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10/21/87

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of	)	
	)	
DUKE POWER COMPANY, <u>et al.</u>	)	Docket Nos. 50-413
	)	50-414
(Catawba Nuclear Station,	)	
Units 1 and 2)	)	

TESTIMONY OF CHARLES R. BALDWIN

1 Q. STATE YOUR NAME AND BUSINESS ADDRESS.

2 A. My name is Charles R. Baldwin, and my business address is  
3 Catawba Nuclear Station, P.O. Box 223, Clover, South Carolina  
4 29710

5 Q. STATE YOUR PRESENT JOB POSITION WITH DUKE POWER  
6 COMPANY AND DESCRIBE THE NATURE OF YOUR JOB.

7 A. I am a Technical Supervisor in the Quality Assurance Department  
8 responsible for welding inspection and nondestructive examination  
9 during construction of the Catawba Nuclear Station. I am  
10 responsible for ensuring that all welds are inspected by welding  
11 inspectors and that all radiography and nondestructive examinations  
12 are performed by qualified and certified inspectors in an efficient  
13 and timely manner according to applicable QA procedures, design  
14 drawings, design specifications, and governmental and safety  
15 regulations. I must ensure that the necessary number of inspectors  
16 are available to complete the inspections and tests according to  
17 construction schedules.

18 I must work closely with the Supervising Technicians to assign  
19 welding inspectors, radiographers and nondestructive  
20 examination inspectors, and provide technical expertise in the  
21 resolution of questions raised by inspectors. Interfacing regularly

1 with Design Engineering, Construction Technical Support and  
2 Quality Assurance and contact with NRC representatives is required  
3 from time to time to review compliance with Quality Assurance  
4 procedures.

5 I am responsible for ensuring that all Supervising Technicians  
6 and inspectors are properly trained in applicable QA inspection  
7 procedures, Design Engineering specifications, design drawings and  
8 governmental and safety regulations. I am also responsible for  
9 scheduling inspector training with the Training Department,  
10 initiating, maintaining, and updating inspector certifications of all  
11 inspectors and radiographers in my assigned area.

12 I also serve as the site Radiation Protection Officer. During  
13 audits by outside regulatory agencies, I am responsible for  
14 providing information and documentation concerning compliance with  
15 State and Federal regulations. This responsibility includes  
16 conducting periodic radiation Safety Inspections throughout the  
17 construction project and making written report on the inspection  
18 findings. After examining and evaluating the inspection results, I  
19 am responsible for determining the resolution of existing and  
20 potential radiation safety deficiencies.

21 Q. DESCRIBE YOUR PROFESSIONAL EXPERIENCE AND  
22 QUALIFICATIONS, INCLUDING YOUR PRIOR POSITIONS HELD  
23 WITH DUKE POWER.

24 A. I graduated from Westminster High School, Westminster, South  
25 Carolina in 1957. I took Industrial Arts Courses in high school  
26 which included welding and basic metallurgy.

1 I attended Berry College, Mt. Berry, Georgia. My courses at  
2 Berry included Shielded Metal Arc and Gas Welding, Mechanical  
3 Drawing, Castings and Basic Metallurgy.

4 I also completed a course of study in Mechanical Engineering  
5 through International Correspondence Schools, from 1964-1966.

6 I completed a course of study in Magnetic Particle, Liquid  
7 Penetrant, and Radiographic Examinations of welds as outlined in  
8 the American Society for Nondestructive Testing, Recommended  
9 Standards for Inspector Certification, SNT-TC-1A, offered by  
10 Babcock and Wilcox Company, Barberton, Ohio, September, 1968;  
11 completed a course on Basic Metallurgy by the American Society of  
12 Metals, Pendleton, S.C., May, 1972; completed Duke Power  
13 Company's Supervisory Development Program, June, 1973; completed  
14 Supervisory Training, Dynamics of Supervision, presented by  
15 Success Motivation Institute, Inc., October, 1973; attended seminars  
16 on ASME Section V and ASME Section XI codes in Miami, Florida,  
17 June, 1974; completed 40 hours training in Ultrasonic Examination of  
18 Welds, 1974; completed required training and examination and was  
19 certified as a Welding Inspector, 1976; completed Duke Power  
20 Company's Management Development Program, May, 1978; and  
21 attended Industrial Radiation Safety Seminar, North Carolina State  
22 University, November, 1979.

