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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

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

TESTIMONY OF LARRY R. DAVISON

Q. STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Larry R. Davison, and my business address is Catawba Nuclear Station, P.O. Box 223, Clover, South Carolina 29710.

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

A. I am the Project Quality Assurance Manager responsible for Quality Assurance during construction of the Catawba Nuclear Station. Quality Assurance consists of planned activities to assure that the Catawba plant will be designed, constructed and operated in a manner consistent with all applicable regulatory requirements and in a manner to protect the health and safety of the public. During construction these activities consist of inspection of actual work, review of materials used in constructing the plant, review and approval of construction procedures used in construction, and review and approval of documentation generated in the above activities. These activities are conducted in accordance with procedures contained in the Duke Quality Assurance Manuals for construction. There are approximately 230 Quality Assurance employees at Catawba consisting of engineers, technicians, inspectors and clerks.

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

A. I am a registered Professional Engineer in both North Carolina and South Carolina. I received a Bachelor of Science degree in Mechanical Engineering from the Georgia Institute of Technology in 1967. My experience has included four years in the United States Navy where I attended both nuclear power and submarine schools. The nuclear power school consisted of six months of theoretical training in nuclear power and six months at a prototype nuclear power plant actually learning to operate the plant. After completion of both schools, I was assigned on-board an operating ballistic missile submarine for approximately two and one-half years.

I started working for Duke Power Company in 1971 as an Assistant Field Engineer at the Oconee Nuclear Station. I was responsible for generating welding construction procedures. In 1973 I was promoted to Associate Field Engineer, with responsibility for welding inspection at Oconee. With the completion of Oconee, I was transferred to the Catawba Nuclear Station in 1974. I had the assignment of Senior Quality Control Engineer and was responsible for Quality Control inspection activities at Catawba in all the disciplines of work that was being performed. I remained in that position until February, 1981 when I was appointed QA Manager for the Projects Division of the Quality Assurance Department. With this assignment, I was transferred from the Catawba site to the Charlotte Office. I held that position until approximately September, 1982 when I was transferred back to Catawba Nuclear Station as the Project QA Manager. In my current position, I have

responsibility for all of the QA activities at the Catawba site during the construction of the plant.

I have attended several schools involving welding and welding inspection, including a one week course at the University of Tennessee dealing with the technical aspects of welding, and a training course at Magnaflux Corporation in interpretation of radiographic film. I have been certified as a Level III welding inspector examiner by Duke Power Company at Catawba, although I do not presently hold that certification. I held this certification from 1978 to 1980. During 1980 the Level III examiner duties were consolidated during a reorganization in the QA Department. I allowed my certification to lapse in 1980 since I was no longer performing the Level III examiner duties. My resume is Attachment 1 to my testimony.

Q. HAVE YOU BEEN INVOLVED IN THE PROCESS WHICH SETS THE PAY CLASSIFICATION FOR INSPECTORS?

A. I was part of a group that updated all inspector position analyses in the spring of 1980. This updating of inspector position analyses was done with input from inspection supervision. The position analyses were then evaluated and assigned a pay grade classification.

Q. DESCRIBE WHAT HAS OCCURRED OVER THE YEARS WITH RESPECT TO THE PAY CLASSIFICATION.

A. When Catawba construction began in 1974, there were no position analyses for inspectors. Quality Assurance Procedures governed training and certification, but did not cover pay. The pay classifications that existed were administered by each supervisor

with increases or promotions originating with the supervisor's recommendation.

Position analyses were developed for the various inspector positions in 1977 at McGuire. These position analyses and corresponding pay grade classifications were initiated in February 1980.

Because of the time lag between when the position analyses were completed in 1977, and their implementation in 1980, all the position analyses were reviewed and updated as necessary soon after implementation. Upon completion of this updating, the positions were evaluated and classified for pay purposes. These revised pay classifications were implemented in July 1981.

Q. WHAT WAS THE RESULT OF THE 1981 ANALYSIS ON THE PAY CLASSIFICATION OF WELDING INSPECTORS?

A. It resulted in the pay grade for the new position of Welding Inspector A being reduced one pay grade below the previous Welding Inspector position. With this reduction in pay grade, the Welding Inspector A position was a few cents per hour higher than the craft welder pay.

Q. WHAT CAUSED THE WELDING INSPECTOR POSITION TO BE LOWERED A PAY GRADE?

A. Prior to 1981 there were two levels of welding inspectors for pay purposes, welding inspector learner and welding inspector. The pay classification for these positions was based on the qualifications requirement of two years experience in welding fabrication or welding inspection. In June, 1978, the two years experience requirement was changed when the certification procedure for inspectors established uniform experience requirements and levels of

inspector certification for all inspector disciplines. The welding inspector position evaluation by the pay classification committee in 1980 took into account the changes in the required experience. This change in the experience requirement was one of the reasons the pay classification was lowered to Grade 10. This evaluation of positions included all inspector positions, and resulted in some inspector positions, such as Mechanical Inspector A, bring upgraded by one pay grade.

Q. DID THIS CHANGE IN THE REQUIREMENTS FOR WELDING INSPECTORS RESULT IN LESS QUALIFIED WELDING INSPECTORS?

A. No. Qualification and certification of welding inspectors was still based on successful completion of the training and testing program. When the two year welding inspection or welding fabrication experience requirement was dropped, the procedure introduced levels of welding inspectors. These were Level I, II and III. Since all our welding inspectors at Catawba at the time had met the two year experience requirement, they met the requirements for Level II inspector certification. Any new inspectors hired would have to move through the Level I certification to gain experience before being qualified to Level II. The experience requirement was not simply dropped, it was replaced with requirements for inspection experience. The training and testing program remained essentially the same.

Q. DID YOU COMMUNICATE THE DECISION CONCERNING THE PAY RECLASSIFICATION TO THE WELDING INSPECTORS.

A. Yes. This decision was communicated to all the inspectors through their supervision and in meetings with the inspectors.

Q. WHAT WAS THE RESPONSE OF THE WELDING INSPECTORS TO THIS PAY RECLASSIFICATION?

A. They were not happy over this reduction in pay grade. Several welding inspectors followed Duke's recourse procedure to seek management review of the reclassification.

Q. WERE YOU INVOLVED IN PROCESSING THE PAY RECOURSES?

A. Not directly. The recourses were handled in accordance with the corporate recourse policy. Step 1 was to the Department Head, step 2 to Corporate Employee Relations, and step 3 to the President of the company. I was involved to the extent of being interviewed or asked questions by persons working on the responses during these steps.

Q. WHEN DID YOU FIRST BECOME AWARE OF THE CONCERNS EXPRESSED BY WELDING INSPECTORS AT CATAWBA WHICH APPEARED TO AFFECT THE QUALITY OF PLANT CONSTRUCTION?

A. In December 1981 I was informed by Mr. Wells, Corporate QA Manager, that some concerns of this nature had been expressed and that a Task Force had been appointed by Mr. Owen to investigate the concerns.

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

A. I was not directly involved with Task Force I. They interviewed me as part of their investigation, and I made arrangements for them to have a place to work at Catawba.

Q. DESCRIBE YOUR INVOLVEMENT WITH THE TECHNICAL TASK FORCE.

A. After Task Force I completed its investigation, I was advised that additional specific concerns had been expressed by the welding

inspectors. I called a meeting with all welding inspectors at Catawba on January 11, 1982 and asked them to specifically list all of their concerns so they could be investigated. This request was made again on January 21, 1982, in a letter from Jim Wells to all Catawba welding inspectors. When these concerns were turned in, I delivered them to the Technical Task Force. I was not involved in the Task Force investigation of these concerns.

