completion and inspection of pipe
15 welds, all such welds are extensively tested before being put into
16 service. All Class A, B, and C welds are hydrostatically and/or
17 pneumatically tested before being put into service. Virtually all
18 Class E and F welds are also hydrostatically or pneumatically tested
19 prior to being put into service.

20 If Mr. Hoopingarner was referring to structural steel welds,
21 these welds are also inspected, with designated structural welds
22 receiving NDE. Designated structural welds receive a fit-up
23 inspection, final visual inspection, and nondestructive examination
24 such as ultrasonic testing, radiograph testing, magnetic particle
25 testing, or penetrant testing. All safety-related structural welds,
26 as a minimum, receive a final visual inspection. Also, all structural
27 steel welding is subject to random in-process inspections. Here
28 again the welding process is selectively monitored to assure the

1 welder is qualified to make the weld and that he is welding in
2 compliance with the FWDS required.

3 Q. DO YOU BELIEVE THAT MR. HOOPINGARNER'S ALLEGATION
4 PRESENTS A PROBLEM RESPECTING THE SAFETY OF THE
5 CATAWBA PLANT?

6 A. No. There are no grounds to substantiate the fact that the welders
7 meant anything by "fill the gap" other than the situation outlined
8 above. In any event, the allegation does not present a hazard with
9 respect to public health and safety because all welders welding on
10 safety-related systems are trained and qualified to weld in
11 accordance with appropriate Welding Process Specifications (WPS)
12 and Field Weld Data Sheets.

13 Moreover, as explained above, Duke's QA inspection program
14 is designed to detect violations such as those alleged by Mr.
15 Hoopingarner. Duke's surveillance program, both planned and
16 random, also looks for WPS and FWDS violations.

17 Q. YOU HAVE REFERENCED WELDING PROCESS SPECIFICATIONS
18 (WPS) AND FIELD WELD DATA SHEETS (FWDS) IN YOUR
19 DISCUSSION. BRIEFLY TELL US WHAT YOU MEAN BY THESE
20 TERMS?

21 A. The Welding Process Specification (WPS) is a written welding
22 procedure prepared to give direction to a welder or welding
23 operator using a particular welding process. The Field Weld Data
24 Sheet is used in conjunctions with a WPS to specify the
25 requirements to be met while making a specific weld, such as fit-up
26 requirements.

1 Q. WHAT IS YOUR CONCLUSION WITH RESPECT TO THIS
2 ALLEGATION BY MR. HOOPINGARNER?

3 A. I have concluded that this allegation does not raise a question of
4 public health and safety.

5 (R.S.A.) IV. TESTIMONY REGARDING MR. HOOPINGARNER'S
6 ALLEGATION CONCERNING PRESSURE NOT TO
7 TALK TO NRC PERSONNEL (2d)
8

9 Q. ARE YOU FAMILIAR WITH MR. HOOPINGARNER'S ALLEGATION
10 THAT HE WAS PRESSURED NOT TO TALK TO THE NRC?

11 A. Yes. I have reviewed Mr. Hoopingarner's deposition testimony.
12 Mr. Hoopingarner alleges that he approached the NRC Inspector on
13 the job site one day and asked if he could talk with him. After the
14 NRC Inspector had left, Mr. Hoopingarner states that he was
15 approached by his foreman and ordered not to approach or talk to
16 the NCR Inspector. Mr. Hoopingarner states that, subsequent to
17 this order, he approached an employee relations person, told him of
18 the order, and a day later this order was withdrawn. HD Vol. 1
19 Tr., pp. 17-18; Vol. 2 Tr., pp. 6,8,70-71

20 Q. WHAT IS YOUR KNOWLEDGE OF THIS INCIDENT?

21 A. In 1980, I caused this incident to be investigated. I have reviewed
22 our files on this incident and they reflect that on April 23, 1980
23 Mr. Hoopingarner came to Employee Relations Assistant John Turner
24 and was concerned because his General Foreman had told him he
25 could not talk to the NRC unless the NRC approached him.
26 Apparently this was precipitated by Mr. Hoopingarner stopping
27 George Maxwell, an NRC inspector, as he was walking though the
28 plant. The General Foreman apparently saw this happen and told
29 Mr. Hoopingarner that he could talk to the NRC inspector if he was
30 approached, but he should not initiate the contact with the NRC

1 inspector. Mr. Hoopingarner took exception to this and questioned
2 John Turner from Employee Relations about this issue.

3 John Turner then spoke with the General Foreman who stated
4 that he had received the general instructions he gave to Mr.
5 Hoopingarner from Mr. Scruggs, the Builder Superintendent.
6 Turner then talked to Scruggs who said that the General Foreman
7 had misunderstood him. Scruggs stated that he had told the
8 General Foreman that an employee could talk to the NRC Inspector
9 if approached and could approach the NRC in the work area. If an
10 employee needed to talk at length, then an appointment should be
11 made. Mr. Hoopingarner was informed of this misunderstanding,
12 but was still concerned about the "order" that he was supposedly
13 given. Turner told Hoopingarner that if he considered it an
14 "order" then that "order" was rescinded. Turner again told him
15 that it was a misunderstanding, and not a direct order.

16 Q. WHAT IS THE DUKE POLICY WITH RESPECT TO EMPLOYEES
17 TALKING WITH NRC INSPECTORS, OR WITH ANY NRC
18 PERSONNEL?

19 A. The Construction Department's policy on employees talking to the
20 NRC was clearly stated in an April 25, 1977 letter from R. L. Dick,
21 Vice President - Construction. This letter states that "any nuclear
22 industry worker who has concerns or questions about the nuclear
23 safety of any facility or activity licensed by the NRC may bring
24 these matters to the attention of the NRC Inspector of the nearest
25 NRC regional office, if they cannot be resolved directly with his or
26 her employer". The regional NRC telephone number is also listed
27 in this letter which was posted at the project from that date
28 onward. In addition to this letter, NRC Form 3 has been posted on

1 from which it also dripped onto the floor and the control boards.
2 Significantly, inspection revealed no condensation formed on the
3 insides of the control boards. Therefore, none of the contact
4 portions of switches or meters, or wiring underneath the control
5 boards were exposed to condensation. This incident was reported
6 as a Nonconforming Item Report, NCI 4395.

7 Q. PLEASE DESCRIBE THE STATUS OF COMPLETION OF THE
8 CONTROL BOARDS AT THE TIME THIS INCIDENT OCCURRED.

9 A. At the time this incident occurred, the majority of the switches (all
10 of which were of the sealed type) were installed in the control
11 boards and wired to plugs inside the control boards. However,
12 only a few meters were in place, and no chart recorders, CRTs, or
13 printers were installed. To put the completion status of the control
14 boards in proper perspective, the completed control boards will
15 include many additional pieces of equipment such as all other
16 switches, meters, chart recorders, annunciator alarms, lights,
17 indicating lights, computer type typewriters, and CRT screens.
18 The majority of these items have to be wired to plugs under the
19 board itself.

20 Q. AS A RESULT OF THIS INCIDENT, WERE CORRECTIVE ACTIONS
21 TAKEN?

22 A. Yes. First, a number of space heaters were installed in the control
23 room to bring the relative humidity level down to preclude a similar
24 occurrence.

25 Approximately 60 of the switches located on the boards were
26 selected and given a megger test to assure that there was no
27 adverse impact. The megger test consists of running a higher than
28 normal voltage through the switch to determine insulation

1 resistance. Moisture would decrease the resistance of the insulation
2 which would be detected by the meggar test. All 60 of the switches
3 tested passed the test, which provided adequate assurance that
4 none of the switches potentially exposed to the moisture were
5 adversely affected by this incident.

