

U. S. NUCLEAR REGULATORY COMMISSION  
OFFICE OF INSPECTION AND ENFORCEMENT

REGION IV

Report No. 50-458/81-02

Docket No. 50-458

Category A2

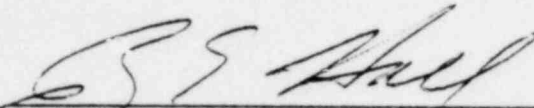
Licensee: Gulf States Utilities  
Post Office Box 2951  
Beaumont, Texas 77704

Facility Name: River Bend, Unit No. 1

Inspection at: River Bend Site

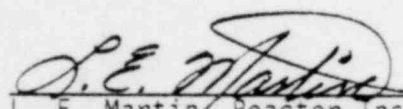
Inspection Conducted: February 2-6, 10-13, and 17-20, 1981

Inspectors:



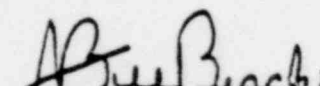
R. E. Hall, Acting Chief, Engineering and Material  
Section (Team Leader)  
(paragraphs 1, 2, 8 & 9)

4/13/81  
Date



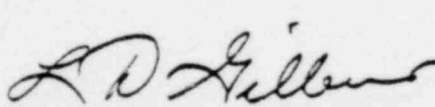
L. E. Martin, Reactor Inspector, Reactor Projects  
Section No. 3 (Backup Team Leader)  
(paragraphs 3 and 7.1)

4/13/81  
Date



A. B. Beach, Resident Reactor Inspector, Reactor  
Projects Section No. 3  
(paragraphs 6 and 7.5)

4/13/81  
Date



L. D. Gilbert, Reactor Inspector, Engineering  
and Materials Section  
(paragraphs 6 and 7.3)

4/13/81  
Date

J. I. Tapia  
J. I. Tapia, Reactor Inspector, Engineering  
and Materials Section  
(paragraphs 4 and 7.2) 4/17/81  
Date

D. P. Tomlinson  
D. P. Tomlinson, Reactor Inspector, Engineering  
and Materials Section  
(paragraphs 5 and 7.4) 4-17-81  
Date

Approved: W. A. Crossman 4/17/81  
W. A. Crossman, Chief, Projects Section No. 3 Date

R. E. Hall 4/17/81  
R. E. Hall, Acting Chief, Engineering and Materials  
Section Date

Inspection Summary:

Inspection on February 2-6, 10-13, and 17-20, 1981, (Report No. 50-458/81-02)

Areas Inspected: Special, announced, trial team inspection of licensee and contractor programs for control of design, program management, procurement and quality assurance for construction. The inspection involved 362 hours by six inspectors.

Results: In the areas inspected, one violation was found in the area of document control (violation - failure to take prompt corrective action to internal audit findings - paragraph 4.4). In addition, 14 areas of perceived programmatic strengths and 17 areas of perceived programmatic weaknesses were identified in the areas of this Project Management Program, On-site Design Control, the Procurement Program, the QA Program, and the Construction Control Program.

## DETAILS

### 1. Persons Contacted

#### Principal Licensee Employees

#\*W. J. Cahill, Senior Vice President, River Bend Nuclear Group  
#J. E. Wimberley, Superintendent, Site Construction  
+\*T. C. Crouse, Director, Quality Assurance  
W. F. Cummings, Manager, Administrative Services  
#\*J. R. Durkelberg, Assistant Superintendent, Site Construction  
+\*G. V. King, Supervisor, Quality Systems  
+\*R. B. Stafford, Supervisor, Quality Engineering  
#C. B. Graham, Quality Systems Representative  
R. M. Knobloch, Superintendent, Site Administration  
+V. J. Normand, Supervisor, Area I  
\*R. W. Helmick, Supervisor, Area II  
J. W. Holmes, Nuclear Training Representative  
B. R. Marino, Training Assistant  
S. D. Ellzey, Scheduling Engineer  
+\*M. E. Walton, Nuclear Staff Analyst  
+\*P. D. Graham, Assistant to Senior Vice President  
#\*K. C. Hodges, Quality Engineering Representative  
#\*C. J. Ballard, Quality Assurance Engineer  
#\*R. R. Daggart, Quality Assurance Engineer  
#J. W. Leavines, Site Field Engineering Supervisor  
R. C. Lundholm, Civil Engineer  
I. Hormozi, Civil Analyst  
#\*I. M. Malik, QA Engineering Representative  
#\*E. A. Troncellit, QA Engineer  
#\*R. D. Pearson, Senior QA Engineer  
\*J. E. Booker, Manager Technical Programs  
\*D. B. Reynolds, Supervisor, Administrative Support  
#\*W. S. Stuart, Q Systems Representative  
#\*G. R. Kimmel, QA Engineer

#### Stone and Webster Personnel

\*R. B. Kelly, Vice President and Manager QA  
#\*W. I. Clifford, Resident Manager  
#\*P. D. Hanks, General Superintendent, Construction  
J. E. Loomis, General Superintendent, Construction  
B. Poythress, Chief, Material Control Supervisor  
R. W. Jackson, Administrator, Construction Control and Completion Program (CCCP)  
J. Mervin, Senior Training Supervisor  
L. Lewis, QC Training Supervisor  
+\*E. A. Sweeney, Superintendent of Engineering  
T. Rucci, Lead Electrical Engineer  
+\*R. L. Spence, Superintendent, Field Quality Control  
+\*C. D. Lundin, Project QA Manager  
+J. F. Demeo, Assistant to Superintendent of Engineering

L. Evans, Area Coordinator 1A  
 A. Scott, Supervisor, Concrete Batch Plant  
 J. Raft, Senior Electrical Supervisor "A" Shift  
 S. Ehele, Piping Supervisor "A" Shift  
 N. Crawley, Iron Worker Supervisor "A" Shift  
 T. Dullum, Carpenter Supervisor "A" Shift  
 J. Tisdale, Construction Training Supervisor  
 B. Hall, Senior Field QC Engineer  
 J. Wentworth, Senior Purchasing Agent  
 J. Aldridge, Senior Field QC Supervisor  
 T. Maddlen, Senior Mechanical Engineer  
 R. Ferguson, QC Engineer  
 N. Walker, QC Engineer  
 D. Castleberry, Senior QC Engineer  
 J. Strickland, NDE Inspector  
 #\*G. M. Byrnes, FQC Assistant Superintendent  
 J. Howard, Chief Inspector Supervisor  
 A. Clawson, Inspector Supervisor  
 P. Lacy, QC Engineer  
 W. P. Wheeler, Pipefitter Foreman  
 R. Ferguson, QC Engineer, ASME Group  
 R. L. Phebus, Senior Materials Engineer  
 J. L. Park, Welding Supervisor  
 R. Jones, Chief, Inspection Supervisor  
 C. Schilt, Senior Management Systems Engineer  
 L. T. Rouen, QA Engineer  
 A. Kamdar, Resident Engineer  
 \*J. D. Dabis, Assistant Superintendent FQC  
 #\*W. R. Whitley, Assistant Superintendent FQC  
 #\*P. C. Kelleher, Assistant Superintendent FQC  
 \*D. P. Barry, Assistant Superintendent  
 \*J. G. Borden, QA Engineer  
 \*B. G. Schultz, Project Manager  
 \*K. E. Conrad, QA Engineer  
 \*J. J. Zullo, Project QA Engineer, S&W  
 \*T. L. Vaughn, Project QA Engineer  
 #\*D. L. Wells, CH QC Inspector Supervisor  
 \*J. D. Anderson, QC Inspector Supervisor  
 \*R. A. Plant, Manager, FQC