When the Technical Task Force completed its work and issued its report, I worked with George Grier, Neal Alexander, Wayne Henry and Bill Bradley to review the Technical Task Force recommendations and develop implementation objectives based on the Task Force recommendations.

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

A. I was interviewed by Mr. Zwissler during the time the Technical Task Force was investigating the inspector concerns.

Q. DESCRIBE YOUR INVOLVEMENT WITH THE NONTECHNICAL TASK FORCE.

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

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

A. Yes.

Q. DESCRIBE YOUR ROLE IN IMPLEMENTING THE RECOMMENDATIONS OF THE TECHNICAL TASK FORCE.

A. I participated in the review of the recommendations of the Technical Task Force. George Grier, Neal Alexander, Wayne Henry, Bill Bradley, and I developed implementation objectives from the general

and programmatic recommendations made by the Technical Task Force.

I participated in the assignment of individuals to carry out the specific recommendations of the Technical Task Force, and the implementation objectives based on the general and programmatic recommendations.

I personally developed the action to be taken on three of the implementation objectives, 9(3)a 1, 2 and 3; 9(3)d and 9(3)h (Technical Task Force, Volume I, Section 9). In doing this, I reviewed the recommendations of the Task Force, developed actions to be taken, and either carried them out myself or assigned them to be carried out.

The three implementation objectives I worked on resulted in action to

1) involve inspector supervision in QA Procedure revision process;

2) establish periodic meetings between representatives from QA, Construction Engineering and Craft to discuss any process control problems; and

3) to conduct training of Projects QA Supervision and Inspectors.

The training of QA supervision included a flow chart of how to resolve technical questions from inspectors, sometimes referred to as the "stickman" process, when to give direction to inspectors, and to never direct an inspector to accept anything he is uncomfortable with. The training of Inspectors was to be sure they understood that they shculd not accept any item they felt was not

acceptable even if they felt they were directed to do so. The "stickman" flow chart is Attachment 2 to my testimony.

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

A. In my view, they were concerned about two things:

1. The reduction in their pay grade
2. Decisions made by several individuals in their management which they did not understand or did not agree with.

This is based on my discussions with inspectors and my review of the task force reports.

Q. ARE YOU AWARE OF ANY OTHER SPECIFIC CONCERNS OF THE WELDING INSPECTORS?

A. Yes, I am aware of several concerns that welding inspectors have raised. These include:

1. welds on systems where only a final visual inspection is performed;
2. possible damage to structural steel after it has been inspected;
3. NCI-9085; and
4. additional concerns of G.E. Ross since the technical Task Force

Q. PLEASE EXPLAIN THE SITUATION WITH REGARD TO WELDS ON SYSTEMS WHERE ONLY A FINAL VISUAL INSPECTION IS PERFORMED.

A. There are various classes of piping systems ranging from Class A to Class H, A being the highest. Inspections performed on welds in these systems are based on Class and Code requirements. Class A gets cleanliness, fit up, visual, surface and volumetric NDE as opposed to Class E which receives only a final visual inspection.

The classification of piping systems is determined by Design Engineering based upon the safety function of the system. Lower classes receive less inspection because significance to safety is less and the degree of assurance is correspondingly less. In addition to inspection, all safety related systems are hydrostatically tested in accordance with ASME Code requirements. This provides additional assurance of weld integrity.

Q. WHAT IS THE SITUATION WITH REGARD TO POSSIBLE DAMAGE TO STRUCTURAL STEEL AFTER IT HAS BEEN INSPECTED?

A. This involves a recent concern about removal of welds on previously inspected structural steel without the removal area being inspected. Procedures are in place that provide that when temporarily attached welds are removed, the removal area is to be inspected. We are in the process of evaluating this concern. We will review the instances cited to determine their significance and if significant will take proper corrective action. In addition, we will determine if our procedures should be modified in some way.

Q. WHAT IS THE SITUATION WITH REGARD TO NCI-9085?

A. This NCI originated as a result of three different heat numbers being marked on a piece of Class B pipe installed in a Class E piping System. One number was valid, two were invalid. Class E piping systems do not require heat number traceability (i.e. ability to identify the origin of the material) and thus the matter was acceptable as is. The concern is that this piece of installed Class B pipe could be removed and used in a Class B piping system without proper traceability. Such is not the case because of the heat number check that is performed at fit up inspection of Class B piping systems. This check verifies the heat number with a log of

valid heat numbers. The two invalid numbers on this piece of pipe would not pass that check. Accordingly for traceability purposes, only one number, and that the valid one, will be associated with this piece of pipe.

Q. WHAT IS THE SITUATION WITH REGARD TO THE ADDITIONAL CONCERNS OF G. E. ROSS?

A. I have discussed the additional concerns with G. E. Ross. He has indicated he is satisfied with one exception. We have agreed to action to be taken to resolve this one concern. This action is ongoing.

Q. THE CONCERNS EXPRESSED BY THE WELDING INSPECTORS WERE INITIALLY CHARACTERIZED AS CONCERNS AFFECTING THE QUALITY OF WORK OR THE SAFETY OF THE CATAWBA PLANT. IN YOUR VIEW, DID THE CONCERNS EXPRESSED BY THE WELDING INSPECTORS AFFECT THE QUALITY OR THE SAFETY OF THE CATAWBA PLANT?

A. No. Based on my review of the results of the Technical Task Force's investigations, I saw nothing that indicated that any of the concerns would have affected the quality or safety of Catawba. The concerns involved misunderstandings, less than desirable communications, and room for improvement in procedures; but, none of these concerns resulted in less than acceptable quality or safety at Catawba.

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

A. No. In fact, the expression of concerns indicated that the QA Program was working because of the openness where the concerns were brought up, investigated, and resolved in such a manner to improve the Program. Any program will always have room for improvement; but, that does not mean it does not work. The dedication to quality by Duke management and employees is evidenced by the continual review of the QA Program with emphasis on making it even better, and the avenues set up to allow anyone to raise concerns to higher levels of management through recourse.

These are elements of a successful QA Program rather than one that does not work.

Q. HAVE YOU EVER PRESSURED AN INSPECTOR OR SUPERVISOR TO APPROVE FAULTY OR DEFICIENT WORKMANSHIP?

A. No. I have based my decisions in evaluating NCI's or other nonconformances on applicable technical standards.

Q. WHAT IS THE QA DEPARTMENT'S POLICY AND PRACTICE WITH RESPECT TO EMPLOYEE'S ACCESS TO THE NRC TO EXPRESS CONCERNS OR RAISE TECHNICAL QUESTIONS?

A. It has always been both the policy and practice of the QA Department that all employees have free access to the NRC on any matter involving quality or safety at its nuclear plants. This is not only a QA Department policy, but it is the Company's policy. The Catawba site QA organization is a primary interface with the Resident NRC Inspector, particularly as it relates to their periodic inspections. At one time or another, practically all QA employees at Catawba have direct access to the NRC. It would be simply unrealistic to attempt to restrict employee access to the NRC.

This policy of open access to the NRC was the same when the QC inspection group was part of the Construction Department. It was posted on company bulletin boards at the site in 1977 in a document signed by Mr. R. L. Dick. This document contained the NRC's Regional Office telephone number, and a statement that the NRC would accept collect calls. It has also always been clear to me that the company policy is that employees have a right, but more importantly, the responsibility to bring up any concerns they have of a technical or nontechnical nature through Duke's recourse procedures. This policy in no way restricts employee contact with the NRC.