6 Q. HAVE FURTHER TESTS BEEN RUN TO SEE IF THE CONTROL
7 BOARDS ARE FUNCTIONING NORMALLY?

8 A. Yes. It should be understood that all the equipment on the control
9 boards potentially affected by this incident are tested/operated
10 many times for proper functioning during the installation process,
11 construction system testing and start-up activities. Prior to
12 operation of the facility, the control boards will have been
13 exhaustively checked for functioning of each of the components. In
14 addition the control boards are tested on numerous occasions
15 through individual system functional testing and two major
16 integrated tests (Hot Functional Test and Engineering Safety
17 Feature Activation System Test). Operation of the integrated tests
18 are through the control boards and indications are monitored in the
19 control room. Additionally, there are maintenance and calibration
20 procedures for the control board equipment. Further, during
21 operation, periodic surveillance testing will assure proper
22 functioning of the equipment.

23 Q. WHAT IS YOUR CONCLUSION WITH RESPECT TO THE DECEMBER
24 1978 INCIDENT WHICH RESULTED IN CONDENSATION FORMING ON
25 THE EXTERIOR SURFACES OF THE CONTROL BOARDS?

26 A. It is my opinion, for the reasons that I explained above, that when
27 this incident occurred appropriate evaluation and corrective action
28 was taken to insure that the moisture on the control boards had no

1 adverse effect on the switches and other components that were then
2 installed. Further, because of the extensive checks, tests and
3 functional operation of the equipment that occurs during the
4 installation and start-up of the plant, I am confident that if there
5 were any defects from this incident, they would not go undetected.
6 Therefore, I conclude that this incident has no effect on the public
7 health and safety.

8 (S.W.D.) VII. TESTIMONY REGARDING MR. HOOPINGARNER'S
9 ALLEGATION CONCERNING REBAR AND PIPING (2n)
10

11 Q. ARE YOU FAMILIAR WITH THE ALLEGATION MADE BY MR.
12 HOOPINGARNER WITH RESPECT TO PIPING AND REBAR TOUCHING
13 THE GROUND OR LYING ON THE FLOOR?

14 A. Yes I am. I have reviewed Mr. Hoopingarner's deposition testimony
15 and have determined that this allegation is based on three specific
16 events, i.e., (1) that rebar was touching the ground in the rebar
17 storage area, (2) that three sections of stainless steel piping were
18 touching the ground at the piping fabrication shop, and (3) that
19 sections of the piping were lying on the concrete floor in the
20 auxiliary building. HD Vol 2. Tr., pp. 76-78.

21 I also am familiar with NRC Inspection Report 50-413/80-19,
22 50-414/80-19 which, I believe, addresses these concerns after they
23 were pointed out to our NRC inspector by Mr. Hoopingarner.

24 Q. WHAT ARE THE STANDARDS WHICH GOVERN STORAGE OF REBAR
25 AND PIPING AT THE CATAWABA SITE?

26 A. The governing industry standard which Duke Power follows at
27 Catawba in regards to handling and storage of materials is ANSI
28 N45.2.2-1972, "Packaging, Shipping, Receiving, Storage, and
29 Handling of Items for Nuclear Power Plants". This document

1 establishes a standard for general industry use that defines
2 requirements for the above activities. The extent to which the
3 individual requirements of the standard apply depends upon the
4 nature and scope of the work to be performed and the importance
5 of the item or service involved. The requirements are intended to
6 assure that the quality of items is not degraded as a result of
7 packaging, shipping, receiving, storage, and handling practices
8 and techniques. Rebar and piping fall into storage classification
9 level D as defined by the standard. Level D items may be stored
10 outdoors in an area which is well drained, preferably gravel
11 covered or paved, and reasonably removed from the actual
12 construction area and traffic so that the possibility of damage from
13 construction equipment is minimized. Items are to be stored on
14 cribbing or its equivalent to allow air circulation and to avoid
15 trapping water.

16 The standard also sets forth requirements for periodic inspection to
17 be performed to assure storage areas are being maintained in
18 accordance with these requirements.

19 Q. HAVE YOU INVESTIGATED THESE ALLEGATIONS?

20 A. Yes. With regard to the item concerning rebar touching the
21 ground, as stated in the NRC inspection report (at p. 3), this
22 rebar was being stored at Catawba but designated for use at other
23 sites. With regard to the two alleged incidents involving the
24 piping, the NRC inspection report (at p. 4), noted above,
25 addressed these two items and stated that the allegation that piping
26 was stored in the auxiliary building in violation of procedures was
27 without merit. However, the report (at p. 4) noted that the 3
28 sections of stainless steel piping which had been placed on the

1 ground outside the piping fabrication shop should have been
2 elevated. As far as corrective action, the report stated that the
3 normal flushing/cleaning required before any safety-system piping
4 is placed in service would be adequate. An NCI was prepared on
5 this deficiency. In short, from my investigation, incidents
6 involving unacceptable storage of rebar and piping to be used at
7 Catawba are isolated incidents involving minor deficiencies which
8 were immediately corrected.

9 Q. WHAT IS THE SAFETY SIGNIFICANCE OF REBAR OR PIPING
10 TOUCHING THE GROUND?

11 A. While procedures require such material to be elevated to assure
12 cleanliness and minimize corrosion, prior to such items being placed
13 in service they are thoroughly inspected and/or tested to assure
14 acceptability. For example, with regard to rebar, prior to making
15 a concrete pour a Prepour Form M-2A must be completed which, in
16 pertinent part, requires a signature verifying that rebar has been
17 inspected and is free from mud, dirt or other unacceptable
18 contaminants. In a similar manner, piping is inspected and
19 inspection sheets must be completed verifying its condition and
20 cleanliness prior to use. In addition safety-related piping is
21 internally cleaned or flushed before plant start-up and specific
22 safety-related piping receives additional cleaning and tests. In
23 short, there is reasonable assurance that the allegation of Mr.
24 Hoopingarner does not present a potential impact on public health
25 and safety.

1 Q. WHAT IS YOUR CONCLUSION THEN WITH RESPECT TO THE
2 ALLEGATIONS MADE BY M.R. HOOPINGARNER?

3 A. My conclusion is that this allegation presents no question of the
4 public health and safety at Catawba.

5 (S.W.D.) VIII. TESTIMONY REGARDING MR. MCAFEE'S ALLEGATION
6 CONCERNING POURING CONCRETE IN THE RAIN (1a)
7

8 Q. ARE YOU FAMILIAR WITH THE ALLEGATION RAISED BY MR.
9 MCAFEE WITH RESPECT TO POURING CONCRETE IN THE RAIN?

10 A. Yes. I have reviewed the deposition testimony of Mr. McAfee. He
11 alleges (MD Tr., P. 72) that during the period between January
12 and March of 1978 in an area which he describes as one on the wall
13 above the interior dog house on reactor building one containment,
14 he

15 witnessed concrete poured in downpours of rain with no
16 rain protection. As I said, I was pre-pour runner. I
17 went up to the pour, the concrete on the Reactor
18 Building One Containment. The concrete had too much
19 water in it by anyone's reasonable standards. It didn't
20 look like concrete. It had water floating on top
21 of the concrete, and I'll say here I am not a concrete
22 inspector, but reason should prevail. [MD Tr., pp. 12-13]
23

24 From this review, I have concluded that Mr. McAfee is concerned
25 because he witnessed rain falling on concrete which was being, or
26 had been placed.

27 Q. PLEASE DESCRIBE THE STANDARDS FOR THE PLACEMENT AND
28 PROTECTION OF CONCRETE AT CATAWBA AS THEY RELATE TO
29 THIS ALLEGATION.

30 A. The standards followed for placement of concrete at Catawba are
31 that safety-related concrete pours will not be started during times
32 of rain, sleet or snow unless there is adequate protective actions
33 taken commensurate with the level of precipitation (e.g.,
34 construction of a shelter). However, if precipitation begins after a

1 safety-related concrete pour is started, absent overriding technical
2 concerns, the pour is continued until the section is completed to
3 avoid problems associated with cold joints. Cold joints appear in a
4 concrete placement when a layer of previous concrete hardens or
5 sets to the extent that a newly placed layer does not bond to it.
6 In effect, this would result in two or more masses of concrete
7 separated by a joint where only one mass was designed. These
8 standards are consistent with Chapter 8 of "Specification for
9 Structural Concrete for Building", ACI 301-72, except where
10 modified within the design concrete specifications.

