

# SHAW, PITTMAN, POTTS & TROWBRIDGE

A PARTNERSHIP OF PROFESSIONAL CORPORATIONS

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February 14, 1984

WRITER'S DIRECT DIAL NUMBER

(202) 822-1209

Mr. J. M. Felton, Director  
Division of Rules and Records  
Office of Administration  
United States Nuclear Regulatory  
Commission  
Washington, D.C. 20555

Re: Freedom of Information Act Request

Dear Mr. Felton:

This is a request under the Freedom of Information Act, 5 U.S.C. § 552, and 10 C.F.R. Part 9.

The NRC conducted an inspection of the South Texas Project, Units 1 and 2, Docket Nos. 50-498 and 50-499, on August 6-10, 1979. The NRC transmitted its inspection report, Inspection and Enforcement Report Nos. 50-498/79-13 and 50-499/79-13 ("Report No. 79-13") to Houston Lighting & Power Co. ("HL&P") on October 5, 1979. A copy of Report No. 79-13 and the October 5, 1979 transmittal letter is attached.

I write to request copies of all records leading up to, arising out of, or in any way pertaining to Report No. 79-13. This request encompasses, but is not limited to, (1) all records located in Region IV or any other NRC branch office; (2) all records to or from Region IV or any other NRC branch office; (3) all internal NRC memoranda and communications discussing or relating to Report No. 79-13 and the associated Notice of Violation; and (4) any notes or minutes of discussions

FREEDOM OF INFORMATION  
ACT REQUEST  
FOIA-84-108  
Rec'd 2-16-84

8404190077 840214  
PDR FOIA  
SAMP84-108 PDR

SHAW, PITTMAN, POTTS & TROWBRIDGE

A PARTNERSHIP OF PROFESSIONAL CORPORATIONS

Mr. J. M. Felton  
February 14, 1984  
Page Two

between NRC personnel and HL&P personnel at the conclusion of the August 6-10, 1979 inspection.

I hereby agree to pay the prescribed fees for locating and copying the records sought by this request.

Please call me if you have any questions about the scope of this request.

Sincerely yours,

A handwritten signature in cursive script, appearing to read "Richard A. Samp".

Richard A. Samp

RAS:tms  
Attachment



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION IV  
611 RYAN PLAZA DRIVE, SUITE 1000  
ARLINGTON, TEXAS 76010

October 5, 1979

In Reply Refer To:

RIV

Docket No. 50-498/Rpt. 79-13

50-499/Rpt. 79-13

Houston Lighting and Power Company  
ATTN: Mr. E. A. Turner, Vice President  
Power Plant Construction and  
Technical Services  
Post Office Box 1700  
Houston, Texas 77001

Gentlemen:

This refers to the inspection conducted by Mr. W. G. Hubacek and other members of our staff during the period August 6-10, 1979, of activities authorized by NRC Construction Permits No. CFP-128 and 129 for South Texas Project, Units No. 1 and 2, and to the discussion of our findings with Mr. R. A. Frazar and other members of your staff at the conclusion of the inspection.

Areas examined during the inspection and our findings are discussed in the enclosed inspection report. Within these areas, the inspection consisted of selective examination of procedures and representative records, interviews with personnel, and observations by the inspectors.

During the inspection, it was found that certain activities under your license appear to be in noncompliance with Appendix B to 10 CFR 50 of the NRC Regulations, "Quality Assurance Criteria for Nuclear Power Plants." The items of noncompliance and references to the pertinent requirements are identified in the enclosed Notice of Violation.

Nine new unresolved items are identified in paragraphs 3.c, 3.d, 3.h, 3.i, 3.m, 3.n, 6, 9, and 10 of the enclosed report.

This notice is sent to you pursuant to the provisions of Section 2.201 of the NRC's "Rules of Practice," Part 2, Title 10, Code of Federal Regulations. Section 2.201 requires you to submit to this office, within 30 days of your receipt of this notice, a written statement or explanation in reply including:

- (1) corrective steps which have been taken by you, and the results achieved;
- (2) corrective steps which will be taken to avoid further noncompliance; and
- (3) the date when full compliance will be achieved.