Q. HAVE YOU EVER DIRECTED INSPECTORS TO NOT EXPRESS CONCERNS OR RAISE TECHNICAL QUESTIONS WITH THE NRC?

A. No. I have encouraged inspectors to express their concerns and questions to their supervisors and company management and through recourse procedures before going to the NRC. In 1980, I held meetings with all welding inspectors to be sure they understood that the recourse procedure applied to any concern, technical or nontechnical. I advised the inspectors that they had a responsibility to follow this procedure prior to going to the NRC, but, that this responsibility in no way would replace their right by law to go to the NRC at any time. There are several reasons why I encouraged inspectors to raise concerns within the company structure. The company has established a comprehensive set of procedures to receive, review and resolve technical and nontechnical concerns. It is extremely important to encourage employees to discuss matters with their supervisor. This is an effective method of both problem identification and problem solving.

If employees raise concerns with their supervisors, the concerns can get resolved expeditiously, leading to better communications and better work. It provides the kind of feedback necessary to have a good QA program.

Q. WHY DID YOU HAVE A MEETING WITH WELDING INSPECTORS IN 1980 TO DIRECT THEM TO EXPRESS CONCERNS AND RAISE TECHNICAL QUESTIONS WITH DUKE MANAGEMENT BEFORE GOING TO THE NRC?

A. I held these meetings with the welding inspectors because of discussions I had with the Resident NRC Inspector. During my normal contact with the Resident NRC Inspector, he had indicated that some welding inspectors had brought to him concerns which did not involve safety-related portions of the plant. While I did not receive specific examples during these conversations, I was left with the impression that these matters brought to the NRC should be handled by the company, and were nonsafety related. I felt a need to ensure that our inspectors understood that we wanted them to communicate with management, and that the Duke recourse procedure was available to them on these matters, as well as any other matter.

Q. TO YOUR KNOWLEDGE HAVE QA EMPLOYEES USED THE RECOURSE PROCEDURES, THE HARASSMENT PROCEDURE OR TAKEN THEIR CONCERNS TO THE NRC?

A. I know QA employees have used the recourse procedures and the harassment procedures. However, I do not know of any QA employees who have taken a concern to the NRC, but I understand such has occurred.

Q. TO YOUR KNOWLEDGE HAS SUCH TAKEN ANY RETALIATORY ACTION AGAINST INDIVIDUALS WHO HAVE USED THE RECOURSE PROCEDURES, THE HARASSMENT PROCEDURE OR TAKEN THEIR CONCERNS TO THE NRC?

A. No.

Q. ARE YOU AWARE OF ALLEGATIONS BY INSPECTORS THAT THEY HAVE BEEN HARASSED IN CARRYING OUT THEIR TASKS?

A. Yes. I am aware of two cases where formal harassment charges have been made which involved disputes between a welding inspector and the craft. In both instances the matter was investigated and it was concluded that harassment had not occurred. Rather, heated arguments had taken place. In both cases the employees involved were counseled on their actions. I would note that QA is not pressured by craft to be the extent that anything less than satisfactory work is approved. Our inspectors simply will not permit this. There has been, and I imagine there will continue to be, tension between craft and QA from time to time. This stems from the nature of the job. QA inspects craft work; if it is not satisfactory it will not be approved. It is natural for craft to be somewhat resentful to be told work is not satisfactory. However, as has been noted, management of both organizations worked together to assure that the interface does not impair the safety of the plant. Further, our inspectors are instructed that when such situations develop they should avoid becoming involved in an argument. If any situations come forward which identify a problem representatives of both departments meet and attempt to resolve the issue.

PART II

Q. DESCRIBE THE QA ORGANIZATION AT THE CATAWBA SITE.

A. The current QA organization at the Catawba site is set forth on a chart which is Attachment 3 to my Testimony. The organization consists of five groups which perform various functions, the Inspection Group, the QA Technical Group, the Surveillance Group, the Planning Group, and Employee Relations.

Q. PLEASE DESCRIBE THE FUNCTION OF EACH OF THESE GROUPS, BEGINNING WITH THE INSPECTION GROUP.

A. The Inspection Group is responsible for the Quality Control (QC) inspection of the work that is being done, and is headed by an Inspection Superintendent. The Inspection Group is organized by discipline into several other groups. There is a Mechanical Group, Electrical and Instrumentation Group, a Civil Group, a Welding and Non-Destructive Examination (NDE) Group, a Receiving Group, and a Document Control Group. The Mechanical Group is responsible for inspection of mechanical work such as pipe erection, equipment installation and pipe support erection. The Electrical and Instrumentation Group is responsible for inspection of electrical and instrumentation work such as cable installation, electrical equipment installation, and instrumentation installation. The Civil Group is responsible for inspection of structural work such as concrete placement, soils work, structural steel erection and coatings. The Welding and NDE Group is responsible for inspection of welding including visual inspection and non-destructive testing, such as radiography (X-ray), liquid penetrant and magnetic particle inspections. The Receiving Group is responsible for inspection of all safety related material and equipment received at the site. The

Document Control Group is responsible for inspection of documents in use to construct the plant to ensure they are current.

The Inspection Group has the inspectors who are responsible for the actual inspection of the work activities in accordance with the QA procedures. This inspection may be done in-process, such as welding inspection which has hold points at various steps prior to welding, during welding, and after welding; or the inspection may be done upon completion of a work activity, such as a mechanical pipe hanger. Once the hanger is completed, then the inspection is performed.

The Inspection Superintendent is responsible for all the inspections that are required by the Qualify Assurance Program and Quality Assurance Procedures. The Inspection Superintendent has reporting to him four Technical Supervisors or QA Engineers. There are two Technical Supervisors in welding and non-destructive examination. There is a Technical Supervisor for the mechanical area, and a QA Engineer for the electrical and instrumentation area, which also includes the receiving and document control areas. Each of these Supervisors has Supervising Technicians reporting to him who are the first line supervision of inspectors. For example, in the mechanical area there is a Supervising Technician for equipment activities, a Supervising Technician for piping activities, and a Supervising Technician for pipe support/restraint activities.

Supervising Technicians are generally qualified inspectors who have demonstrated through performance the ability to supervise and lead others. They are certified as a Level II Inspector in the discipline they supervise, or they will have inspectors who are certified to that level in their groups. In the Electrical Group,

there is a Supervising Technician for instrumentation and certain electrical activities and another Supervising Technician for the remaining electrical activities. There is a Supervising Technician in the civil area for the concrete, soils, structural steel, and coating work activities. There is a QC Supervisor who supervises the receiving and document control inspection personnel at Catawba.

In the welding area, there are two Technical Supervisors, Fred Bulgin and Charles Baldwin. They have reporting to them Supervising Technicians who have certified welding inspectors and inspectors who are certified in non-destructive examination techniques. The non-destructive examination techniques used at Catawba include magnetic particle inspection (MT), liquid penetrant inspection (PT), radiographic inspection, and ultrasonic inspection (UT). Radiography at Catawba is performed on a third shift because of safety aspects involved in radiography.

Q. WHAT IS THE FUNCTION OF THE QA TECHNICAL GROUP?

A. The QA Technical Group is headed by a Senior Quality Assurance Engineer, R. A. Morgan, and is composed of engineers and technicians whose primary function is to review the process control that is issued for the work at Catawba to insure it is correct, to review the inspection reports that are generated by the Inspection Group of QA, and insure those inspections have been completed and accepted. In addition, the Technical Group reviews documentation of materials received from vendors for certain items and releases the materials for use in the plant. This group also reviews and approves resolutions to inspection deficiency reports (R-2A's) and nonconforming items (NCI's).