11 Each safety-related concrete placement at Catawba involves a
12 minimum of three concrete inspectors trained in the requirements of
13 QA procedure M2, Design Engineering Specifications, and ACI 301.
14 In large pours more inspectors are involved. Each of these
15 inspectors has the authority to stop a concrete placement or to
16 write a nonconforming item report if a requirement is not met.

17 Q. PLEASE EXPLAIN THE STANDARDS AND PROCEDURES FOR
18 PLACING CONCRETE IN RAIN.

19 A. Unless adequate protective measures are taken, we do not plan to
20 place concrete in the rain. Construction personnel associated with
21 concrete placement monitor the local weather forecast and plan their
22 daily concrete operations accordingly. A judgment on whether to
23 pour or not is made using the facts on hand at the scheduled time
24 of the pour. With a high probability of rain, the initiation of some
25 pours may be delayed substantially while others may be started,
26 keeping in mind that each pour is unique.

27 As to protection against precipitation, some pours may be
28 covered or protected more easily than others. In some cases, a

1 complete cover such as a shed may be installed prior to starting a
2 placement. However, a number of factors enter into this
3 consideration, such as the size of the pour, its surface area (that
4 is, whether the pour is a wall or foundation), the mode of
5 transportation of concrete to the form, surface finish required, and
6 the importance of the concrete; for example, there are thousands of
7 yards of concrete at Catawba that are not structural concrete, or
8 part of a safety-related structure.

9 If during the course of a safety-related pour it begins to rain,
10 measures commensurate with the amount of precipitation and the
11 nature of the pour are taken to protect the concrete. However, as
12 I noted, absent other overriding technical concerns, once a
13 safety-related pour is started it should be finished without any cold
14 joints. Duke has guidelines which it follows in such a situation.
15 These guidelines, consistent with sound industry practice and
16 Chapter 8 of ACI 301-72, provide that in the event of sudden,
17 unexpected precipitation during placement or finishing of concrete,
18 the following actions should be taken, as appropriate:

- 19 1) Use lower slump concrete by withholding as much mixing water
20 as possible while maintaining workability.
- 21 2) Dry up or drain any ponding. If possible, maintain the
22 surface of the concrete being placed at a slight slope so water
23 will runoff and provide for water drainage or consider
24 removing the water such as by pumping.
- 25 3) Avoid working the surface of wet concrete.
- 26 4) If a cold joint can be tolerated, consider stopping the pour.
27 Design Engineering may be able to provide advice if time
28 permits, but should, in any event, be notified if a pour is

1 stopped long enough to form a cold joint before the pour is
2 completed.

3 5) If precipitation is so heavy that ponding cannot be removed or
4 drained (so as to affect the properties of the concrete), the
5 pour should be stopped. Design Engineering should be
6 notified and a determination must be made on how much of the
7 concrete placed can be salvaged.

8 In short, in the event that precipitation begins after a
9 concrete pour has started, there are specific guidelines which are
10 followed to assure that structural integrity of the concrete will not
11 be compromised should the pour continue.

12 It should be noted that even without rain, a certain amount of
13 free water will form on the surface of fresh concrete due to
14 sedimentation of aggregate particles or solids. This water is called
15 bleed water and, while normal, gives the appearance of excessive
16 water in the mixture.

17 Q. HAVE YOU BEEN ABLE TO IDENTIFY THE SPECIFIC POUR WHICH
18 IS THE SUBJECT OF MR. MCAFEE'S ALLEGATION?

19 A. From the information provided by Mr. McAfee, the pour records
20 were examined for each pour in the area described by Mr. McAfee
21 during the time in which he was a prepour runner (January -
22 March 1978). From this review of the concrete records (Form
23 M-2D), for this period only two pours (in January 1978) could
24 possibly fit the description of the allegation. These are reactor
25 building No. 1 shell wall pours W82 (January 19, 1978) and W83
26 (January 25, 1978). In each case, the weather conditions of "rain
27 and cold" are indicated on the pour Form M-2D. Thus, I have
28 concluded that the particular pour was a reactor building shell wall

1 pour above the elevation of the roof of the interior dog house which
2 ties into the side of the reactor building.

3 Q. DO THESE RECORDS SHOW THAT PROPER MEASURES WERE TAKEN
4 TO AVOID THE PROBLEM OF RAIN EFFECTING THE CONCRETE?

5 A. Yes. In fact, it happens that a QA surveillance was performed on
6 the January 25, 1978 pour. This QA surveillance report
7 (No. C-3-1-78) indicated that adequate arrangements were being
8 made (e.g., plastic covers and pumps) to keep rainwater out of the
9 form area on wall pour W83. With respect to wall pour W82,
10 nothing unusual or out of the ordinary was reported or recorded on
11 Form W-2D. In sum, with respect to the two pours which I have
12 identified as being the possible subject of Mr. McAfee's allegation,
13 adequate procedures and protection were afforded so that the
14 presence of rain during or after the pours did not effect the
15 integrity of the particular area. Moreover, I have no reason to
16 believe that any concrete pours which may have occurred during
17 rainfall were done other than in accordance with procedures.

18 Q. EVEN IF CONCRETE WAS POURED IN CONDITIONS WHERE SOME
19 RAIN WAS PRESENT (AS ALLEGED HERE), WOULD THIS HAVE A
20 SUBSTANTIAL IMPACT ON THE STRUCTURAL INTEGRITY OF THE
21 WALL?

22 A. The likelihood of such an impact is very remote. As concrete is
23 poured, being much denser than water, it would displace the water
24 causing the water to rise to the surface. On the surface, the
25 water would have no adverse impact while the concrete cured.
26 Indeed, during the curing process water is quite often continuously
27 sprayed on concrete to assure proper curing.

1 Q. WHAT IS YOUR CONCLUSION WITH RESPECT TO THIS SPECIFIC
2 ALLEGATION OF MR. MCAFEE?

3 A. I do not believe that this allegation raises a concern with respect to
4 the health and safety of the public.

5 (L.R.D.) IX. TESTIMONY REGARDING MR. MCAFEE'S
6 ALLEGATION CONCERNING QA WAIVER OF
7 REQUIREMENTS ON CONCRETE FORMS (1b)
8

9 Q. ARE YOU FAMILIAR WITH THE ALLEGATION OF MR. MCAFEE WITH
10 RESPECT TO QUALITY ASSURANCE WAIVING REQUIREMENTS ON
11 CONCRETE POURS?

12 A. Yes. I have reviewed the deposition testimony of Mr. McAfee. Mr.
13 McAfee contends that during the time he was a prepour runner, he
14 believes that the Quality Assurance Department inappropriately
15 waived requirements on concrete pour forms in order to let the
16 Construction Department make the pours. As the basis for his
17 allegation, Mr. McAfee relates an occurrence which he alleges
18 occurred one day when he was trying to get a pour signed off. He
19 states that the Construction Department was eager to make the
20 pour, but that one of the QA engineers was holding up the pour
21 because requirements had not been met. Mr. McAfee was not
22 familiar with the requirements. Mr. McAfee states that a person
23 who he believes to have been a junior QA engineer stated that the
24 requirements could be waived. MD Tr., pp. 13, 73-74. Mr.
25 McAfee did not know what requirements this individual referred to;
26 he did not know whether it was appropriate for the requirements to
27 be waived; and he was unable to recall either the area of the plant
28 or the individuals involved. Id. at p. 74.

1 Q. PLEASE DESCRIBE THE REQUIREMENTS SET FORTH ON THE
2 "CONCRETE POUR FORMS" WHICH MUST BE MET BEFORE A POUR
3 IS MADE.