Other Personnel

L. Sutton, Senior QC Engineer, Graver  
 C. Carr, QC Engineer, Graver

The NRC inspectors also interviewed other licensee and contractor personnel during the course of the inspection.

\*Denotes those attending the exit meeting on February 6, 1981.

#Denotes those attending the exit meeting on February 13, 1981.

+Denotes those attending the exit meeting on February 20, 1981.

2. Follow Up on Previously Identified Problems

Not applicable.

3. Project Management

3.1 Areas Inspected

The NRC inspector performed a review and evaluation of the Project Management Systems utilized by Gulf States Utilities and Stone and Webster at the River Bend Station. The intent of this review and evaluation was to verify that the management team, management programs, and management involvement are programmatically effective in exercising controls in such a manner to assure a quality product. The review included the organizational structure, methods of communication, staffing, and interfaces of the various management groups or sections that make up the total organization.

3.1.1 Program Content

The NRC inspector reviewed the following program manuals for content with relationship to procedural and administrative controls and line/staff responsibilities and authority:

GSU Project Procedure Manual

S&W Construction Management Systems Manual

S&W Construction Management Manual

S&W Construction Control and Completion Program

The NRC inspector also reviewed both GSU and Stone and Webster organizational charts and 12 different position descriptions for personnel at various levels of the organizations. The NRC inspector also reviewed and discussed with GSU and S&W the employee evaluation systems and the associated merit award systems. The training programs, including a tour of the training facilities and review of portions of actual presentations of both GSU and S&W course materials, were completed.

The NRC inspector interviewed the individuals responsible for the above activities to determine their perception of responsibility and authority to carry out the programs. These interviews also provided insights into management and individual commitments and an opportunity to discuss program aspects and goals.

3.1.2 Program Adequacy

The management and management programs reviewed during this inspection appear to be strong. The programs address the

procedural responsibilities of the individual positions both in line and staff functions. The programs clearly identify the channels of communications, management reports and reviews, and change controls.

The position descriptions reviewed by the NRC inspector adequately addressed the function of each position. The position descriptions clearly defined the scope of the responsibilities and interfaces of the position both verbally and graphically. The principal accountabilities were defined. The position descriptions were tailored to fit the management program requirements and they clearly defined the positions shown on the organizational charts.

The only area in the management program, that was not adequate, was found in the GSU Project Procedure Manual. This manual is approximately six months out of date. The procedures and organizational charts do not accurately reflect the position of the Senior Vice President and do not clearly indicate that he is the Senior GSU representative on site.

Both the GSU and Stone and Webster programs address salary administration and annual employee performance evaluations. The Stone and Webster performance evaluation is an excellent program requiring multiple evaluations including peer and subordinate inputs.

Interviews with management and supervisory personnel indicated that the staffs are fully aware of the areas of responsibility and accountability. The interviewees were very knowledgeable in their areas as related to the management programs as defined in their position description. These people were aware of problems in their areas and the results of an outstanding audit and NRC findings in their areas. One item that concerned the NRC inspector in one area was the lack of commitment to the resolution and corrective actions with regards to NRC findings in the area of concrete. This was an isolated case and was discussed in detail with the GSU Senior Vice President.

The construction training program for GSU is a basic nuclear indoctrination that is adequate both in content and presentation. GSU is now in the process of developing new video tapes to improve the presentation qualities. The facilities and equipment seem to be more than adequate for this training program. The GSU program also includes operator training and will soon be expanded to include technical training for other personnel. The operator training program was beyond the scope of this inspection and was only briefly discussed.

The Stone and Webster Training Program includes both Quality Control and Construction Training. The program for QC inspector training is excellent. The curriculum is very good, the equipment and training aids are excellent and the facilities are adequate.

The Stone and Webster construction training program is adequate considering the infancy of the program. The program is ambitious and, if properly executed, will be very beneficial. S&W's seems to recognize that quality is built into a product by the craftsman versus being inspected in by the inspector. The construction training program is S&W's attempt to come to grasp with this fact. At the present time, the construction training group is receiving most of the training requirements, course content and attendance requirements from the Craft Supervisors and Managers. This is a stop gap type measure that may get the training started. The NRC inspector perceives that this type of training may result in the ability to correct deficiencies after the fact but will not provide the training level to preclude problems. Basically the construction training program is in a reactive mode. Eventually the training organization will have to take the lead and determine the level of training required so that the training is more routine than reactive.

### 3.1.3 Program Implementation

The NRC inspector held interviews with numerous GSU and S&W personnel to determine if the management programs at River Bend Station were being implemented. One area that the NRC inspector was concerned with was the rolling ten hour, four day shift and the change of crews. S&W is working rotating shifts. Each shift works four-ten hour days. This shift change requires some special communications effort. S&W has divided the shift change to provide overlap days. General foreman overlap on the day before shift change and supervisors overlap on the last day of a shift. This method provides a continuity of information flow. Responsible general foremen, area coordinators, and supervisors have shift change meetings to ensure a continuity of work. All affected disciplines and organizations participate in the meetings at the various levels. Both S&W and GSU management and supervision are aware of the potential for breakdown in communication and discontinuity in this area. The NRC inspector was not able to identify any significant deficiency related to shift change. This area is apparently being adequately controlled.

The NRC inspector reviewed records related to personnel turnover to determine trends and possible problem areas. The turnover rate is not abnormally high, and the productivity rates seem to be good in most activities.

During the interviews with some of the GSU and S&W managers the NRC inspector noticed that various formats for productivity, activity status and schedule information were being utilized. The NRC inspector had previously reviewed the Construction

Management System (CMS). CMS is a computer program that is utilized to track the site activities. It became apparent to the NRC inspector that the CMS output programs and formats do not meet the needs of the personnel that have to work with them on a day to day basis. The information being issued by these managers had, in most cases, been transcribed from one or more CMS outputs. As an example, one program manager when questioned about work activities in his scope of work, consulted an abstracted summary sheet prepared from the CMS by clerical personnel. This appeared to be a case where the program output could be more clearly tailored to the needs of the user to eliminate the need for abstracting or copying.