Q. WHAT IS THE FUNCTION OF THE SURVEILLANCE GROUP?

A. The Surveillance Group is headed by a Supervisor, and has technicians who are responsible for conducting surveillance on both the construction work, and the inspection activities of the Inspection Group to assure that the work and the QC inspections are performed in accordance with QA procedures. This group is completely independent from the Inspection Group and the Technical Group. This supervisor has the freedom to schedule when surveillance will be done. He also schedules what areas will be looked at. Major construction areas are covered periodically, but whenever a specific problem area is found, that area may be looked at in more detail and more frequently. When a problem is identified, it is noted in a surveillance report and that problem may either be nonconformed or handled in accordance with a Quality Assurance procedure for correcting the deficiency or discrepancy. In addition, the Surveillance Supervisor can also notify the Project Manager or the Project QA Manager of a condition that has been observed. Corrective action may be required for such identified conditions. The surveillance reports are communicated to the Project Manager as a means of informing the Construction Department of the results of the surveillance activities.

Q. WHAT IS THE FUNCTION OF THE QA PLANNING GROUP?

A. The Planning Group in the QA organization at Catawba is responsible for disseminating schedule information to the various QA Groups. They are responsible for coordinating the QA work with the construction work schedule so that the inspections can be scheduled and accomplished in a timely manner.

Q. WHAT IS THE FUNCTION OF THE EMPLOYEE RELATIONS ASSISTANT ON SITE AT CATAWBA?

A. The Employee Relations Assistant is responsible for the personnel activities of the Quality Assurance Department at the Catawba site. The site QA organization is composed of about 230 employees. The Employee Relations Assistant handles personnel matters for these employees. The Employee Relations Assistant is also involved as an aide to employees in any recourse that the employee might be involved in, and coordinates personnel matters with the QA Manager of Administrative Services located in Charlotte.

Q. HOW DID THE QA SITE ORGANIZATION DIFFER DURING 1981?

A. In 1981 the QA organization was basically the same, except for some differences in reporting lines. We did not have a position of Inspection Superintendent in 1981. The various technical supervisors in charge of the inspection areas reported directly to the Project QA Engineer, who at that time was the senior QA person on the site. The Surveillance Group was headed by one of the QA Engineers, and we did not have the Employee Relations Assistant or Planning Supervisor positions. The 1981 organizational structure is set forth on the chart which is Attachment 4 to my testimony.

Q. DESCRIBE THE QA-CONSTRUCTION MANAGEMENT INTERFACE AT THE PROJECT SITE LEVEL.

A. Overall, there is a close interface between the management of the Quality Assurance Department onsite and the management of the Construction Department onsite. There are periodic meetings held by site Construction and QA supervision to discuss program implementation; inspection supervisors are regularly discussing the

status of the work with Construction Department supervision; Quality Assurance personnel regularly attend onsite meetings held by the Construction department to review the status of the project; inspection report trend analyses are performed and reviewed by Construction and QA management on site; surveillance of construction and QA activities is performed periodically and the results reported to construction and QA management; and exit meetings conducted by the Audits Division of the Quality Assurance Department and by the NRC as well as other audit teams are attended jointly by Construction and QA Projects Division personnel.

Q. DESCRIBE THE QA-DESIGN ENGINEERING INTERFACE AT THE PROJECT SITE LEVEL

A. The QA-Design interface primarily exists through the specification of design requirements in specifications and drawings which are implemented in the course of fabrication and erection. The contact with Design Engineering personnel generally takes place in conjunction with Construction Technical Support and QA Technical Services Division personnel. When Design Engineering personnel visit the Catawba Nuclear Station, there is usually general discussion between them and Quality Assurance personnel in the Projects Division.

Q. EXPLAIN THE ROLE OF THE INSPECTOR IN THE OVERALL QA PROGRAM

A. The QA function is carried out at Catawba primarily through the inspectors. The QA Department has developed detailed Quality Assurance procedures that set forth the specific aspects of various construction processes that are to be inspected, and when they

should be inspected. Some processes, such as some classes of welding, will have various required in-process inspection steps, or "hold points". A hold point is a point at which work must be inspected before the work can continue. When hold points are established, generally process control travelers, which follow the work, are used to indicate the inspections required and the acceptability of those inspections. In other work areas, the work is completed and then it is inspected, and a report is made of its acceptability. This is the primary method by which the work is verified to meet the design specifications and Quality Assurance requirements. The QA procedures contain the points at which inspections are completed, and provide the means for handling discrepancies discovered during inspections.

Q. HOW DO INSPECTORS KNOW THE DIFFERENCE BETWEEN ACCEPTABLE AND UNACCEPTABLE WORK?

A. Inspectors determine acceptability by referring to acceptance standards established in QA Procedures and Design Specifications. Prior to becoming certified, Inspectors must complete training and testing in the QA Procedures they will be using. This process assures their familiarity with the procedures used to determine acceptance. During inspections the Inspector compares the work being inspected to these standards to determine its acceptability.

Q. WHAT DOES THE INSPECTOR DO WHEN HE IDENTIFIES A DISCREPANCY BETWEEN THE WORK AND THE REQUIREMENTS SET FORTH IN THE PROCEDURES, AND HOW ARE THESE DISCREPANCIES RESOLVED.

A. The Quality Assurance Program in use at Duke Power Company during construction at Catawba has several means available to

correct discrepancies that are discovered by inspectors. There are four basic methods available, three of which do not involve writing an NCI.

(1) The first, which is sometimes referred to in some of the procedures as the "hold point" method, consists of an Inspector making the craft aware of a deficiency, the deficiency being corrected to the satisfaction of the inspector, and the inspector signing off the item. In this method, the item is not signed off until all necessary action has been completed, and the inspector is satisfied. This "hold point" method -- is common, and has been in use at Catawba throughout construction.

(2) The second is the "process control" method, whereby the inspection report itself provides the means to document a repair. This method is used primarily in welding where, for example, a final visual inspection might detect defects which would be recorded on the inspection form. The procedure for the inspection and for making the weld would provide instructions on how to correct that item (or that defect) and then provide instructions for reinspection. All of this would be documented on the Process Control Form, which serves both as a documentation of the work and the inspection of that work.

(3) The third method is a Deficiency Report Form. There have been several different procedures available to inspectors under this method. The procedure currently in use is the Discrepancy Report Form, commonly referred to as an R-2A. By this method, the inspector would document the problem he identified, and that would then be sent to the Construction Technical Support group at the site. That group would determine necessary corrective action. If

such action involved the craft redoing work, it would go to the craft to be done. The form would then be routed back to the inspector who would reinspect the work and, if satisfied, sign off on it.

(4) Inspectors may use QA Procedure Q-1, "Control of Nonconforming Items," and its corresponding form Q-1A, "Nonconforming Item Report," commonly referred to as an NCI. This method is used when the discrepancy is not handled by one of the methods discussed above.

The item is described on a Nonconforming Item Report form (Q-1A) and this form is signed by the originator. It is then serialized, and presented to designated individuals in QA for review. These individuals review the form for completeness and validity. If the report is found to be invalid at this point the reason is explained on the form, a copy is provided to the originator, and the form is filed. After review, QA assigns the report to the appropriate department for resolution, and assigns a review for reportability under 10CRF, Part 21 and §50.55(e) to the appropriate department.