4 A. Form M-2A, entitled "Prepour Site Inspection" (the "Prepour
5 Form"), is a checklist that sets forth requirements for concrete
6 pours. (Attachment G) Among other things, it requires all
7 involved crafts and inspectors to assure that items installed are in
8 accordance with the design drawings prior to placing concrete.
9 This form is used for both safety related and non-safety related
10 concrete pours. It should be noted that while Form M-2A is used
11 for all concrete pours, non-safety related concrete pours do not
12 "require" QA attention.

13 On the Prepour Form, there are a number of blocks to be
14 signed off by the appropriate disciplines before the pour can be
15 made. Signing off on these blocks is necessary for several
16 reasons. First, before concrete is placed, either as a wall or floor
17 slab, it is necessary to assure that embedded systems, such as
18 piping or electrical conduits, are installed in accordance with the
19 design. If not, then the structure might later have to be modified
20 to install the missing items. Second, the form assures that the
21 necessary concrete forms and reinforcing steel are in place and
22 signed off before the pour is made. Finally, the form requires that
23 all necessary QA inspections be complete prior to making the pour.

24 Q. WHAT ARE THE QA REQUIREMENTS WHICH ARE APPLICABLE?

25 A. As required by Quality Assurance Procedure M-2, "Inspection of
26 Design Concrete," prior to signing Form M-2A, QA verifies that the
27 correct concrete mix has been entered on the form along with the
28 approximate volume of the pour, and that all NCI reports that could

1 effect concrete placement have been cleared. Also, Quality
2 Assurance Procedure M-2 requires verification that applicable
3 foundation compaction records, rebar cadweld records, and records
4 for installation, inspection and testing of embedded piping are
5 complete. Furthermore, the Procedure requires that QA personnel
6 review the entire Form M-2A for completeness to assure all
7 inspections and signatures have been recorded and evaluate any
8 notes made by inspectors or civil engineering personnel that would
9 effect placement requirements.

10 Q. WHAT IS THE PROCEDURE SHOULD ANY OF THE ABOVE
11 REQUIREMENTS NOT BE MET?

12 A. If any of the crafts or QA Inspectors identify a problem that needs
13 correcting prior to concrete placement, QA will not sign Form M-2A
14 and the concrete placement will be on "hold" until the problem is
15 resolved. Form M-2A must be forwarded to the QA Inspectors at
16 the prepour site prior to concrete placement. If that form is not
17 signed by QA, then concrete placement is not authorized and
18 concrete will not be placed. It should be noted that with the
19 exception of the structural inspector who finally determines when
20 the concrete forms are clean, QA is the last signature on Form
21 M-2A.

22 Q. PLEASE EXPLAIN HOW THIS PROCESS WORKS IN ACTUAL
23 PRACTICE.

24 A. Prepour Form M-2A is initiated for all design pours whether
25 safety-related or non-safety related. The builder foreman, who is
26 responsible for installing the rebar and structural embedments
27 (such as structural plates) along with the formwork for the pour,
28 initiates the Prepour Form during the installation process. That

1 foreman coordinates a schedule with other crafts and inspectors for
2 installing embedded items such as electrical cable conduit and
3 piping. After the responsible crafts finish their required work in
4 the pour, a runner handcarries the Prepour Form M-2A to each
5 craft to sign to signify that work is complete. The runner then
6 carries the Prepour Form M-2A to each inspection discipline who
7 inspects the items as required by QA Procedure M-2 and signs the
8 Prepour Form M-2A when complete. If a QA Inspector finds that
9 work is not in accordance with the drawings or specifications, then
10 the pour is put "on hold" until the work is corrected or evaluated.

11 Q. ARE REQUIREMENTS ON THE PREPOUR FORM M-2A WAIVED? IF
12 SO, UNDER WHAT CIRCUMSTANCES IS THIS DONE?

13 A. Yes, on occasions requirements on the Prepour Form are waived.
14 For example, if items noted on the Prepour Form (e.g., electrical
15 conduits or components) are not required by the design drawings,
16 the structural inspector who inspects the work enters an "NA" in
17 the appropriate area on the Prepour Form. This would occur when
18 he determines that no work is required by the drawings for the
19 applicable craft or inspector.

20 As another example, should an inspector find work that is not
21 in accordance with the drawing, procedure, or specification, and is
22 not readily correctable by either bringing the item into conformance
23 or through a Variation Notice, he prepares an NCI. The resolution
24 to the problem is documented on the NCI. Design Engineering will
25 evaluate the problem and may accept the "as-built" condition or may
26 require corrective action. This decision is documented in the
27 resolution to the NCI.

1 In addition, circumstances exist under which the designated
2 technical * support personnel can waive certain requirements,
3 assuming that the necessary procedures are followed and the
4 waivers are recorded on the Prepour Form M-2A by the designated
5 technical support individual. The individuals who have the
6 authority to waive requirements are designated in writing by the
7 Project Management and approved by QA. In this regard, there
8 are basically two types of waivers or evaluations that can be made
9 by technical support personnel. The first type involves the
10 evaluation of dimensions and tolerances for clear distance to
11 concrete form surface for rebar. When some rebar is relocated from
12 specified dimensions to avoid interferences or embedments, the
13 required tolerances of rebar location may be exceeded. As allowed
14 by ACI code and concrete specification for Catawba, variance from
15 specified dimensions and tolerances may be evaluated and accepted.
16 Designated technical support individuals are authorized to make
17 such evaluations and document them on the Prepour Form M-2A.

18 A second type evaluation involves non-safety related pours.
19 In this area technical support personnel can evaluate discrepancies
20 identified and handle them as they deem necessary. QA has no
21 official or procedural authorization to evaluate the discrepancies
22 identified in non-safety related pours.

23 Q. HAVE YOU TAKEN ACTION TO TRY TO DETERMINE WHICH POUR
24 MR. MCAFEE MAY HAVE BEEN REFERRING TO IN HIS
25 ALLEGATION?

26 A. Yes. To attempt to determine which pour Mr. McAfee was referring
27 to, we reviewed all the pours which took place while Mr. McAfee
28 was a prepour runner (January 1, 1978 to March 30, 1978). We

1 reviewed all pours whether they were safety related or non-safety
2 related. This review included approximately 255 Construction
3 Concrete Pour Numbers which are composed of 344 Prepour Form
4 M-2As. Several Prepour Forms may be assigned the same
5 construction concrete pour number when they are poured
6 consecutively with the same concrete mix and at the same pour
7 location. As a result of our review, we determined that all of these
8 pours were in compliance with procedures and all waivers were
9 properly granted. In this regard, there were nine waivers granted
10 during this time. Six of the nine waivers related to non-safety
11 related pours. The three waivers relating to safety-related pours
12 involved spacing and location of rebar and were each properly
13 documented and processed.

14 Because Mr. McAfee was unable to identify the requirements,
15 the individuals involved, or the area of the plant, it is not possible
16 to identify precisely which pour was the subject of his allegation.
17 Nevertheless, as I stated, the records reviewed reflect that each
18 pour was made in accordance with procedures, and that no waivers
19 of requirements, where they existed, were improperly granted.

20 Q. WHAT IS YOUR CONCLUSION THEN WITH RESPECT TO MR.
21 MCAFEE'S ALLEGATION REGARDING QA WAIVER OF
22 REQUIREMENTS ON CONCRETE FORMS?

23 A. My conclusion is that the allegation is without foundation, and
24 presents no question as to the health and safety of the public.

1 (L.R.D.) X. TESTIMONY REGARDING MR. MCAFEE'S
2 ALLEGATION CONCERNING INSTRUCTIONS
3 NOT TO WRITE NCIs (1i)
4

5 Q. ARE YOU FAMILIAR WITH MR. MCAFEE'S ALLEGATION REGARDING
6 INSTRUCTIONS NOT TO WRITE NCIs?

7 A. Yes. I have reviewed the deposition testimony of Mr. McAfee in
8 which he alleges that he "was told not to write NCI's although as
9 an inspector I was required [to] by law, I believe." (MD Tr., p.
10 23) Mr. McAfee can only recite one instance in which he was
11 specifically told not to write an NCI. This issue has already been
12 resolved by this Board.