23 I was employed with Duke Power Company Construction  
24 Department at the Oconee Nuclear Station July 25, 1967 as a Quality  
25 Control Inspector. I was transferred to the Welding Inspection and  
26 Nondestructive Testing Section of the Quality Control Department  
27 after completing training in Radiography, Magnetic Particle and  
28 Liquid Penetrant Examinations. I served as an inspector in these

1 disciplines until I was promoted to Supervising Technician, Welding  
2 Inspection and Nondestructive Examinations, June 1, 1971.

3 I also served as the Level III Radiography Inspector Examiner.  
4 The responsibilities of the Radiography Examiner included  
5 developing procedures and Techniques for radiographing welds in  
6 accordance with applicable codes and specifications, resolving  
7 technical questions concerning radiography, and training, examining  
8 and certifying radiography inspectors in accordance with  
9 applicable codes. While serving as the Radiography Examiner at  
10 Oconee, Station, I was responsible for supervising a complete  
11 review and evaluation of all radiographs.

12 I was transferred from Oconee to Catawba Nuclear Station as a  
13 Supervising Technician (first line supervisor) November 15, 1975.  
14 My duties included supervising inspectors performing welding  
15 inspection, nondestructive examinations of welds, radiographic  
16 inspections of welds, inspection of controlled documents and  
17 receiving inspection of safety related materials and equipment.

18 I was promoted to Technical Supervisor (second level  
19 supervisor) Welding Inspection and Nondestructive Testing, July 1,  
20 1976.

21 I have also served as the Welding Inspector examiner at  
22 Catawba. The responsibilities in this position included training,  
23 examining and certifying welding inspectors in accordance with  
24 established procedures as well as developing and adopting the  
25 program to specific applications.

26 Q. DESCRIBE THE FUNCTIONS WITHIN THE QA ORGANIZATION AT  
27 THE CATAWBA SITE WHICH YOU ARE RESPONSIBLE FOR.

1 A. I am responsible for ensuring that all welds are visually inspected,  
2 nondestructively examined by Ultrasonics, Magnetic Particle and  
3 Liquid Penetrant, examinations and radiographically inspected by  
4 qualified and certified inspectors in accordance with the Quality  
5 Assurance procedures

6 At present, there are three (3) Supervising Technicians (first  
7 line supervisors) and one (1) Inspector Clerk reporting directly to  
8 me. Bill Deaton and Stanley Ledford are Supervising Technicians  
9 responsible for welding inspection crews. W. D. Cabe is the  
10 Supervising Technician responsible for radiographic inspections.

11 Q. PLEASE DESCRIBE THE RESPONSIBILITY OF THESE CREWS.

12 A. The inspectors on these crews perform all visual, magnetic particle  
13 and liquid penetrant inspections of welds required by procedures,  
14 process control, design specifications, and design drawings in both  
15 Unit 1 and Unit 2 Auxiliary Buildings and Unit 1 and Unit 2  
16 Turbine Buildings. W. D. Cabe is the Supervising Technician  
17 responsible for all radiographic inspections.

18 Q. HOW DID THE QA FUNCTIONS REPORTING TO YOU DIFFER  
19 DURING 1981?

20 A. Prior to May 1981, I was responsible for all welding inspection,  
21 nondestructive examination, document control inspections, and  
22 radiographic inspections as Technical Supervisor for all areas at the  
23 Catawba site. I had four (4) Supervising Technicians and three  
24 (3) document control inspectors reporting directly and  
25 approximately sixty-five (65) Welding Inspectors, Radiographers and  
26 Nondestructive Testing Inspectors reporting indirectly to me. I  
27 was also serving as Welding Inspector Examiner, and Radiation  
28 Protection Officer during this period.

1           In May, 1981, Art Allum was transferred from Cherokee to the  
2           Catawba site. The responsibility for radiography, non-destructive  
3           examinations, and document control inspectors was shifted from my  
4           responsibility to Art Allum. I maintained responsibility for all  
5           welding inspectors.

6           In January, 1982, Art Allum and I exchanged responsibilities.  
7           I became responsible for radiography, nondestructive examination,  
8           and document control inspectors. Since January 1982, two crews of  
9           welding inspectors have been assigned to me, and responsibility for  
10          document control inspectors has been transferred to another  
11          supervisor.

12   Q.   EXPLAIN YOUR ROLE AND THE ROLE OF THE CREWS REPORTING  
13          TO YOU AS A PART OF THE OVERALL QA PROGRAM.