The NRC inspector also reviewed the implementation of the Construction Control and Completion Program (CCCP) as defined by Construction Methods Procedure (CMP) No. 1.11, Revision A. The NRC inspector selected this particular area because previous interviews had indicated that this particular procedure was not being implemented by S&W. This lack of implementation was adequately identified in GSU's QA Finding Report (QAFR) Nos. 80-8-23-D, 80-8-25-D, 80-8-26-D, and 80-8-27-D of August 27, 1980. CMP-1.11 requires the verification that completed construction work was performed in conformance with engineering and contractor requirements. There are other procedures, both in GSU and S&W, that require this verification, but this procedure (CMP-1.11) brings all of the other areas to a one point, one check list verification by work unit or work package. The CCCP check list provides a single document that indicates craft supervision inspection results of completed work, QC inspection tracking and inspection report number, and all applicable N&Ds associated with this work package.

The strength of this procedure is that it provides a single point check for all completed work packages. The NRC inspector determined that S&W is now attempting to implement this procedure in full. They are also beginning to implement a work tracking program. There may possibly be some duplication in these two efforts.

Overall the GSU and S&W management programs appeared very adequate and the implementation has been and is very effective in exercising controls to assure a quality product.

#### 3.1.4 Management Involvement

The NRC inspector through program reviews, document reviews, and interviews with all levels of management, was able to determine that both GSU management and S&W management are directly involved in the River Bend Station construction. The strongest single facet of the total management program at the River Bend Station is GSU's involvement in the decision making process in the construction activities on site. GSU recognizes that they do not have the



manpower to build this site, but they readily accept the responsibility that they have as the licensee. One advantage that GSU has is that they have retained the primary quality assurance function. Stone and Webster management openly acknowledges GSU involvement. They do not always agree with GSU's involvement but without exception the managers interviewed indicated a very strong GSU involvement in all of S&W activities. This was perceived as a rather exceptional posture for a licensee, who is building their first nuclear production facility.

GSU's main interfaces with S&W are at the manager levels, which by definition requires S&W managers to be involved in the actual construction status and problem solving chain on a day-to-day basis. The S&W managers are very conscientious and have many years of nuclear construction experience. Each manager and supervisor that the NRC inspector interviewed was conversant in the problems within their area of responsibility. When questioned on previous GSU audit findings, NRC findings, procedure revisions etc., the managers and supervisors either had copies of the findings and corrective actions or had memos and CORs that provided the direction required. The managers were aware of the status of their areas, impending schedules, productivity rates, personnel turnover, and QC status and trending. They freely discussed areas that they perceived as potential problems and their plans to overcome these situations before they become problems.

The NRC inspector's one area of concern, was the recent resignations of the GSU Construction Superintendent and one of the two Assistant Construction Superintendents. With GSU's active involvement in the construction activities, it is imperative that they maintain an effective, highly experienced, and motivated staff. The vacancy of these two key positions for any appreciable length of time could have a detrimental effect on the leading posture that GSU has assumed and is fulfilling as licensee at the River Bend Station. These two positions provide the leading edge for GSU construction experience and are, under the present management system, also the leading edge for S&W GSU day-to-day communication system for construction related problems.

### 3.2 Perceived Program Inadequacies or Weaknesses

The following areas were perceived by the NRC inspector as program inadequacies or weaknesses:

- a. The GSU Project Procedure Manual does not reflect the position of the Senior Vice President as the Senior GSU Representative on site.

- b. In an isolated instance, the NRC inspector, through a personal interview, perceived a lack of an individuals' commitment to resolution and corrective action with regard to NRC findings in one area. The time for a manager to question findings, resolutions and corrective actions is during the inspection, or at the time the resolutions and corrective actions are being developed, and for the purpose of assuring that they achieve the desired result.
- c. The Stone and Webster Construction Program needs to ensure that they are responsive to the training needs of construction, but must recognize their responsibility to determine the training level in a routine mode rather than a reactive mode.
- d. The Construction Control and Completion Program is not being fully implemented as defined by CMP-1.11, Revision A.
- e. The GSU Construction Group is under staffed in two key positions due to recent resignations.

### 3.3 Perceived Program Strengths

The NRC inspector perceived the following areas as being strengths:

- a. Gulf States Utilities has assumed a very active role in the management of the construction of the River Bend Site.
- b. Both GSU and Stone and Webster, for the most part, have experienced highly motivated, quality conscious personnel in all areas of management and supervision.
- c. The Stone and Webster Training Programs appear strong. The QC training program and the construction/craft training appear adequate.
- d. The Nuclear Agreement seems to provide a responsible and reasonable labor relations/negotiation tool.
- e. The fifty-month schedule and the shift work both seem to have positive motivating factors. The craftsmen like the four day work week. Every person interviewed by the NRC inspector indicated excitement and enthusiasm.

### 3.4 Identified Violations

No violations or deviations were identified.

#### 4. On-site Design Control

##### 4.1 Areas Inspected

The NRC inspector performed a quality assurance program evaluation with respect to the on-site design control measures required by the River Bend Station PSAR. The evaluation consisted of reviewing program documents, observation of implementation, and interviews with selected personnel. This combined effort served to define the organizational structure within which the program is implemented and also to delineate the authority and responsibility of the persons and organizations involved in performing on-site design activities. The internal and external interfaces among the involved organizations as well as personnel qualifications were also examined. Those program measures which call for periodic audits, and management review and evaluation of program effectiveness were also examined by the NRC inspector. Specific attention was given to the provisions of the program for controlling design changes and for document control.

##### 4.1.1 Program Content

The quality assurance program requirements for on-site design control are delineated in the S&W Engineering Assurance Procedures (EAP) Manual, in the S&W River Bend Procedures (RBP) Manual, and in the GSU River Bend Project Procedure (RBPP) Manual. The following documents were specifically reviewed:

- a. GSU RBPP No. 6.8, "Handling of E&DCRs and N&Ds by GSU," Revision 3
- b. S&W EAP No. 3.6, "Definition of Quality Assurance Categories and Marking of Documents," Revision 2
- c. S&W EAP No. 6.1, "Document Control," Revision 1
- d. S&W EAP No. 6.3, "Preparation, Review, Approval, and Control of E&DCRs (Engineering and Design Coordination Reports)," Revision 3
- e. S&W EAP No. 15.2, "Handling of Nonconformance and Disposition Reports (N&Ds) by Engineering," Revision 1
- f. S&W RBP No. 11.0-12, "Control and Distribution of S&W Drawings Diagrams, Process Procedures, and Specifications"
- g. S&W RBP No. 12.0-10, "Engineering and Design Coordination Report (E&DCR) Procedure"
- h. S&W RBP No. 14.0-6, "Handling of Nonconformance and Disposition Reports (N&Ds)"