The item is then evaluated and the disposition is placed on the form. If a department other than QA provided the disposition, the disposition is reviewed technically by designated individuals from the department providing the disposition. The disposition is then reviewed and approved by designated individuals in QA for clarity and completeness. At this point the QA reviewer determines if Significant Corrective Action Evaluation (Procedure R-6) is required. If he determines that such evaluation is required, it is

indicated on the form. Any action required, such as rework or reinspection, is added to the form and approved by QA.

The form is routed to the groups responsible for any action. After they complete their action they sign the form. When all action is complete the form is set to QA for a final review to assure it is complete.

The originator tags the item when practical to indicate it is non-conforming by use of an NCI tag, Form Q-1B. This prevents further work on the item unless so allowed on the form.

Additionally, all R-2A "Discrepancy Report" forms are reviewed for possible upgrading to an NCI. R-2A discrepancies are required by QA Procedure to be upgraded to an NCI if the discrepancy represents any of the following:

- a design deficiency (other than minor interpretations, clarifications, and editorial changes)
- requires Design evaluation
- a manufacturer discrepancy (other than minor)
- requires extensive rework
- a bypassed inspection hold point
- an item found at other than a preplanned activity and no other required activities were planned that would check for that type discrepancy.

Q. HOW IS THE DISCREPANCY REPORT FORM, R-2A, PROCESSED AFTER IT GOES TO THE CONSTRUCTION TECHNICAL SUPPORT GROUP?

A. The Construction Technical Support Group is made up of engineers and technicians who review the discrepancy and determine what action should be taken to resolve the discrepancy. That

determination would then be indicated on the form and go to the craftsman involved who would be responsible for taking the action, signing on the form, and returning the form to the inspector for reinspection of the activity if required. This group also reviews the R-2A for upgrading to an NCI based on the criteria contained in the Procedure and listed above. After the action is completed, the form goes to QA for a final approval.

Q. DESCRIBE THE ROLE OF QC AND QA IN THE ORIGINATION AND RESOLUTION OF NON CONFORMING ITEMS WHILE YOU WERE SENIOR QC ENGINEER PRIOR TO 1981.

A. I was the Senior QC Engineer at Catawba from 1974 until February 1981. During this period there were several revisions to the Nonconforming Item Procedure (Q-1); but, my role was essentially unchanged during this period.

When an inspector determined that a deficiency could not or should not be handled by a method other than the nonconforming method, he would obtain a nonconforming item form (form Q-1A) and complete the top portion of the form. If there was a question in the inspector's mind as to whether an item was in fact nonconforming, he might talk with his supervision to make a determination. If this determination was that the item was not, in fact, nonconforming, or that another method would be appropriate to handle the item, then the form (Q-1A) would not be completed or would be discarded. If the form was completed, the inspector would describe the item and its condition along with other information, such as location, on the top part of the form. The inspector would then sign the form as originator. A review of the

form by the inspector's first line supervisor was sometimes conducted at this point, but was not required.

Next, the NCI procedure required review by a Senior Engineer. Normally this was the senior engineer in the originator's section. For example, I was the Senior QC Engineer and reviewed most of the NCI's originated by the QC group.

There was no requirement to have a serial number assigned to the NCI form at this point, however, usually a number had been obtained by the originator at this point. An inspector might not be sure the item was nonconforming and would therefore intentionally not have a serial number assigned prior to this review. This was not the normal case, and the vast majority of NCI's submitted to me for review already had a serial number assigned to them. The assignment of a serial number was purely a clerical function and in no way involved a review of the NCI for validity. A serial number was assigned by the facilities group in construction simply because they maintained the NCI log book.

The typical situation was for the inspector to give me a completed NCI form that was signed and had a serial number. I would review the NCI for accuracy, completeness, and validity, and I might request that additional information be added to the form by the originator. This review was to determine:

- if the item is clearly identified;
- if the problem is clearly described;
- what requirement has been violated and is it identified;
- whether all the available information is given such that the party assigned resolution will have all they would need to understand the deficiency;

- if the form is legible; and
- if there is another, more appropriate way to handle the item;

If the NCI form needed work on clarity or legibility, or more information was needed, I would explain what was needed to the originator and direct him to obtain the information or clarify it and resubmit the form to me. If I had questions about its validity or thought it was invalid, I would discuss it with the originator. This discussion might also include the inspector's supervisor. If in my judgment, I determined that the NCI was not valid, I would explain this to the originator and handle it in one of two ways, depending on whether the form had a serial number on it. If it had a serial number, I would either explain on the form why it was invalid or go ahead and approve it, or ask the QA group to assign it to me for resolution, in which case I would resolve the NCI by stating why it was invalid. In both cases the form would be forwarded to QA. If it did not have a serial number, I would return it to the originator explaining why it was not a valid NCI. If the inspector expressed disagreement about the validity of the NCI I would usually sign it. In some cases I would direct that the discrepancy be handled by another method, such as a Corrective Action Notice (R-2A) or by informing the craft to correct it.

At least 17,000 NCI's have been originated at Catawba. To the best of my recollection, only a few per year, perhaps as many as 20, would be invalidated during this kind of review. Most of these situations arose because the inspector had a question as to whether the discrepancy should be an NCI. More often than not, I

concluded that these discrepancies would probably be best handled as an NCI and would sign the NCI form.

The NCI Procedure in effect at this time stated that if an NCI was determined to be invalid, the reason should be stated in the description block. My interpretation of this procedure was that this provision applied to NCI's that had been logged and serialized. Also, since the NCI procedure was used for nonsafety related items, many times I would determine an NCI to be invalid because it was not on a safety related system, and the same QA requirements did not apply. Some of the deficiencies identified by inspectors would not be valid nonconformances on nonsafety related systems.

After review by the Senior Engineer the NCI was sent to the QA group for assignment of resolution responsibility. In June 1978, a block was added to the NCI form to include a QA review of the origination also. This change was inconsequential because the form was always routed to QA after Senior Engineer review.

The QA group would determine who would be assigned to resolve the NCI and route it to them through the facilities group so the log could reflect the assignment. The resolution could be assigned to either the Design Engineering, Construction or QA departments depending on what requirement was violated and whether or not Engineering evaluation was required.

The resolution or disposition would be determined and added to the form and approved by a competent individual for technical content. This approval was not required for resolutions developed by QA because it would get the review automatically. The QA group would then review and approve the resolution and indicate any action to be taken.

If inspection was required as part of the action, it would involve the QC group and usually the originator of the NCI. Action taken would be documented on the form by sign-offs and the completed form sent to QA for final review to ensure that all action had been taken. The NCI was then considered closed.

Q. IS THERE ANYTHING IMPROPER OR INCONSISTENT WITH A SOUND QUALITY ASSURANCE PROGRAM FOR A SUPERVISOR TO REVIEW AN NCI WRITTEN BY AN INSPECTOR AND VOID THE NCI BECAUSE IN A SUPERVISOR'S JUDGMENT, THE NCI SHOULD NOT BE WRITTEN.

A. There is nothing improper or inconsistent with a sound Quality Assurance program for QA or QC supervision to review NCI forms and give direction to inspectors, or other originators, as to the validity of the NCI, or the appropriateness of using an NCI or other methods to handle discrepancies.

A major function of QA and QC supervision is to make technical judgments on problems identified by inspectors or others. The supervisors in QA and QC at Catawba are experienced in the inspection areas reporting to them, and are well qualified to make these technical judgements.