14   A.   My role as Technical Supervisor is to direct and supervise the  
15          Supervising Technician to ensure the required inspection are  
16          performed and documented in accordance with the QA Program.  
17          The Supervising Technicians role is to directly supervise the  
18          inspectors. The inspectors role is to do the required inspections  
19          and to document the results of their inspections in accordance with  
20          the QA Program.

21   Q.   DESCRIBE THE ROLE OF THE TECHNICAL SUPERVISOR IN THE  
22          RESOLUTION OF NONCONFORMING ITEMS WHILE YOU HAVE BEEN  
23          A TECHNICAL SUPERVISOR.

24   A.   I am not involved in the resolution of Nonconforming Item Reports.  
25          From February 1981 to January 1983, I was involved in processing  
26          NCIs by performing the technical review. This review was  
27          necessary to evaluate the discrepancy identified by the inspector to  
28          determine whether it in fact was a nonconforming item; to determine

1 that the NCI Report was the appropriate means of documenting the  
2 discrepancy; determine if the problem had been described  
3 accurately and completely; and to direct the inspector on  
4 documenting or resolving the discrepancy in another manner in  
5 accordance with the Quality Assurance Program when it was  
6 determined the NCI Report was inappropriate.

7 If it was determined that the Nonconforming Item Report was  
8 inappropriate, my responsibility was to instruct the inspector on  
9 how to appropriately handle or document the discrepancy.

10 Q. IS THERE ANYTHING IMPROPER OR INCONSISTENT WITH A  
11 SOUND QUALITY ASSURANCE PROGRAM FOR A TECHNICAL  
12 SUPERVISOR OR OTHER SUPERVISOR TO REVIEW AN NCI  
13 WRITTEN BY AN INSPECTOR AND VOID THE NCI BECAUSE IN  
14 THE JUDGMENT OF THE TECHNICAL SUPERVISOR OR OTHER  
15 SUPERVISOR, THE NCI SHOULD NOT BE WRITTEN.

16 A. There is nothing improper or inconsistent with a sound Quality  
17 Assurance Program for a Technical Supervisor or other supervisor  
18 to verbally void a written NCI Report if it is determined to be  
19 inappropriate or can be resolved by another means within the  
20 Quality Assurance Program. Supervisors have the responsibility to  
21 exercise this kind of judgement in the normal course of  
22 implementing the QA Program. In the normal course of carrying  
23 out their inspection duties, inspectors have questions about specific  
24 items of workmanship, and are usually directed by supervisors on  
25 the appropriate actions to be taken. It was not uncommon until  
26 recently for inspectors to document their questions on an NCI form  
27 prior to discussing the questions with their supervisors. Providing  
28 verbal directions to the inspector is the same in the instance where

1 the question is documented on an NCI, as providing verbal  
2 directions where the question is not documented on an NCI form.

3 All inspector concerns involving verbally voiding NCI's and  
4 other technical concerns of the inspectors were identified, and  
5 investigated by the Technical Task Force. The Task Force found  
6 that the decisions of the supervisors were correct from a technical  
7 standpoint, and no rework was required as a result of the inspector  
8 concerns as determined by the Technical Task Force.

9 Q. WHAT OPTIONS ARE AVAILABLE TO A WELDING INSPECTOR WHO  
10 BELIEVES THAT A SUPERVISOR MADE AN INCORRECT JUDGMENT  
11 IN INSTRUCTING HIM TO VOID AN NCI?

12 Prior to the initiation of the Quality Recourse Procedure in  
13 July, 1982 inspectors were encouraged to take their concerns to the  
14 next level of supervision, and to upper management until the  
15 concern was satisfactorily answered.

16 Q. DESCRIBE YOUR INVOLVEMENT WITH THE INITIAL TASK FORCE,  
17 WHAT IS NOW REFERRED TO AS TASK FORCE I.

18 A. I was interviewed by Task Force I and was asked to describe my  
19 role as Technical Supervisor and my involvement in verbally voiding  
20 Nonconforming Item Reports written by Inspectors. I described my  
21 role as I have described it in this testimony.

22 Q. DESCRIBE YOUR INVOLVEMENT WITH THE TECHNICAL TASK  
23 FORCE.

24 A. I had no involvement with the Technical Task Force. They were  
25 assigned the task of reviewing, evaluating, and making  
26 recommendations from the welding inspectors point of view. I was  
27 not interviewed, and no information was requested from me.