- i. S&W RBP No. 18.1-0, "Establishment and Staffing of the Engineering Group (Jobsite)"
- k. S&W RBP No. 18.3-0, "Interface Between the Site Engineering Group and Project Headquarters (CHOC)" (sic. CHOC - Cherry Hill Operations Center)
- l. S&W RBP No. 18.4-0, "Interface Between the Construction Department and the Engineering Group (Jobsite)"
- m. S&W RBP No. 18.6-0, "Requirements for Training of Engineering Group (Jobsite) Personnel"
- n. S&W RBP No. 18.8-0, "Engineering Group Processing of and Advance Authorization for Change Requests"

In addition, the following documents which supplement the above listed document control procedures, were also reviewed:

- a. S&W Construction Methods Procedure (CMP) No. 11.1, "Jobsite Document Control," Revision 0
- b. S&W Construction Site Instruction (CSI) No. 11.0.1, "Site Control of Level 1 Documents," Revision 0

#### 4.1.2 Program Adequacy

The implementing quality assurance program requirements listed above were compared with the commitments applicable to River Bend established in the Preliminary Safety Analysis Report. The documents were also reviewed for any disparities with Regulatory Guide 1.64, "Quality Assurance Requirements for the Design of Nuclear Power Plants," and with American National Standard N45.2.11-1974, "Quality Assurance Requirements for the Design of Nuclear Power Plants." The assessment of program adequacy also included the interface control systems, the involvement of engineering in the review and analysis of potentially reportable construction deficiencies, the provisions for independent design checks, the field verification by on-site design engineers of installation/erection of field design changes, and the field observation by on-site design engineers of ongoing construction activities in the various engineering disciplines. As a result of the appraisals performed by the NRC inspector during this inspection, it has been found that the quality assurance program requirements for on-site design control should assure that the applicable regulatory requirements of Criterion III of Appendix B to 10 CFR Part 50 are being satisfied at the River Bend Station.

#### 4.1.3 Program Implementation

The NRC inspector determined that procedures were available for control of the design process relative to drawings, specifications, calculations, and revisions. Verification was also made that those selected instructions, procedures, drawings, and specifications reviewed during this inspection satisfied the requirements and conformed to good engineering practice with respect to design control. The Master Calculation Log was reviewed and those on-site generated calculations with respect to concrete were reviewed for technical adequacy. Randomly selected Engineering and Design Coordination Reports (E&DCRs) were reviewed to determine that the design change was reviewed by the originating design organization, did not appear to compromise the original design intent, and that the change was reviewed and approved by someone other than the originator. The additional review was found to be performed by the lead engineers who in the course of their review consider the impact of the design change on the overall design. A review was conducted of design drawings in the field to determine whether they were updated and revised to reflect the latest design changes. Drawing No. 12210-EC-68H-3 at Station 29 was found being used without a current list of outstanding E&DCRs (design changes). The list found was dated January 28, 1981, while the outstanding current list was dated February 4, 1981. Through discussions with GSU QA representatives, it was determined that this item was another example of a finding identified in GSU Audit No. SWS-01/81. This audit was performed during January 26-30, 1981, for the purpose of determining the effectiveness and implementation of procedures in the areas of document control and control of N&Ds. The NRC inspector reviewed the Summary Audit Report and noted that the GSU audit team found several deficiencies in the control of drawings and document changes by construction. Since the Resident Reactor Inspector has also recently identified problems in the area of document control (see IE Inspection Report No. 50-458/80-13, paragraph 3), the S&W response to the GSU audit findings will be considered an unresolved item pending closure of the audit findings.

#### 4.1.4 Management Involvement

Interviews were conducted with the on-site management of both the GSU and S&W Engineering Departments. The discussions served to identify the depth of on-site management involvement in the areas of program review, delegation of responsibility, establishment of policy, and corporate office interface. The interviews also served to determine the threshold levels for field and home office involvement in the review of design changes and to evaluate the responsiveness of the home office design group to field originated

problems. The qualifications of a representative sample of on-site design engineers involved in the oversight and initiation of on-site design activities were reviewed and discussed with the appropriate management.

#### 4.2 Perceived Program Weaknesses

The following observations made by the NRC inspector are perceived to be weaknesses in the quality assurance program for on-site design controls which, if corrected, would serve to strengthen the program:

- a. The GSU review and approval of Engineering and Design Change Requests (E&DCRs) and Nonconformance and Disposition Reports (N&Ds) performed in accordance with procedure RBPP No. 6.8, is documented on Figure No. 6.8-1, Revision 0 of the RBPP. This figure is entitled, "Review and Approval Route Sheet." This sheet calls for a determination of whether or not the PSAR, Environmental Report, Specifications, or Drawings are affected by the E&DCR or N&D. It is felt that the inclusion of documentation of a review for reportability of a potential construction deficiency under 10 CFR Part 50.55(e) would serve to strengthen the overall review and approval performed of E&DCRs and N&Ds.
- b. The S&W review of N&Ds for reportability of a potential construction deficiency under 10 CFR Part 50.55(e) is being performed by the Engineering Department. It is felt that formal review and/or concurrence in the determination by the S&W QA Department would serve to strengthen the overall program for potential construction deficiency reportability or determinations.
- c. The determination as to whether or not the S&W QA Department formally reviews an N&D is being performed by the engineer assigned the disposition. It is felt that if the S&W QA Department reviewed all generated N&Ds for the purpose of deciding whether or not they should be involved in the formal approval of the disposition it would serve to strengthen the N&D system. This observation is also based on the fact that N&D trending is the responsibility of S&W QA.
- d. Nonconformance Reports generated by offsite vendors and sub-contractors are tracked by use of the E&DCR form. This form does not provide for a review of the item with respect to potential construction deficiency reportability under 10 CFR Part 50.55(e) or 10 CFR Part 21. It is felt that the review of nonconformances generated off site would be strengthened by a formally documented review for reportability.

#### 4.3 Perceived Program Strengths

As a result of the NRC inspector's quality assurance program evaluation with respect to on-site design controls, it is felt that, with the exception of document control, both the GSU and S&W programs are strong and viable systems which when implemented satisfy the requirements of the applicable sections of Appendix B to 10 CFR Part 50.

#### 4.4 Identified Violations

A review of procedure manuals in the Site Engineering Office disclosed the two controlled manuals had missing procedures, missing procedure change notices, and contained outdated procedures. These discrepancies were identified in a S&W Corporate Audit (QACA Audit No. 21) performed during January 12-19, 1981. The S&W audit team recommended a complete review of all manuals in the Site Engineering Office to assure that they were updated and properly maintained. As of this inspection, no review had been performed and the discrepancies still existed.