The Duke QA Program at Catawba provides for checks on this process. For example, audits of the work of both craft and inspectors are continually conducted by groups independent from the supervisors. In addition, periodic audits are conducted by groups independent of Duke to ensure that the QA Program is functioning. For example, we have the Joint Utility Management Audit (JUMA) yearly, audits by on site Authorized Nuclear

Inspectors (ANI), and periodic surveys by ASME teams to maintain ASME N-stamp authorization, and NRC inspections.

Q. YOU SUBMITTED A SET OF RECOMMENDATIONS TO MR WELLS PRIOR TO TASK FORCE I ISSUING ITS REPORT. ONE OF THOSE RECOMMENDATIONS WAS TO DISCONTINUE THE PRACTICE OF VERBALLY VOIDING NCI'S. WHY DID YOU RECOMMEND DISCONTINUANCE OF THIS PRACTICE?

A. Through my interview with Task Force I and discussions with Mr. Morgan at the site, I realized that some welding inspectors considered an effort to reduce the number of NCI's on minor items, by handling them using other established methods, improper. With this realization I recommended that what has been referred to as "verbally voiding NCI's" be discontinued. This was done in early January 1982. Mr. Morgan, with my concurrence, instructed the Technical Supervisors and QA Engineers not to void NCI's.

Both my and Mr. Morgan's reasoning was that if this effort to reduce minor NCI's in the welding area was being interpreted as lack of support by the inspectors, then we should discontinue voiding NCI's until the QA Procedures could be developed which would remove the concern. The QA procedure to handle this problem, R-2, was implemented in July, 1982. There was never any effort to avoid resolving deficiencies; but rather, to handle them in an appropriate way.

Q. WHAT OPTIONS WERE AVAILABLE TO A WELDING INSPECTOR WHO BELIEVED THAT A SUPERVISOR MADE AN INCORRECT JUDGMENT IN INSTRUCTING HIM TO VOID AN NCI?

A. Any inspector who felt that a supervisor had made an incorrect judgement in instructing him to void an NCI had not only the option

but the responsibility to pursue his views about that decision through the higher levels of supervision and management. In 1977 this option was formalized in the Construction Department "Personnel Policy and Practices" booklet under "Employee Relations." In 1979 this option was formalized again in Duke's "Management Procedures," "Employee Recourse Procedure" (8901-0012). All QC inspectors were in the Construction Department at this time, and were aware of these procedures.

Q. ANOTHER RECOMMENDATION WAS THAT THE CHARLES BALDWIN AND ART ALLUM, TECHNICAL SUPERVISORS, SWITCH POSITIONS. WHY DID YOU MAKE THIS RECOMMENDATION?

A. In January 1982 when it became evident that several of the welding inspector concerns involved relations between people, including Charles Baldwin, I had several discussions with him about the communications channels between him and the inspectors. At that time, Mr. Baldwin was the Technical Supervisor over the three welding inspector crews. It was apparent to me, through these discussions, that communications between Mr. Baldwin and some of the inspectors were strained. He did not feel he had effective communications with them. I felt that switching Mr. Baldwin and Mr. Allum would help to improve these lines of communication. Mr. Allum was qualified for the Technical Supervisor position over welding inspection by virtue of his background and experience. He had also served in that position at our Cherokee project. Mr. Baldwin was qualified for Mr. Allum's position of Technical Supervisor over NDE by virtue of his background and experience.

I recommended that Mr. Baldwin and Mr. Allum switch positions. Mr. Wells, my supervisor, concurred and the switch was

made in late January 1982. After the switch, Mr. Baldwin was the Technical Supervisor over two NDE crews and Mr. Allum was the Technical Supervisor over three welding inspection crews. I believe this lateral move was effective in keeping lines of communication between inspectors and supervisors more open than they otherwise would have been.

Q. DESCRIBE THE CHANGES AT THE CATAWBA SITE SINCE THE EXPRESSION OF CONCERNS BY THE WELDING INSPECTORS AND THE IMPLEMENTATION OF THE TASK FORCE RECOMMENDATIONS.

A. There were several changes that occurred at Catawba, some as a result of the welding inspector concerns and implementation of the recommendations of the task forces that investigated those concerns; other changes were the result of our ongoing effort to improve the way we do things. Several procedures were revised and clarified as a result of recommendations from the Task Forces. Procedure Q-1, The Nonconforming Item procedure, was revised to clarify what work activities could be allowed to continue on items nonconformed. Procedures H-4 and H-5, which control the identification of piping materials and structural steel materials, were clarified as they related to the marking requirements for identification of those materials. Procedure L-80, which is the Visual Workmanship Standard for Welds, was modified by adding a section that gave acceptance criteria for rounded indications. Various other local site procedures or construction procedures were revised as a result of specific recommendations of the Task Forces.

The manner of handling disputes or disagreements between inspectors and their supervision or management was changed. A flow chart was developed for training QA supervision at Catawba in

how these situations should be handled. This flow chart has come to be known as "Stickman" and is attached as Attachment 2. Any inspector question, concern, or area of disagreement should be discussed with his supervisor and resolved at that level if possible. If the supervisor is unable to answer the question or address the concern because it may be out of his area of expertise or he may not know the answer, then he would refer it to this supervision, which is the second level supervision in QA at Catawba. The flow chart indicates that this level would obtain the answer or resolution to the concern or develop the answer himself if its in his area of expertise. If the answer is obtained from another source, Design Engineering, Quality Assurance Technical Services Divisions, or a Level III Inspector in welding and NDE, then it would be documented. The questions and answers generated under the "Stickman" process are supplied to the Technical Services Division of Quality Assurance for review and possible incorporation into QA procedures, and would be communicated to the inspector through his first line supervision. The inspector can pursue a recourse if he is not satisfied with the answer. This process was explained to the inspectors during the implementation of the Quality Recourse Procedure. It has been clearly communicated to inspectors that they have the right and the responsibility to pursue matters involving quality of construction at Catawba. In addition, training of Quality Assurance Supervision emphasized that supervisors should not direct inspectors to accept items that the inspector may not feel should be accepted, or may not be comfortable accepting. The training included instructions on what to do in this situation. If the supervisor is qualified and certified to perform the

inspection, and is comfortable that the item is acceptable, the supervisor should accept the work.

We now have periodic meetings between Quality Assurance Management and Construction Engineering and Craft personnel to discuss problems that may be encountered in the field in the use of process control information. These meetings have been conducted in the major work disciplines and have been successful in helping to identify and resolve problems that may exist in the use of process control. Additionally, Quality Assurance Supervisors are involved to a greater extent in the review of Quality Assurance procedure revisions. As a result of Train-The-Trainers Program started by the Quality Assurance Technical Services Division, sessions are held with site Quality Assurance Supervisors to discuss procedure revisions. These sessions include discussion of the reasons behind the intent of the revisions. In addition to these sessions, proposed revisions to QA Procedures are routed to appropriate site supervision for review and comment. These changes have resulted in a better understanding of QA Procedure revisions.

Some of the changes that have occurred as a result of the Non-Technical Task Force have involved the use of a standard color hard hat for Quality Assurance personnel so that these personnel are easily identified and feel more part of a team, a departmental newsletter, and initiation of Quality Assurance forums. Through the Forum Procedure, Quality Assurance employees hold periodic meetings with their second level supervision to discuss any item.