1 Q. DESCRIBE YOUR INVOLVEMENT WITH LEWIS ZWISSLER OF  
2 MANAGEMENT ANALYSIS COMPANY.

3 A. I was interviewed by Lewis Zwissler and was asked to describe my  
4 Technical background and qualifications, the responsibilities of my  
5 position as Technical Supervisor and my opinion of the adequacy of  
6 the Quality Assurance Program. My involvement was limited to  
7 responding to Mr. Zwissler's questions.

8 Q. DID YOU HAVE ANY INVOLVEMENT WITH THE NONTECHNICAL  
9 TASK FORCE?

10 A. No. I had no involvement with the Nontechnical Task Force.

11 Q. WERE YOU INVOLVED IN THE IMPLEMENTATION OF  
12 RECOMMENDATIONS ISSUED BY ANY OF THE TASK FORCES?

13 A. No. I was not involved in determining how those recommendation  
14 would be implemented. My involvement in implementing the  
15 recommendations of the Task Forces would have been as a result of  
16 QA Procedural revisions that might have been made as a result of  
17 Task Force recommendations. I complied with these procedure  
18 revisions just as I have complied with prior revisions.

19 Q. HOW WOULD YOU DESCRIBE THE PRIMARY CONCERN OF THE  
20 WELDING INSPECTORS?

21 A. I feel the primary concerns of the inspectors resulted from  
22 supervision failing to adequately communicate to the inspectors their  
23 role as welding inspectors, and failing to clearly describe to the  
24 inspectors how to control and document discrepancies, particularly  
25 where supervision made decisions based on their technical  
26 expertise. The basis for the supervisor's decisions was frequently  
27 not accepted by the inspectors.

1 Q. THE CONCERNS EXPRESSED BY THE WELDING INSPECTOR WERE  
2 INITIALLY CHARACTERIZED AS CONCERNS AFFECTING THE  
3 QUALITY OF WORK OR THE SAFETY OF THE CATAWBA PLANT.  
4 IN YOUR VIEW, DID THE CONCERNS EXPRESSED BY THE WELDING  
5 INSPECTORS AFFECT THE QUALITY OR THE SAFETY OF THE  
6 CATAWBA PLANT?

7 A. In my view, the concerns expressed by the welding inspectors did  
8 not affect the quality or the safety of the Catawba Plant. These  
9 concerns resulted from the inspectors failing to accept technical  
10 directions given to them by their supervision. This was due in  
11 part to supervision failing to communicate to the inspectors the  
12 boundaries of the inspector's responsibilities and authority.

13 Q. IN YOUR VIEW, DID THIS EXPRESSION OF CONCERNS BY THE  
14 WELDING INSPECTOR INDICATE THAT THERE WAS A BREAKDOWN  
15 IN THE QA PROGRAM AT CATAWBA OR THAT THE QA PROGRAM  
16 WAS NO LONGER WORKING AT CATAWBA?

17 A. In my view, these concerns did not indicate that there was a  
18 breakdown in the QA Program or that the program was no longer  
19 working. The concerns did indicate a need to communicate better  
20 to the inspectors. In my view, the QA Program at Catawba has  
21 been implemented.

22 Q. HAS PRESSURE FROM THE CONSTRUCTION DEPARTMENT OR  
23 ANYWHERE ELSE EVER INFLUENCED YOUR PROFESSIONAL  
24 JUDGMENT IN MAKING DETERMINATIONS CONCERNING WHETHER  
25 CONSTRUCTION DEFICIENCIES IDENTIFIED BY INSPECTORS  
26 SHOULD BE APPROVED OR REJECTED?

27 A. There are always pressures in any position of responsibility,  
28 particularly supervisory responsibility. From my perspective, these

1 pressures never overcame the obligation to make the correct  
2 professional decisions while implementing the QA Program. These  
3 pressures have never caused me to accept any work that in my  
4 professional judgement did not meet the applicable standards.

5  
6  
7  
8

9 I hereby certify that I have read and understand this document, and  
10 believe it to be my true, accurate and complete testimony.

11  
12  
13  
14

Charles R. Baldwin  
Charles R. Baldwin

15  
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17 Sworn to and subscribed before me  
18 this 21 day of September, 1983.

19  
20  
21  
22

Jo Ann D. Bowman  
Notary Public

23

24 Commission Expires 7-12-88

NUCLEAR REGULATORY COMMISSION  
Office of Fishery  
Receptor No. 50-413 Catawba 20  
In the matter of ✓  
Name ✓  
Address ✓  
City & State ✓  
County ✓  
Other ✓  
Reporter Bon Graham  
DATE 10/21/83  
OFFICE ✓