This represents a failure to take prompt corrective action as required by Criterion XVI of Appendix B to 10 CFR Part 50.

### 5. Procurement Program

#### 5.1 Areas Inspected

The NRC inspector reviewed 30 randomly selected purchase orders stored in the S&W purchasing department files. These were traced backward to the original material requests and forward to receipt of the material. All were reviewed to assure that the procurement of critical material had been in accordance with PSAR requirements and S&W procurement specifications. Ten purchase orders were selected from this sample for a more thorough review and to follow the procurement system through to material use or final storage prior to issuance to field activities. To assure a good product mix, these orders were selected to include nonengineered expendable items, ASME III Category 1 and 2 pipe fittings, and weld filler material. Each purchase order was checked to assure that all requirements for purchase, storage, handling and content were specified on the purchase order or were clearly referenced. Records of all ten were also reviewed for adequacy of received documentation and inspections performed. Following receipt of the material, record packages and Certified Material Test Reports (CMTR) were reviewed in the record storage vault area to assure that accepted material was in compliance with the physical and chemical properties specified in each purchase order. A tour was made of two warehouses and several outdoor storage areas to verify that the material specified on these purchase orders was identified, segregated and stored as specified. All activities examined in this inspection appeared adequate and in compliance with the PSAR and internal procurement specifications. The ten purchase orders selected for this review were: 12210-05607, 12210-05996, 12210-07258, 12210-07741, 12210-08836, 12210-09024, 12210-09124, 12210-09155, 12210-09441, and R0-4388. These purchase orders were issued to companies or suppliers selected from the Proprietary Recommended Bidders List (RBL). Purchase Order R-04388 was placed with a company on the RBL although the items purchased and dollar value of the contract did not require this. The items on this purchase order, due to the nature of the product, were selected and ordered in accordance with S&W File No. 211.160, "Qualified Products List of Expendable Materials", Revision 2. All of the nine other purchase orders were placed in accordance with one of the following:

S&W 211.104, "Specification for Corrosion - Resisting Chromium and Nickel - Chromium Steel Covered Welding Electrodes", Revision 3

S&W 211.161, "Specification for Nonengineered Items," Revision 3

S&W 211.180, "Specification for Procurement of ASME Section III Raw Materials," Revision 1

S&W 228.150, "Specification for Shop - Fabricated Piping," Revision 1.

Each of these specifications is a very comprehensive document which details the requirements of the order. Such items as chemical compositions, physical tests required, shipping and storage instructions, marking of material, CMTR or COC required and any special environmental controls were clearly stated.

#### 5.1.1 Program Content

The overall content of the procurement program appears adequate as all commitments in the PSAR and internal purchasing documents were addressed on each purchase order in the sample.

#### 5.1.2 Program Adequacy

An initial examination of the program seemed to show it to be bulky and choked with excessive documents and manuals. The system does, however, become very clear and workable when familiarity is attained. All phases examined, including purchasing, receipt inspection, storage and record keeping, appear to be consistent with PSAR and procedural requirements. The procurement program seems adequate and appears to meet or exceed the requirements.

#### 5.1.3 Program Implementation

As evidenced by the lack of negative findings implementation of the program was determined to be adequate. Personnel were interviewed in each area inspected and all seemed to have a thorough knowledge of the mechanics of the system and records indicated that program requirements were being observed by all. These interviews, along with record reviews and inspections of storage areas indicate that the program implementation is adequate and does comply with the system requirements.

#### 5.1.4 Management Involvement

Interviews with personnel and supervisors in each area examined, along with observations by the NRC inspector indicate that management is intimately involved in all facets of the procurement



program. Each supervisor had a thorough understanding of not only his own area of responsibility but also those with which he interfaced. Employees in each area unanimously voiced the opinion that management involvement was good and that supervision was exhibiting a genuine interest in accomplishing the tasks of the program.

#### 5.2 Perceived Program Inadequacies or Weaknesses

No inadequacies or weaknesses were perceived in the procurement program. It should be noted, however, that the present Class A storage area is a building within the confines of a large warehouse. Although the environmental and access controls are good, the amount of space allotted to Class A storage appears to be small for the anticipated equipment to be stored. At the present time, this does not present a problem because only a limited amount of equipment and material requiring Class A storage has been received on site.

#### 5.3 Perceived Program Strengths

The most important program strength is that it works very well when it is understood and adhered to. Purchasing, receiving inspection, storage and material issuance were all examined thoroughly and no violations or significant deficiencies were noted indicating that the overall program is functional.

#### 5.4 Identified Violations

No violations or deviations were identified.

### 6. Quality Assurance Program

#### 6.1 Areas Inspected

The NRC inspector reviewed the Quality Assurance Program of GSU and S&W for program content, program adequacy and program implementation in the areas of organization, staffing, personnel qualification, auditing and measuring equipment control.

##### 6.1.1 Program Content

The Quality Assurance Program for construction of the River Bend Station has been established and defined in the GSU Nuclear Quality Assurance Manual and S&W Quality Assurance Program Manual. These manuals are consistent with the Quality Assurance Criteria of 10 CFR Part 50, Appendix B.

### 6.1.2 Program Adequacy

The Quality Assurance Programs established by GSU and S&W appear to be adequate and consistent with the requirements committed to in Chapter 17 of the PSAR for organizational authority and freedom, personnel qualification, audit scheduling and control of measuring equipment.

### 6.1.3 Program Implementation

The NRC inspector determined, through interviews with GSU and S&W quality assurance personnel and review of Quality Assurance Status Reports, Audit Schedules, Audit Reports and Organizational Charts, that, in the areas inspected, the Quality Assurance Program was being implemented consistent with the GSU Nuclear Quality Assurance Manual and S&W Quality Assurance Program Manual requirements. The Quality Assurance documents reviewed are listed below:

- a. GSU Audit Schedule-1981
- b. GSU Nuclear Quality Assurance Manual
- c. GSU Nuclear Quality Assurance Program Documents
- d. GSU Monthly Quality Assurance Status Reports for November and December 1980
- e. GSU Audit of GSU Site for February 1980
- f. GSU Audit of S&W Site for May 1980
- g. GSU Audit of S&W Site for August 1980
- h. GSU Audit of S&W Site for November 1980
- i. GSU Audit of GSU Site for January 1981
- j. S&W Audit Schedule-First Quarter 1981
- k. S&W Quality Assurance Program Manual
- l. S&W Quality Assurance Directives
- m. S&W Program Audit No. 6, dated November 21, 1979

- n. S&W Program Audit No. 7, dated October 15, 1980
- o. S&W Quarterly Audit No. 20, dated November 19, 1980

#### 6.1.4 Quality Assurance Management Involvement

The Resident Reactor Inspector (RRI) initiated this portion of the Construction Team Inspection by reviewing reports prepared by the Quality Assurance (QA) Organization, reviewing reports received by the QA organization, and determining if action taken by QA management as a result of the reports reviewed reflects appropriate management involvement.