New departmental procedures were implemented in Quality Assurance, and inspectors and supervisors were trained in these procedures. These departmental procedures were Recourse, Quality

Recourse, and a Harassment Procedure. Procedures have existed at the Corporate Level in these areas, but these procedures were developed in greater detail for the Quality Assurance Department and implemented in July of 1982. Inspectors were instructed in the existence of these procedures and how to use them.

In addition to changes that were a direct result of the Task Force recommendations, there have been other changes that were being considered prior to the concerns and have been implemented since that time. One of these areas involves the Quality Assurance procedures regarding nonconforming items and deficiency reports. In 1981, we were not using Corrective Action Procedure, Procedure R-2 in the welding area at Catawba. This procedure was used to handle minor discrepancies discovered by inspectors in the other areas at Catawba, electrical, mechanical, and civil. The reason this procedure had not been used in the welding area was that welding involved more in-process inspection, such as cleanliness and fitup inspections; and, therefore, the process control had established hold points. There did not appear to be a need to use another procedure to handle corrective action for items that might be discovered during these inspections. This meant that any deficiencies or discrepancies would be handled either through the hold point process or a nonconforming item. This resulted in more of the minor deficiencies and discrepancies in the welding area being documented on Nonconforming Items Reports than in the other areas of inspection. Revisions to Procedure R-2 were developed and were implemented in June of 1982. The use of R-2 was expanded to include discrepancies discovered by inspectors at any planned inspection point they might be carrying out where no other

instruction existed to handle the discrepancy. The revision included a review of all discrepancy reports to see if they should be upgraded to a nonconforming item status. Procedure R-2 became a primary method by which inspectors in all areas would document discrepancies found at inspection points, if they were not handled by informing the Crafts of the problem and having the problem corrected.

All of these changes that I have discussed have had the effect of improving the operation of the Quality Assurance Program at Catawba. It is our objective to continue to look for ways that program may be improved in the future. This is a characteristic of any good program, whether in Quality Assurance, or Construction, or any other activity. This is not to say that the Quality Assurance Program was not effective before these changes were made. The QA program was effective before these changes. These changes simply resulted in better understanding, better communications, and a smoother operating Quality Assurance Program.

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

Larry R. Davison

Larry R. Davison

Sworn to and subscribed before me
this 21st day of September, 1983.

Notary Public

Commission Expires Sept. 24, 1985

ATTACHMENT 1

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.

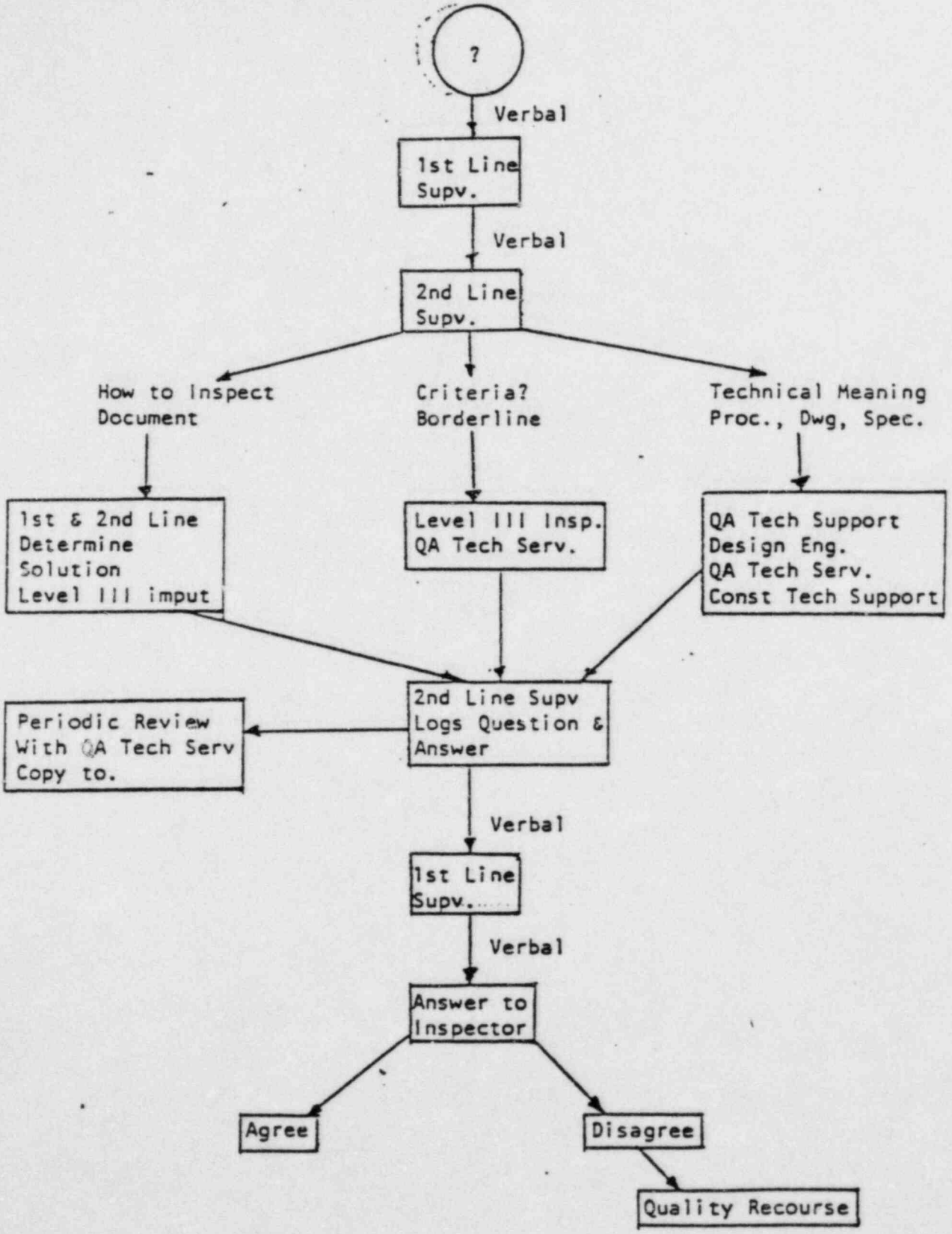
1982 - Present Project Quality Assurance (QA) Manager, Catawba Nuclear Station

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.