13 However, Mr. McAfee does discuss situations in which he
14 alleges that his supervisor suggested that deficiencies he identified
15 should be discussed with craft foreman, to have the craft correct
16 them, rather than writing an NCI. Mr. McAfee states that on one
17 occasion, he inspected 27 cable tray supports, and found that 7
18 appeared to require an NCI; but, he was instructed to try to
19 resolve the matter with the craft. MD Tr., p. 26. Mr. McAfee
20 states that on another occasion, involving cable tray support grids,
21 he was encouraged to discuss and resolve the matter with the craft
22 foreman, rather than to write an NCI. MD Tr., p. 29. Finally,
23 Mr. McAfee references an instance in which he was encouraged to
24 discuss cable tray hangers and supports with a craft foreman
25 rather than to write an NCI. MD Tr., pp. 29-30.

26 Q. WOULD YOU EXPLAIN THE METHODS OF DOCUMENTING AND
27 CORRECTING DISCREPANCIES IN CONSTRUCTION WHICH ARE AND
28 HAVE BEEN FOLLOWED AT CATAWBA?

29 A. The Quality Assurance Program in use during construction at
30 Catawba has had several means available to correct discrepancies

1 that are discovered by Inspectors. There are four basic methods
2 available, three of which do not involve writing an NCI.

3 (1) The first, which is sometimes referred to in some of the
4 procedures as the "hold point" method, consists of an Inspector
5 making the craft aware of a deficiency, the deficiency being
6 corrected to the satisfaction of the Inspector, and the Inspector
7 signing off the item. In this method, the item is not signed off
8 until all necessary action has been completed, and the Inspector is
9 satisfied. In the inspections of cable tray supports, hangers, and
10 grids that Mr. McAfee refers to, the work is inspected upon its
11 completion. The Inspector then documents his inspection and, of
12 course, if he finds no deficiency he tags the support as having
13 been inspected and accepted.

14 However, should the Inspector note a discrepancy in which the
15 necessary corrective action is clear from design drawing, and no
16 Engineering evaluation of the discrepancy is required, it is
17 standard practice for him to contact the craft to have them correct
18 that discrepancy. Following such correction, the Inspector, if he
19 is satisfied, signs off on the work. This "hold point" method
20 (i.e., contacting the craft, making them aware of what is wrong, so
21 they can take corrective action to fix that item, and then the
22 Inspector verifying that it is correct, and completing his inspection
23 after he has done that) is a common one that has been in use at
24 Catawba throughout construction.

25 (2) The second is the "process control" method, whereby the
26 inspection report itself provides the means to document a repair.
27 This method is used primarily in welding where, for example, a
28 final visual inspection might detect defects which would be recorded

1 on the inspection form. The procedure for the inspection and for
2 making the weld would provide instructions for how to correct that
3 item (or that defect) and then provide instructions for reinspection.
4 All of this would be documented on the Process Control Form, which
5 serves both as a documentation of the work and the inspection of
6 that work.

7 (3) The third method is use of the Deficiency Report Form,
8 commonly referred to as an R-2A. There have been several
9 different procedures available to Inspectors under this method. By
10 this method, the Inspector would document the problem he
11 identified, and send the document to the Engineering Group for
12 construction at the site to determine necessary corrective action.
13 If such action involved the craft redoing work, it would go to the
14 craft to be done. The form would then be routed back to the
15 Inspector who would reinspect the work and, if satisfied, sign off
16 on it.

17 (4) The final method that is available is the Nonconforming Item
18 Procedure, Procedure Q-1 in the Quality Assurance Program Manual
19 at Catawba. This method provides for the Inspector to identify the
20 discrepancy, which is then reviewed by supervision and by Quality
21 Assurance. The NCI is then sent to the appropriate party to
22 resolve the discrepancy, e.g., Design Engineering, Construction
23 Department, or Quality Assurance. Evaluations are reported and
24 documented. The NCI is reviewed for reportability under 10 CFR
25 Parts 21 and 50.55(e). Once the resolution documented, it is
26 approved by the technical person in the group that is responsible
27 for the resolution and is subject to QA review and approval. The
28 actions to be taken as a result of the resolution would be identified

1 on the report and assigned to specific groups for implementation.
2 Once those actions are completed and signed off, the form would
3 then be sent to QA who would conduct a final review to be sure
4 that all of the actions have been performed and properly verified.

5 Q. WHICH OF THESE METHODS APPLIES TO THE INSTANCES
6 DESCRIBED BY MR. MCAFEE?

7 A. The three instances described by Mr. McAfee fit within the first,
8 or "hold point" method. An examination of each of these instances
9 confirms this. In each of the three instances, Mr. McAfee states
10 that he was "discouraged to write NCI's . . . [and] encouraged to
11 find other means to solve the problem." MD Tr., p. 23.

12 In the instance of the 27 cable tray supports, Mr. McAfee
13 explains he spoke with the craft foreman, that the foreman agreed
14 to, and did, correct the seven discrepancies identified by Mr.
15 McAfee, that Mr. McAfee subsequently inspected these seven items,
16 and that they were corrected to his satisfaction. MD Tr., p. 27.
17 With respect to the cable tray grids, Mr. McAfee states that he
18 identified discrepancies to the craft, the discrepancies were
19 corrected, and Mr. McAfee was satisfied. MD Tr., p. 29. A
20 similar situation existed with respect to cable tray hangers and
21 supports in the auxiliary building. Mr. McAfee identified some
22 discrepancies between the work and the print, discussed these
23 discrepancies with the craft, the craft corrected them to conform
24 with the print, which was Mr. McAfee's concern, and Mr. McAfee
25 was satisfied. On reinspection, Mr. McAfee signed off on the
26 work. MD Tr., pp. 29-31.

27 From Mr. McAfee's description, then, these incidents fit the
28 "hold point" method.

1 Q. ARE THESE THE TYPE OF INSTANCES IN WHICH THE "HOLD
2 POINT" METHOD IS PROPERLY USED? AND WAS IT PROPERLY
3 USED IN THESE INSTANCES?

4 A. Yes. As Mr. McAfee himself stated:

5 As it turned out, in some cases it was much more
6 effective as far as getting the problem resolved to go talk
7 to the craft foreman because in some instances he would
8 go correct the problems without going through the paper
9 work of the NCI. [MD Tr., p. 24]

10 Indeed, this is the purpose of the "hold point" method, to handle
11 situations in which an Inspector finds a discrepancy where the work
12 has been done incorrectly and the only action required is for the
13 craft to redo the work to make it comply with the specifications or
14 the drawing. In this situation the normal method in use is to
15 notify the craftsman, let him make the necessary change, and
16 reinspect the work to see that it has been corrected. Upon
17 completion of the corrective action, assuming that it was acceptable,
18 the work would be accepted by the Inspector. This process has
19 been in effect since the beginning of construction at Catawba.

20 Q. WOULD THE FACT THAT MR. MCAFEE'S SUPERVISOR
21 ENCOURAGED HIM TO FOLLOW THE "HOLD POINT" METHOD
22 INDICATE THAT MR. MCAFEE WAS DISCOURAGED FROM
23 CORRECTING DISCREPANCIES HE IDENTIFIED?

24 A. Absolutely not. As I have already explained, the "hold point"
25 method is a common procedure which has been used at Catawba
26 since the beginning of construction. Mr. McAfee admits that in
27 each instance he cites he was satisfied. Mr. McAfee alludes to
28 consultation with his supervisor to seek his opinion in some of these

1 instances. MD Tr., pp. 23, 30. There is certainly nothing
2 improper with the supervisor giving directions in such an instance.
3 I would note that Mr. McAfee was a certified QC Inspector for a
4 period of only 4½ months. It certainly would not have been unusual
5 for a supervisor to help a new or less-experienced inspector choose
6 the appropriate method of documenting and resolving a discrepancy.