The River Bend Project Procedure 2.1, "Section and Departmental Monthly Reports," requires that the QA Department issue a monthly report. The purpose of this report, as stated in the procedure, is as follows:

- a. provide a mechanism for tracking open items
- b. promote timely follow up and close out of open items
- c. provide a mechanism for reporting the status of the corrective action program to the River Bend Project Management

QA Department Activity Reports RBG 9231, dated December 8, 1980, and RBG 9528, dated January 19, 1981, were reviewed and found to be prepared in accordance with the above procedural requirements.

Other reports issued by the QA Department and reviewed by the RRI included various audit reports, special investigation reports, and special trip reports.

The RRI then reviewed a sample of the type of reports received by the site QA management. This sample included the following reports:

- a. "Stone and Webster Project Reports," RBS 6095, dated January 16, 1981
- b. "Stone and Webster QA Monthly Status Report," RBS 01774, dated January 10, 1981
- c. "Stone and Webster Field Quality Control Department Report," Report No. 61, dated December 3, 1980

- d. "GSU Expenditure Report," RBS 6140, dated January 28, 1981
- e. "Construction Cost/Scheduling Report Executive Summary," dated December 1980

The NRC inspector interviewed the licensee's QA Director and discussed other methods or channels of information available to him that keep him informed of project status, and that keep him informed of Quality Assurance related problems. The QA Director informed the RRI that a bimonthly meeting is held at the River Bend site with the top management of both the Stone and Webster organization and the Gulf States Utilities organization where corporate level problems can be discussed and corporate level QA inputs can be made. In addition, Stone and Webster Quality Control Engineering issues a report involving nonconformance reports and unsatisfactory inspection reports generated to provide a tool for tracking problem areas. Gulf States QA, in accordance with their PSAR commitment, prepares a semiannual trend analysis to be aware of project trends. A sample of these reports was reviewed by the RRI.

Other topics discussed during this interview included discussions of communication channels available to QA management which can provide early indications of low morale, trouble areas, or even positive suggestions. Recent allegations, media interface, and the overall attitude of the QA personnel were also discussed. From the results of this interview and from the reports reviewed, the RRI determined that QA management was actively involved in the site construction.

The RRI then interviewed seven members of the site management with positions ranging from construction foreman to executive vice president. These individuals were interviewed to obtain their view of the QA Department's activities and their conception of QA management involvement at the site. All personnel indicated their support for the QA function, and believed that the quality of construction at the River Bend site exhibited good communication between the various departments. This they attributed to the fact that QA management was involved and was informed of the day-to-day activities performed at the site.

Nine individuals, including two supervisors, employed in the Gulf States QA Department were interviewed to determine their conception of their management involvement and to determine their conception of their management's performance.

After these interviews had been completed, the RRI discussed with the licensee his observations in the area of QA management involvement. One of these observations involved improved visibility on the site. The Quality Assurance organizations seem very involved in their activities and functions they

perform at the site; however, other individuals in other organizations are not always aware that they are present performing their activity or their function. The site QA organizations could probably benefit by making themselves more visible.

## 6.2 Perceived Inadequacies or Weaknesses

The NRC inspector perceived the following apparent program weaknesses:

- a. Although a strong interface seems to exist among the various site departments and the GSU QA Department, a stronger interface appears necessary between the Stone and Webster QA organization (site) and the licensee's QA organization. The NRC inspector sensed a basic misconception of the purpose of the Stone and Webster QA organization within the GSU organization. The Stone and Webster "Project Quality Assurance Manager Charter and Organization" states, under "Field (Site) Operations," that the site QA group is responsible for "assuring conformance to specifications, drawings, instructions, and procedures during fabrication, erection, installation, and testing, by implementing the Quality Control Program at the construction site. GSU QA, on the other hand, as the licensee, has the overall responsibility to ensure that the site is constructed in accordance with its commitments made in the construction permit. This cannot be perceived as a parallel function. Thus, there seems to be a lack of understanding as to how the Stone and Webster QA group should function among GSU QA personnel, and this relationship needs to be clarified so that the two groups can function as efficiently as possible. Cooperation between Stone and Webster QA personnel, in their implementation of the Quality Control Program, and GSU personnel will assist GSU QA in the performance of the tasks necessary to carry out and fulfill their assigned responsibilities.
- b. As a result of interviews with GSU QA personnel, the NRC inspector perceived what appeared to be a weakness within the Quality Assurance management function. In these interviews, QA personnel indicated a feeling that their management may be too involved in finding their own solution to a problem once it has been identified, rather than in assuring the adequacy and sufficiency of corrective action defined by the responsible groups. Problems the past year in concreting placement activities and civil laboratory manifest this attitude. Concrete problems were consistently identified, but the proper and adequate corrective action to solve the problem was not taken by the licensee. (c.f. Inspection Reports 80-02, 80-05, 80-07, 80-12, and 80-13 pertaining to this facility.)
- c. A general comment rendered by the individuals interviewed revealed that QA group goals are based on the number of identified items and findings they obtain in a specified period. Thus, their ability to ensure adequate corrective action has been taken is also affected since their performance factor is based on numbers of findings.

In his discussions with QA management, the NRC inspector determined that the intention of QA management was to reflect a "surveillance" goal rather than a "number" goal; however, it is still the responsibility of the QA management to ensure that their personnel understand their goal and that their organization function in the manner in which it is intended. The NRC inspector perceived that this conception may have affected the QA individuals' conception of the task they are to perform as part of the Quality Assurance organization.

- d. The NRC inspector expressed concern to the GSU Director of Quality Assurance about the collateral assignment made in January 1981, for one of his supervisors to supervise both the Quality System Section and the Operations Quality Assurance Section. The concern was expressed because the collateral assignment was given to an employee who was recently promoted to supervisor (September 1980); and it was perceived that the impact could be inadequate supervision over one or both functional areas. As a result of the inspectors concern, the Director of Quality Assurance stated that he would monitor the assignment closer to assure that the supervisor does not become overburdened.

### 6.3 Perceived Program Strengths

The NRC inspector perceived the following apparent strengths:

- a. The generation of inspection plans and inspector handbooks by S&W Field Quality Control, Quality Engineering personnel in accordance with Quality Assurance Directive No. 10.14 should ensure that adequate inspections and surveillances are performed and documented.
- b. Bimonthly meetings are held at the River Bend site with top management of both the Stone and Webster and the Gulf States Utilities organizations, with corporate QA input, for problem resolution. Also, Stone and Webster QC Engineering issues a report involving nonconformance reports and unsatisfactory inspection reports which provide an excellent tool for tracking problem areas.
- c. Gulf States QA prepares a semiannual trend analysis report and uses this report to be aware of project trends.
- d. QA management is actively involved in the site construction and lines of communications appear adequate.