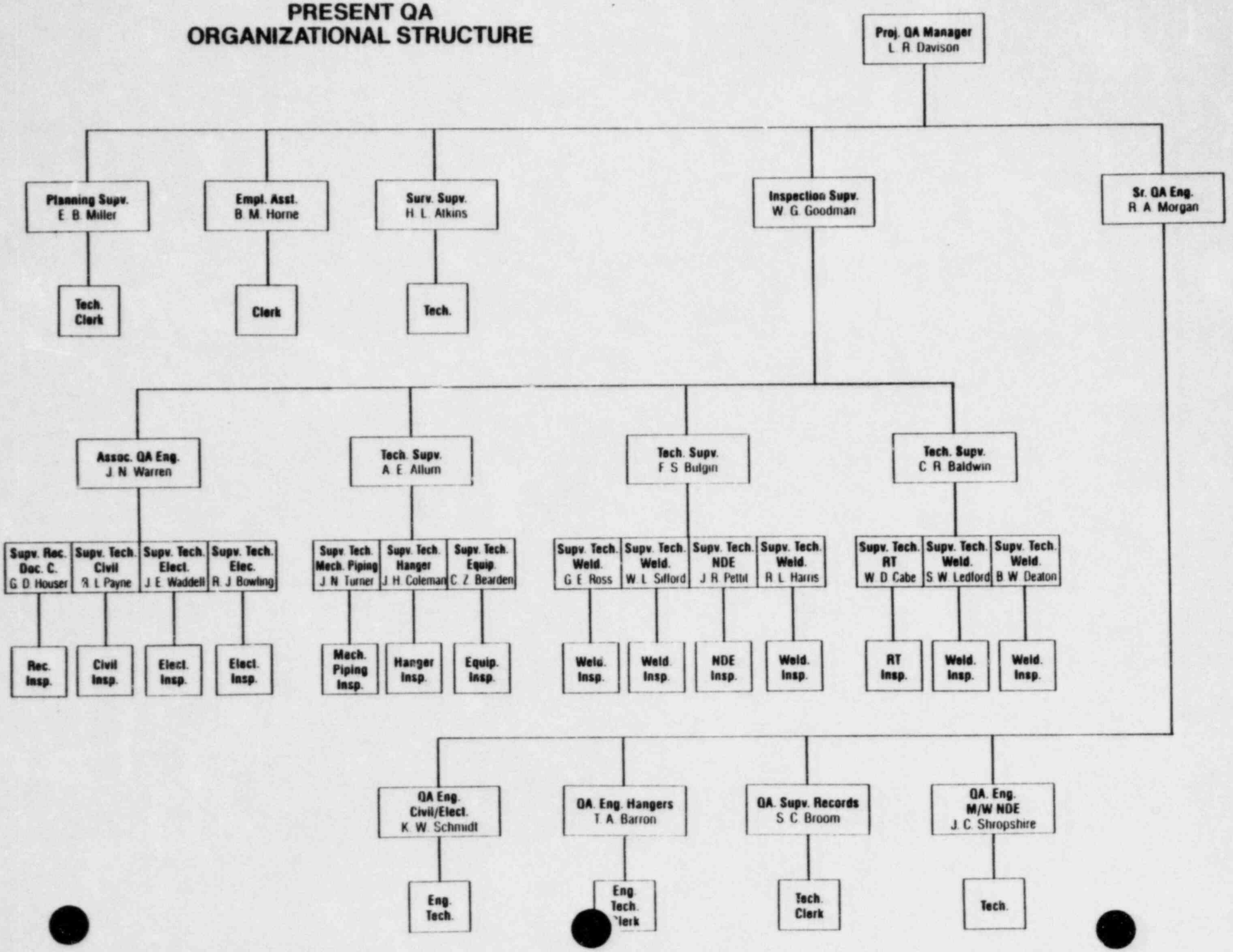
Attachment 2

Objective 9.3.a.1 ; 9.3.a.2 ; 9.3.a.3

Dicussion: Process for interpreting QA Procedures and answering QA Inspector technical questions.
(cont'd)

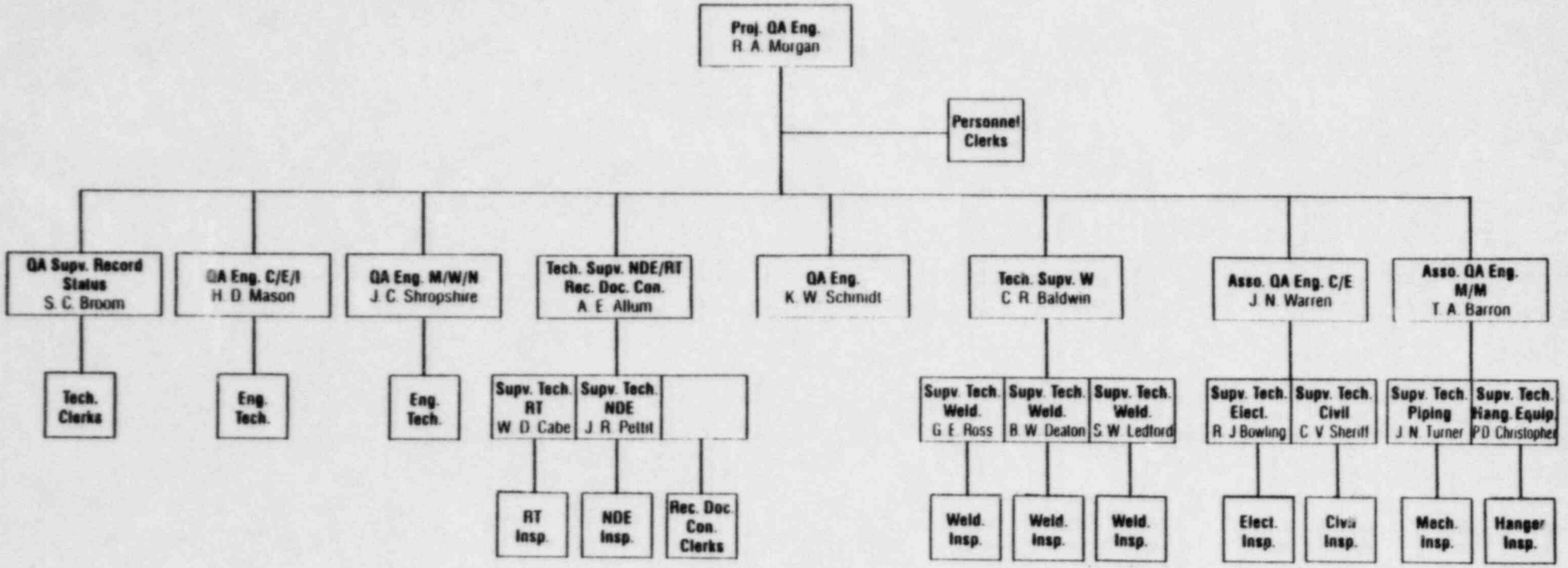


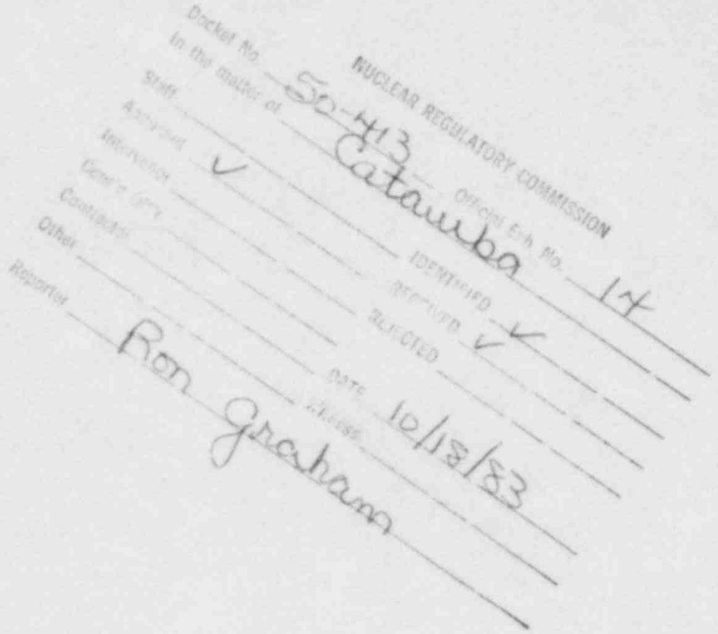
PRESENT QA ORGANIZATIONAL STRUCTURE



ATTACHMENT 2

ORGANIZATIONAL STRUCTURE — DECEMBER '81




NUCLEAR REGULATORY COMMISSION
Docket No. 50-413
In the matter of Catawba
Staff
Applicant
Intervenor
Other (Exh. No. 14
IDENTIFIED
RECEIVED
REJECTED
DATE 10/13/83
WITNESS
Reporter Ron Graham