7 Q. WHAT IS YOUR CONCLUSION WITH RESPECT TO THIS
8 ALLEGATION OF MR. MCAFEE?

9 A. It is my opinion in that procedures were followed and Mr. McAfee
10 was satisfied with the results, this allegation does not raise a
11 potential public health and safety concern.

6/9/83

Attachment A

SAMUEL WILLIS DRESSLER

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FORMAL
EDUCATION

Virginia Polytechnic Institute - BSME, 1963

ADDITIONAL
TRAINING:

System Safety - University of Southern California Air Command and Staff
College - U.S. Air Force

Code Section III Class 1 and MC Nuclear Components - ASME

Advanced Management Development - Duke Power

Effective Management Program - Harbridge House

PROFESSIONAL
INVOLVEMENT

Registered Professional Engineer - North Carolina
South Carolina

Member - American Society of Mechanical Engineers (ASME)

Systems Command, Major, U.S. Air Force Reserve

WORK
EXPERIENCE

<u>FROM</u>	<u>TO</u>	<u>TITLE</u>	<u>PROGRAM</u>	<u>COMPANY</u>
8/82	Present	Engineering Manager	Catawba Nuclear Station	Duke Power

Responsible for civil, mechanical, system testing, piping support/restraints, electrical, instrumentation and welding engineering site activities, plus surveying, facilities, computer operations, document control, and office administration functions. There are 450 engineers, technicians, and clerks in the organization performing these activities with 145 of the personnel managed through a matrix organization structure. The primary functions include performing technical support for all site organizations, interfacing with design engineering and quality assurance to satisfactorily meet technical requirements.

WORK
EXPERIENCE

<u>FROM</u>	<u>TO</u>	<u>TITLE</u>	<u>PROGRAM</u>	<u>COMPANY</u>
5/77	8/82	Senior Construction Engineer	Catawba Nuclear Station	Duke Power

Responsibilities included civil, mechanical, electrical, welding, system testing, and instrumentation engineering activities, plus surveying, facilities, computer operations, and document control functions. The organization was comprised of 275 engineers, technicians, and clerks. Functions included providing technical support for all site organizations, developing systems test logic, managing contractors, coordinating schedule activities, and interfacing with regulatory agencies, design engineering and quality assurance.

2/73	5/77	Field Engineer Mechanical	Catawba/Oconee Nuclear Stations	Duke Power
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Responsible for mechanical technical support activities involving 45 engineers, technicians, and clerks. Developed construction procedures, resolved field pipe/equipment installation problems, performed field design, issued process control, and developed material control processes.

5/71	2/73	Associate Field Engineering-Mechanical	Oconee Nuclear Station	Duke Power
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Provided technical direction to craftsmen, technicians, and inspectors for auxiliary building construction activities. Approved process control, prepared construction procedures, ordered materials, and initiated field design changes. Performed quality assurance functions in area of responsibility.

1/67	5/71	Air Force Officer	Cape Kennedy Florida	United States Air Force
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Staff Development Engineer for Titan III missile launch operations. Performed as test conductor for prelaunch combined system testing and leader of post launch test data review teams. Responsibilities also included writing and reviewing test procedures for assembly, check out, and launch operations.

9/63	1/67	Supervisor-Car Inspection	Mechanical Department	Southern Rail- way System
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After completing 12 month training program, initial responsibilities included inspection, scheduling, material take offs, and development of repair techniques for several production programs involving extensive modification of rail cars. Later, assigned responsibility for company-wide direction of inspection maintenance and modification of all rail automobile rack carriers.

RESUME

LARRY R. DAVISON

EDUCATION:

Graduate of Georgia Institute of Technology (Georgia Tech)
Bachelor of Science in Mechanical Engineering, 1967

Completion of U. S. Naval Nuclear Training Schools
Six months, nuclear theory
Six months, nuclear application (prototype)

Completion of U. S. Naval Submarine School
Six months, submarine systems and operations

Welding, Theory and Application, 40 hours, University of Tennessee

Radiographic Film Interpretation, 40 hours, Magnaflux Corporation

Duke Power Company Management Training
Lake Hickory Training Center
Effective Management

Registered Professional Engineer in North Carolina (8856) and South Carolina (7456)

EXPERIENCE:

U. S. Navy 1967-1971, Ensign - Lieutenant

1½ years schooling on nuclear systems and operation and submarines

2½ years assigned to an operating Ballistic Missile Nuclear Submarine, USS Nathaniel Greene.

Served as Auxiliary Division Officer, Damage Control Assistant and Communications Officer.

Qualified in Engineering Plant as Engineering Officer of the Watch (EOOW)

One year in the shipyard undergoing major overhaul, conversion and nuclear refueling.

Duke Power Company, 1971 - Present

1971 - 1973 Assistant Field Engineer, Oconee Nuclear Station

Worked in the Construction Department Technical Support welding area. Writing welding construction procedures and reviewing and solving welding problems.

1973 - 1974 Associate Field Engineer, Oconee Nuclear Station

Worked in the Construction Department Technical Support welding area. Responsible for welding visual and nondestructive testing (NDE).

1974 - 1981 Senior Quality Control (QC) Engineer, Catawba Nuclear Station

Worked in the Construction Department QA area. Responsible for all QA inspection in construction work at Catawba.

1981 - 1982 Quality Assurance (QA) Manager Projects, Charlotte General Office

Responsible for all QA activities at three nuclear sites under construction, McGuire, Catawba, and Cherokee.

1982 - Present Project Quality Assurance (QA) Manager, Catawba Nuclear Station

Responsible for all QA activities at Catawba Nuclear construction site. Includes inspection, documentation review and filing, review and approval of construction procedures and deficiency reports.

RICHARD S ALEXANDER

PERSONAL: Home Address: 114 Forest Drive
Belmont, NC 28012

Telephone: 704-825-9419 (Home)
803-831-1512 (Work)

FORMAL
EDUCATION: Clemson University - BA 1966

ADDITIONAL
TRAINING: Effective Management - Duke Power Company
Advanced Management - Duke Power Company
Various ASPA Seminars

WORK
EXPERIENCE:

<u>FROM</u>	<u>TO</u>	<u>TITLE</u>	<u>COMPANY</u>
11/78	Present	Personnel Manager	Duke Power Company
Manage the human resource function at the Catawba Nuclear Construction site to provide effective employment, employee relations, training, safety, security, and payroll activities for a peak workforce of 4,200 employees. Administer all salary programs, including exempt, for the site. Provide expertise to project management in all aspects of human resource management, such as policies and procedures, organizational structure and increases/decreases in workforce.			
5/76	10/78	Personnel/Safety Supervisor	Duke Power Company
Supervised the personnel and safety activities of a construction maintenance group which numbered 800 at peak. Handled all phases of personnel area including hiring, testing, training, and safety. Provided guidance for management in policies, procedures, and OSHA regulations to ensure all requirements were met.			
7/70	5/76	Safety Supervisor	Duke Power Company
Developed, implemented, and coordinated all safety, fire protection, and first-aid programs for the construction site at the Belews Creek plant. Supervised three safety assistants and one RN. Conducted daily inspections of the jobsite to minimize hazards and maintain compliance with OSHA standards.			

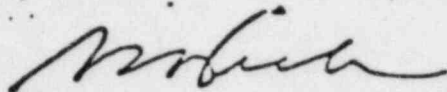
WORK EXPERIENCE: (continued)

<u>FROM</u>	<u>TO</u>	<u>TITLE</u>	<u>COMPANY</u>
6/66	6/70	Program Representative	State of South Carolina

Developed programs through local health departments and private physicians to encourage early childhood immunization. Scheduled and conducted mass immunization clinics throughout South Carolina.

April 25, 1977

We expect our employees to express any concerns they may have about the quality of work to their supervisor or any level of Company management. In addition, we have voluntarily agreed to post the following Nuclear Regulatory Commission communication.