### 6.4 Identified Violations

No violations or deviations were identified.

## 7. Construction Control Program

### 7.1 Electrical

Due to the lack of electrical activity at this stage of construction, the NRC inspector was unable to perform any direct inspection or work observation in the electrical construction area. However, the NRC inspector did review the GSU audit and investigation findings on the Union of Concerned Scientists (UCS) allegations (c.f. Inspection Report 80-08). GSUs audit and investigation findings were thorough and very well documented. The NRC inspector also received a current update on the GSU position on Regulatory Guide 1.31, Okonite cable qualifications and the cable tray repair qualification.

No violations or deviations were identified.

### 7.2 Civil/Structural

#### 7.2.1 Areas Inspected

The NRC inspector reviewed the construction controls in the Civil/Structural area. Due to inclement weather, no concrete placements occurred during this inspection. The review was therefore limited to interviews with selected personnel, review of records, and observation of completed construction activities.

#### 7.2.2 Program Implementation

Interviews were held with selected field quality control and construction personnel in order to assess overall morale and employee opinions relative to the adequacy of management practices, concern for construction quality, and harmony between construction and QA/QC organizations. The interviews also served to define the interviewee's perceived tasks, responsibilities, and authority for subsequent comparison to documented organizational structures, responsibilities, and authorities. Specific attention was given during this phase of the inspection to the stop-work/stop-process authority. The nonconformance trending system was reviewed to determine the extent of the trending program and to define actions resulting from the program. Tours of the site were conducted to observe completed and in-process repairs of nonconforming concrete placements.

#### 7.2.3 Perceived Weaknesses

The review of records resulted in the following perceived weaknesses:

- a. A review of the Pour Card preplacement inspection sign-offs by field quality control showed that in several instances the signatures are not dated and in other

instances the signatures of the mechanical and electrical QC inspectors were from 2 to 4 weeks prior to the placement date. It is felt that the final sign-off performed by the civil preplacement inspector should include a determination that the mechanical and electrical QC inspections are still valid in cases of early inspection sign-offs. It is further felt that all signatures on Pour Cards and other QC records should be dated.

- b. A review of the Pour Cards in the QA vault showed that temporary manila folders were being used for approximately 50 percent of the placement records filed. The Pour Card serves as the permanent folder for the placement records. It was identified that a majority of the Pour Cards were held in the Construction Control and Completion Program (CCCP) office. Although the temporary storage in the CCCP office is in compliance with commitments, it is felt that a more efficient method of document transmittal and retention exists. The oldest Pour Card in the CCCP file was dated December 1, 1980.

#### 7.2.4 Perceived Strengths

As a result of the NRC inspector's review of construction controls in the Civil/Structural area, it is felt that both the GSU and S&W programs result in quality construction. The trending of nonconformances by the S&W QC group and by the CCCP group indicate a strong effort to preclude repetitious nonconformances.

#### 7.2.5 Identified Violations

No violations or deviations were identified.

### 7.3 Welding

#### 7.3.1 Areas Inspected

The NRC inspector performed an inspection of the following areas related to the welding activities of S&W: fabrication controls, measuring and test equipment control, and employee morale.

#### 7.3.2 Program Implementation

The NRC inspector selected three Class 3 welds, Weld No. FW006 on Drawing No. 1-SWP-029 and Welds Nos. FW-006 and FW-013 on Drawing No. 1-SWP-026, in the service water piping system of which the first was being welded in the field and the other two were being welded in the site fabrication shop.

Weld Data Packages consisting of the appropriate Weld Data Sheet, Welding Technique Sheet and Isometric Drawing were available at



each weld location. These packages provided a means of control and documentation for the welding and inspection. The NRC inspector noted that the hold points on the Weld Data Sheets were signed off consistent with the status of work.

In the areas of welder qualification, weld and inspection documentation, procedure compliance, inspector certification, welder surveillance and filler material control, no discrepancies from the requirements of the Quality Assurance Control Manual-ASME III, Welding Procedure No. W-100B and ASME B&PV Code, Section III-ND, were noted. The measuring and test equipment used by S&W personnel are being controlled in accordance with the calibration and control program established in the Calibration Manual. The NRC inspector selected four working standards which are used to calibrate other measuring and test equipment and six measuring and test equipment out-of-tolerance reports for inspection. The certification of calibration for each working standard was found to be current and traceable to the National Bureau of Standards. The out-of-tolerance reports identified the specific problem and the evaluation was properly accomplished concerning previous use of the measuring and test equipment. The following measuring and test equipment (M&TE) Working Standards and Out-of-Tolerance (OT) reports were those selected for inspection:

- a. M&TE No. 10737, Digital Thermocouple
- b. M&TE No. 10356, Indicator Dial Master
- c. M&TE No. 10089, Gage Block Set
- d. M&TE No. 10103, Surface Plate
- e. OT No. 1-028-10, Report on M&TE No. 10620
- f. OT No. 1-028-1, Report on M&TE No. 10584
- g. OT No. 1-020-1, Report on M&TE No. 10385
- h. OT No. 1-018-6, Report on M&TE No. 10426
- i. OT No. 1-014-1, Report on M&TE No. 10093
- j. OT No. 1-013-5, Report on M&TE No. 10552

The NRC inspector determined, from interviewing sixteen S&W employees, consisting of seven Field Quality Control employees, two Welding Supervisors, two Pipefitter Foremen, three welders and two pipefitters, that the employee morale appeared good, working conditions were satisfactory and harmony existed between construction and Field Quality Control organizations.

### 7.3.3 Perceived Inadequacies or Weaknesses

No specific inadequacies or weaknesses were identified.

### 7.3.4 Perceived Strengths

No specific program strengths were identified.

### 7.3.5 Identified Violations

No violations or deviations were identified.

## 7.4 NDE

### 7.4.1 Areas Inspected

The NRC inspector directed this portion of the inspection toward the nondestructive examination activities of Stone and Webster (S&W) and Graver Energy Systems, Inc., as these are the only organizations performing these functions onsite.

The inspection was begun by reviewing the qualification records for 10 S&W and 15 Graver NDE inspectors. The written examinations and practical tests administered to the inspection personnel appeared to be in accordance with SNT-TC-1A. The qualification records also indicated that each person had successfully passed the mandatory annual vision examinations within the past 12 months.