R L Dick
Vice President, Construction

RLD:ejw

Any nuclear industry worker who has concerns or questions about the nuclear safety of any facility or activity licensed by the Nuclear Regulatory Commission may bring these matters to the attention of an NRC Inspector or the nearest NRC Regional Office if they cannot be resolved directly with his or her employer. The NRC will treat the identity of a worker as a confidential source if the worker requests that his identity not be disclosed.

In order to improve channels of communication between NRC and Nuclear Industry workers, the NRC is making two procedural changes:

1. NRC Inspectors will soon be wearing identification badges and, in some cases, safety hats identifying them as NRC inspectors.
2. NRC Regional Offices will accept collect telephone calls from nuclear industry workers who wish to speak with an NRC representative concerning quality of work, radiological safety or safeguards problems. The telephone number of the appropriate NRC Regional Office for this project is 404-221-4503.

These changes will be reflected in a revised NRC Form 3 posted to meet requirements of 10 CFR Part 19 and a revision of proposed 10 CFR Part 21 (both of which are in preparation). Until these revisions are published, all workers at NRC-licensed facilities or activities should be aware of these improved channels of communication with Inspectors.

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

NOTICE TO EMPLOYEES

STANDARDS FOR PROTECTION AGAINST RADIATION (PART 20); NOTICES, INSTRUCTIONS AND REPORTS TO WORKERS; INSPECTIONS (PART 19); EMPLOYEE PROTECTION

The Nuclear Regulatory Commission (NRC) in its Rules and Regulations: Part 20 has established standards for your protection against radiation hazards from radioactive material under license issued by the NRC; Part 19 has established certain provisions for the options of workers engaged in NRC licensed activities; Parts 30, 40, 50, and other parts containing provisions related to employee protection.

POSTING REQUIREMENTS Copies of this notice must be posted in a sufficient number of places in every establishment where activities licensed by the NRC are conducted, to permit employees to observe a copy on the way to or from their place of employment.

IR EMPLOYER'S PONSIBILITY

Employer is required to—
apply these NRC regulations and the conditions of his NRC license to all work under the license.
Post or otherwise make available to you a copy of the NRC regulations, licenses, and operating procedures which apply to work you are engaged in, and explain their provisions to you.
Post Notices of Violation involving radiological working conditions, proposed imposition of civil penalties and orders.
Refrain from discriminatory acts against employees who provide information to NRC.

IR RESPONSIBILITY A WORKER

should familiarize yourself with provisions of the NRC regulations, and the operating procedures which apply to the work you are engaged in. You should observe their provisions for your own protection and protection of your co-workers.

WHAT IS COVERED BY THESE NRC REGULATIONS

1. Limits on exposure to radiation and radioactive material in restricted and unrestricted areas;
2. Measures to be taken after accidental exposure;
3. Personnel monitoring, surveys and equipment;
4. Caution signs, labels, and safety interlock equipment;
5. Exposure records and reports;
6. Options for workers regarding NRC inspections;
7. Identifies "protected activities" that employees may engage in;
8. Prohibits discrimination against employees who engage in these protected activities;
9. Identifies the Department of Labor as a source of relief in the event of discrimination, and
10. Related matters.

REPORTS ON YOUR RADIATION EXPOSURE HISTORY

1. The NRC regulations require that your employer give you a written

report if you receive an exposure in excess of any applicable limit as set forth in the regulations or in the license. The basic limits for exposure to employees are set forth in Section 20.101, 20.103, and 20.104 of the Part 20 regulations. These Sections specify limits on exposure to radiation and exposure to concentrations of radioactive material in air.

2. If you work where personnel monitoring is required pursuant to Section 20.202:
 - (a) your employer must give you a written report of your radiation exposures upon the termination of your employment, if you request it, and
 - (b) your employer must advise you annually of your exposure to radiation, if you request it.

INSPECTIONS

All activities under the license are subject to inspection by representatives of the NRC. In addition, any worker or representative of workers who believes that there is a violation of the Atomic Energy Act of 1954, the regula-

tions issued thereunder, or the terms of the employer's license with regard to radiological working conditions in which the worker is engaged, may request an inspection by sending a notice of the alleged violation to the appropriate United States Nuclear Regulatory Commission Regional Office (shown on map below). The request must set forth the specific grounds for the notice, and must be signed by the worker or the representative of the workers. During inspections, NRC inspectors may confer privately with workers, and any worker may bring to the attention of the inspectors any past or present condition which he believes contributed to or caused any violation as described above.

EMPLOYEE PROTECTION

If an employee believes that discrimination has occurred due to engaging in the "protected activities" said employees may, within 30 days of the discriminatory act, file a complaint with the Department of Labor, Employment Standards Administration, Wage and Hour Division. The Department of Labor shall conduct an investigation

and shall, where discrimination has occurred, issue an order providing relief to the employee if relief is not provided by other means of settlement.

PROTECTION OF INSPECTORS

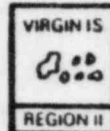
The amended Atomic Energy Act, section 235, provides criminal penalties against any individual who kills, forcibly assaults, resists, opposes, impedes, intimidates or interferes with any person who performs any inspections which (1) are related to any activity or facility licensed by the Commission, and (2) are carried out to satisfy requirements under the Atomic Energy Act or under any other Federal law covering the safety of licensed facilities or the safety of radioactive materials. The acts described above are criminal not only if taken against inspection personnel who are engaged in the performance of such inspection duties, but also if taken against inspection personnel on account of such duties.

SABOTAGE OF NUCLEAR FACILITIES OR FUEL

The amended Atomic Energy Act, section 236, provides criminal penalties against any individual who intentionally and willfully destroys or causes physical damage, or attempts to do so, to any production, utilization, or waste storage facility licensed under the act, or any nuclear fuel or spent fuel regardless of location.

UNITED STATES NUCLEAR REGULATORY COMMISSION REGIONAL OFFICE LOCATIONS

A representative of the Nuclear Regulatory Commission can be contacted at the following addresses and telephone numbers. The Regional Office will accept collect telephone calls from employees who wish to register complaints or concerns about radiological working conditions or other matters regarding compliance with Commission rules and regulations.



Regional Offices

REGION	ADDRESS	TELEPHONE
I	U.S. Nuclear Regulatory Commission Region I 831 Park Avenue King of Prussia, PA 19406	215 337-6000
II	U.S. Nuclear Regulatory Commission Region II 101 Marietta St., N.W., Suite 3100 Atlanta, GA 30303	404 221-4603
III	U.S. Nuclear Regulatory Commission Region III 780 Roosevelt Road Glen Ellyn, IL 60137	312 832-2500
IV	U.S. Nuclear Regulatory Commission Region IV 811 Ryan Plaza Drive, Suite 1000 Arlington, TX 76012	817 465-8100
V	U.S. Nuclear Regulatory Commission Region V 1450 Maris Lane, Suite 210 Walnut Creek, CA 94596	415 943-3700

This federal statute, Section 210 of the Energy Reorganization Act (42 U.S.C. §5851) (1978), provides that no employer (including an NRC licensee, an applicant for an NRC license, or a contractor or subcontractor thereof) may discharge any employee or otherwise discriminate against an employee because of the employee's participation on behalf of any party in an NRC proceeding. More specifically, no employer may take any action against an employee because the employee

- (1) has commenced, caused to be commenced, or is about to commence a proceeding under the Atomic Energy Act of 1954 (i.e., an NRC proceeding);
- (2) testifies or is about to testify in an NRC proceeding; or
- (3) assists or participates in any way in an NRC proceeding.

Any employee who believes that he has been discharged or otherwise discriminated against by his employer for one of the reasons listed above may file a complaint with the U. S. Department of Labor within 30 days of the occurrence of the event. The Labor Department will then investigate the charges and, if it determines that this type of unlawful discrimination has occurred, will order the employer to stop the unlawful discrimination and reinstate the employee to his former position along with back, pay, terms, conditions and privileges of employment. Compensatory damages and expenses related to bringing the complaint may also be awarded to the employee.

§ 5851. Employee protection

(a) Discrimination against employee

No employer, including a Commission licensee, an applicant for a Commission license, or a contractor or a subcontractor of a Commission licensee or applicant, may discharge any employee or otherwise discriminate against any employee with respect to his compensation, terms, conditions, or privileges of employment because the employee (or any person acting pursuant to a request of the employee)—

(1) commenced, caused to be commenced, or is about to commence or cause to be commenced a proceeding under this chapter or the Atomic Energy Act of 1954, as amended (42 U.S.C.A. § 2011 et seq.), or a proceeding for the administration or enforcement of any requirement imposed under this chapter or the Atomic Energy Act of 1954, as amended;

(2) testified or is about to testify in any such proceeding or;

(3) assisted or participated or is about to assist or participate in any manner in such a proceeding or in any other manner in such a proceeding or in any other action to carry out the purposes of this chapter or the Atomic Energy Act of 1954, as amended (42 U.S.C.A. § 2011 et seq.).

(b) Complaint, filing and notification

(1) Any employee who believes that he has been discharged or otherwise discriminated against by any person in violation of subsection (a) of this section may, within thirty days after such violation occurs, file (or have any person file on his behalf) a complaint with the Secretary of Labor (hereinafter in this subsection referred to as the "Secretary") alleging such discharge or discrimination. Upon receipt of such a complaint, the Secretary shall notify the person named in the complaint of the filing of the complaint and the Commission.

(2)(A) Upon receipt of a complaint filed under paragraph (1), the Secretary shall conduct an investigation of the violation alleged in the complaint. Within thirty days of the receipt of such complaint, the Secretary shall complete such investigation and shall notify in writing the complainant (and any person acting in his behalf) and the person alleged to have committed such violation of the results of the investigation conducted pursuant to this subparagraph. Within ninety days of the receipt of such complaint the Secretary shall, unless the proceeding on the complaint is terminated by the Secretary on the basis of a settlement entered into by the Secretary and the person alleged to have committed such violation, issue an order either providing the relief prescribed by subparagraph (B) or denying the complaint. An order of the Secretary shall be made on the record after notice and opportunity for public hearing. The Secretary may not enter into a settlement terminating a proceeding on a complaint without the participation and consent of the complainant.

(B) If, in response to a complaint filed under paragraph (1), the Secretary determines that a violation of subsection (a) of this section has occurred, the Secretary shall order the person who committed such violation to (i) take affirmative action to abate the violation, and (ii) reinstate the complainant to his former position together with the compensation (including back pay), terms, conditions, and privileges of his employment, and the Secretary may order such person to provide compensatory damages to the complainant. If an order is issued under this paragraph, the Secretary, at the request of the complainant shall assess against the person against whom the order is issued a sum equal to the aggregate amount of all costs and expenses (including attorneys' and expert witness fees) reasonably incurred, as determined by the Secretary, by the complainant for, or in connection with, the bringing of the complaint upon which the order was issued.

(c) Review

(1) Any person adversely affected or aggrieved by an order issued under subsection (b) of this section may obtain review of the order in the United States court of appeals for the circuit in which the violation, with respect to which the order was issued, allegedly occurred. The petition for review must be filed within sixty days from the issuance of the Secretary's order. Review shall conform to chapter 7 of Title 5. The commencement of proceedings under this subparagraph shall not, unless ordered by the court, operate as a stay of the Secretary's order.

(2) An order of the Secretary with respect to which review could have been obtained under paragraph (1) shall not be subject to judicial review in any criminal or other civil proceeding.

(d) Jurisdiction

Whenever a person has failed to comply with an order issued under subsection (b)(2) of this section, the Secretary may file a civil action in the United States district court for the district in which the violation was found to occur to enforce such order. In actions brought under this subsection, the district courts shall have jurisdiction to grant all appropriate relief including, but not limited to, injunctive relief, compensatory, and exemplary damages.

(e) Commencement of action

(1) Any person on whose behalf an order was issued under paragraph (2) of subsection (b) of this section may commence a civil action against the person to whom such order was issued to require compliance with such order. The appropriate United States district court shall have jurisdiction, without regard to the amount in controversy or the citizenship of the parties, to enforce such order.

(2) The court, in issuing any final order under this subsection, may award costs of litigation (including reasonable attorney and expert witness fees) to any party whenever the court determines such award is appropriate.

(f) Enforcement

Any nondiscretionary duty imposed by this section shall be enforceable in a mandamus proceeding brought under section 1361 of Title 28.

(g) Deliberate violations

Subsection (a) of this section shall not apply with respect to any employee who, acting without direction from his or her employer (or the employer's agent), deliberately causes a violation of any requirement of this chapter or of the Atomic Energy Act of 1954, as amended [42 U.S.C.A. § 2011 et seq.].

(Pub.L. 95-424, Title II, § 210, as added Pub.L. 95-601, § 10, Nov. 6, 1978, 92 Stat. 2961.)

25573 (R11-B1)

FORM M 2A

REVISION 11

DUKE POWER COMPANY
CONSTRUCTION DEPARTMENT
PROJECT _____

PREPOUR SITE INSPECTION

QA CONDITION _____

LOCATION _____

POUR NO. _____

UNIT _____ DATE READY _____

MIX
REQUIRED _____FINISH
REQUIRED _____APPROXIMATE
YARDAGE _____DATE
PLACED _____

INSPECTION		INITIAL	REMARKS			
FORMS	ALIGNMENT	1	TRANSIT SERIAL NO. _____			
	DIMENSIONS	1	LEVEL SERIAL NO. _____			
	SUPPORTS	2	VARIATION NOTICES AND (10)	DRAWING NO.	REV	DATE
	TIES	2	NON CONFORMING ITEMS	9		
REINFORCING	LOCATION	3				
	SIZE					
	SHAPE					
	GRADE					
	FIRMNESS					
	SPLICES					
	WIRE TIES					
ELEC	ELEC GROUNDS	(4)				
	ELEC CONDUIT					
	PENETRATION	(5)				
	PIPE SLEEVES					
	WATER STOPS					
EMBEDDED ITEMS	EMBEDMENTS					
JOINTS	FOUNDATION TEST	(6)				
	JOINT PREPARATION	(7)				
	CADWELD RECORDS	(8)	DATE			
	ASSURANCE OF INCLEMENT					
	WEATHER PROTECTION	(11)				

CERTIFICATION TO PLACE CONCRETE

LAYOUT PARTY _____ (12) MECH. INSPECTOR _____ (15)
 ELECTRICAL FOREMAN _____ (13) ELEC. INSPECTOR _____ (16)
 FORM & REIN. FOREMAN _____ (12) NDE INSPECTOR _____ (17)
 CONCRETE FOREMAN _____ (13) CONST. ENGR. CIVIL _____ (18)
 MECHANICAL FOREMAN _____ (13) Q A STAFF _____ (19)
 WELD INSPECTOR _____ (14)

FORMS ARE CLEAN AND READY FOR PLACEMENT OF CONCRETE. STRUC. INSPECTOR _____ (20)

Q A APPROVAL _____

DATE _____

1 I hereby certify that I have read and understand this document, and
2 believe it to be my true, accurate and complete testimony.
3
4
5
6

7 Samuel W. Dressler
8 Samuel W. Dressler
9

10
11 Larry R. Davison
12 Larry R. Davison
13

14
15 Richard. S. Alexander
16

17 Sworn to and subscribed before me
18 this 24th day of September, 1983.
19
20

21
22 E. S. Hood
23 Notary Public
24
25

26
27
28 Commission Expires Sept. 24, 1985

NUCLEAR REGULATORY COMMISSION

Docket No. 50-413 Original File No. 37
In the matter of Catawba

Applicant ✓
Insufficient _____
Cost of 20% _____
Construction _____
Other _____

IDENTIFIED ✓
REJECTED ✓

Reporter Don Graham DATE 11/15/83
Witness _____