The NRC inspector reviewed the records for inspections performed on the following seven isometric drawings for piping: 1-CCP-066-A1, 1-CCP-105-A1, 1-CCP-119-A1, 1-CCP-119-A2, 1-CCP-119-A3, 1-HVC-005-A and 1-HVC-005-B. The magnetic particle and visual inspections performed on a total of thirty-four welds were recorded for these drawings. Although repairs were required in some instances, the final records indicated that all welds ultimately met the acceptance criteria of the ASME Boiler and Pressure Vessel (B&PV) Code and that the inspection results of each had been reviewed and signed by the cognizant Authorized Nuclear Inspector (ANI). The NRC inspector also reviewed the Graver records for the magnetic particle and visual examination of six containment vessel liner plate welds. Selected for this review were vertical welds 7-V-4, 7-V-8, 8-V-6, 8-V-4, 9-V-10 and horizontal weld 8-H-2. Records indicated that each inspection was performed by qualified personnel and in accordance with approved inspection procedures.

The NRC inspector reviewed S&W radiographs and attendant records for four piping joints. A total of thirty-one shots, including repair and final radiographs, were examined for adequacy of film densities, penetrameter selection, penetrameter placement, proof of coverage, film identification and interpretation of indications. Selected for this review were 1-RHS-016-143-2 FW-003, 1-CS-006-020-2 FW-002, 1-CS-006-020-2 FW-003 and 1-ICS-006-020-2 FW-006. An independent evaluation was made of each radiograph

and the results compared with the S&W interpretation sheet. S&W evaluation and disposition appeared to be in compliance with the requirements of the ASME B&PV Code.

The NRC inspector selected five containment vessel liner welds and one welder qualification test for evaluation of Gravers' Radiographic Inspection Program. Selected for this review were vertical welds 12-V-2, 12-V-6, 12-V-10; horizontal welds 9-H-2, 9-H-6; and the three radiographs for the qualification of Graver welder No. 70. A total of 65 radiographs were subjected to the same examination as above with essentially the same results. One discrepancy was noted on the interpretation sheets for the welder qualification radiographs. This discrepancy involved the recorded film density and the actual density observed by the NRC inspector. The Graver Supervisor was notified and did concur that an erroneous entry had been made. The Supervisor agreed that further instruction in the use of a densitometer was warranted and would be conducted within one week. No further action is deemed necessary as there is no requirement to record film density on the interpretation sheets. All entries, required or not, should however be accurate.

The NRC inspector reviewed the calibration records for approximately 30 pieces of equipment under Graver's calibration system. The review included magnetic particle equipment, pyrometers, thermometers, tong testers and ultrasonic inspection instruments. All records indicated that equipment calibration was being performed at the specified intervals and that all equipment was currently calibrated or had been removed from service.

The NRC inspector interviewed several inspectors and supervisors and one ANI to discuss the applicability of and adherence to Hold Point requirements. All interviewed felt that the Hold Point system was necessary and all exhibited an understanding of its relevance. Only two occasions of work progressing beyond Hold Points were mentioned by those interviewed; but these were not considered to be in noncompliance by the NRC inspector. Both cases were isolated events in which the Hold Points were passed by newly transferred craftsmen who were not yet familiar with their purpose. Other workmen had immediately noticed the omission and notified QC, and corrective action had been accomplished in accordance with QA program requirements. In both cases, the Hold Point inspection could be, and was, satisfactorily performed after-the-fact. Both had been verbally reprimanded and reinstructed.

#### 7.4.2 Program Implementation

Implementation of the NDE programs of both Graver and S&W appears adequate. Both organizations seem to have very good interface relations between the QA/QC engineering and construction functions.

#### 7.4.3 Perceived Inadequacies or Weaknesses

The only perceived weakness was the lack of instruction in the use of a densitometer by one or more of the Graver film interpreters. This is not a violation, as there is no requirement to record film density on the interpretation sheets. Graver supervision has verbally committed to have the film interpreters enter the minimum and maximum film densities in the appearance spaces in the future as an information item.

#### 7.4.4 Perceived Strengths

Both Graver and S&W have effective NDE programs that are being administered by supervision and inspectors that seem very competent and enthusiastic. Morale and inter-departmental rapport appear to be good.

#### 7.4.5 Identified Violations

No violations or deviations were identified.

### 7.5 Quality Assurance

#### 7.5.1 Areas Inspected

The NRC inspector reviewed the organization chart for the Field Quality Control (FQC) program, and interviewed Field Quality Control inspection personnel and FQC supervisors. As a result of the review of the FQC program and discussions with FQC personnel, the RRI perceives a strength in the Field Quality Control program at River Bend as noted in 7.5.4 below.

#### 7.5.2 Program Implementation

Discussions with supervisory personnel revealed a dedication to quality. Personnel seemed well qualified for their positions, and were extremely competent in their areas of expertise.

The NRC inspector reviewed a sample of inspection plans, inspector reports, and various charts and graphs applicable to the function of the Quality Control Engineering group. The FQC Superintendent was then interviewed to assess his perception of the FQC organization and its function. As a result of this review, the NRC inspector perceived management within the FQC organization itself to be competent, with a sincere dedication to quality and quality control.

### 7.5.3 Perceived Inadequacies or Weaknesses

Even though the quality control organization at River Bend facility appears strong overall, there seems to be a weakness in the Civil Testing Laboratory QC program. The NRC inspector perceived a weakness in that there seems to be a lack of adequate management in the civil testing laboratory.

The NRC inspector personally interviewed all of the laboratory personnel present on site during the inspection period. These interviews resulted in the following perceived problems:

- a. The full time lab supervisor rarely had the time to supervise.
- b. Laboratory programs were not adequately implemented.
- c. A wide gap of communication existed between the workers and their supervision.
- d. Laboratory test reports were not properly reported on the date the test was performed.
- e. There have been several NRC findings involving the test lab in the past year and the problems did not appear to have been relayed to upper management.

One thing that became apparent to the NRC inspector during these interviews was the fact that the personnel, including the supervisors, did not understand the importance of signatures on quality records.

A recent organization and change of personnel may be the solution to many of the above noted problems in the test lab; however, QC management must remain informed of problems that exist so that a proper and adequate solution can be rendered.

### 7.5.4 Perceived Strengths

An important aspect of the FOC organization is the Quality Control Engineering group which is responsible for issuing inspection plans to provide an aid to the field inspector. This group is also responsible for monitoring their inspection personnel to ensure that the field inspectors are utilizing proper and adequate inspection techniques. Another important function of this group is to provide a trending analysis of problem areas. A graphic analyst has been hired to perform this function.

7.5.5 Identified Violations

No violations or deviations were identified.

8. Unresolved Items

Unresolved items are matters about which more information is required in order to ascertain whether they are acceptable items, violations, or deviations. One such item is discussed in paragraph 4.1.3 and will be entitled, "Documentation Control," in future discussions of this matter.

9. Exit Interview

The NRC inspectors met with the licensee and contractor representatives denoted in paragraph 1 at the conclusion of each week of the inspection on February 6, 13 and 20, 1981. The scope and findings of the inspection were summarized.