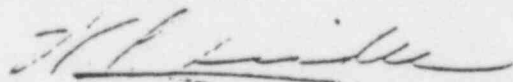
7411130116  
STAFF EXHIBIT NO. 27

October 5, 1979

In accordance with Section 2.790 of the NRC's "Rules of Practice," Part 2, Title 10, Code of Federal Regulations, a copy of this letter and the enclosed inspection report will be placed in the NRC's Public Document Room. If the report contains any information that you believe to be proprietary, it is necessary that you submit a written application to this office, within 20 days of the date of this letter, requesting that such information be withheld from public disclosure. The application must include a full statement of the reasons why it is claimed that the information is proprietary. The application should be prepared so that any proprietary information identified is contained in an enclosure to the application, since the application without the enclosure will also be placed in the Public Document Room. If we do not hear from you in this regard within the specified period, the report will be placed in the Public Document Room.

Should you have any questions concerning this inspection, we will be pleased to discuss them with you.

Sincerely,



W. C. Seidle, Chief  
Reactor Construction and  
Engineering Support Branch

Enclosures:

1. Appendix A, Notice of Violation
2. IE Inspection Report No. 50-498/79-13  
50-499/79-13

APPENDIX A

NOTICE OF VIOLATION

Based on the results of the NRC inspection conducted on August 6-10, 1979, it appears that certain of your activities were not conducted in full compliance with the conditions of your NRC Construction Permits No. CPPR-128 and 129 as indicated below:

A. Failure to Follow Procedures for Maintaining PDM QA Manuals

10 CFR Part 50, Appendix B, Criterion V requires that activities affecting quality shall be accomplished in accordance with instructions, procedures, or drawings.

Pittsburgh Des Moines (PDM) QA Manual, Section 12 requires that the manual shall be reviewed semiannually or more frequently by the QA Committee to keep the manual current with Code Addenda and PDM construction and QA procedures.

Contrary to the above:

The PDM QA Manual did not appear to have been reviewed on a semiannual or more frequent basis in that it was not current nor adequately controlled as exemplified by the following:

1. Section 12, "Manual Revision and Distribution," does not describe how supplements are to be integrated into the manual after receipt.
2. Section 13, "Audits," does not state Lead Auditor and auditor qualifications requirements nor does it describe how they are qualified.
3. QA Manuals No. 67, 132, 152, and 177 were found deficient in several areas such as missing sections, different supplements, a superseded procedure and an unauthorized memorandum imposing additional requirements.

This is an infraction.

B. Failure to Follow Procedures for Conduct of PDM Site Audits

10 CFR 50, Appendix B, Criterion V requires that activities affecting quality shall be accomplished in accordance with instructions, procedures, or drawings.

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PDM QA Manual, Section 13.0 requires that: annual or more frequent audits be performed at each construction site; deficiencies and corrective actions be brought to the attention of responsible managers; audit results be reviewed by responsible management; and reaudits be performed to assure correction of deficiencies.

Contrary to the above:

1. Annual or more frequent audits at the construction site were not performed in that the QA program was not completely audited in 1976.
2. Deficiencies and corrective actions were apparently not brought to the attention of responsible managers in that corrective action statements have not been signed off by management since 1976.
3. There is no evidence that audit results have been reviewed by responsible management to determine required corrective action. Reaudits were not performed to assure correction of deficiencies. In one case, recurring deficiencies were identified in 1977, yet the deficiencies have not been corrected to date (August 16, 1979).

This is an infraction.

C. Failure to Delineate Organizational Change in the PDM QA Manual

10 CFR 50, Appendix B, Criterion I requires that authority and duties of persons and organizations affecting safety-related functions of structures, systems, and components shall be clearly established and delineated in writing.

Contrary to the above:

A new position that had been established between the PDM Division QA Manager and the PDM Site QA Manager was not delineated in the PDM QA Manual.

This is a deficiency.

D. Failure to Maintain Completed Audit Checklists in Audit Files

10 CFR 50, Appendix B, Criterion XVII requires that sufficient records shall be maintained to furnish evidence of activities affecting quality.

Houston Lighting & Power Company (HL&P) Procedure QAP-5B requires that completed audit checklists shall be maintained in the QA audit files.

Contrary to the above:

The QA file for audit HL-60 contained two incomplete audit checklists.

This is a deficiency.

E. Failure to Destroy or Stamp a Deleted QA Procedure

10 CFR 50, Appendix B, Criterion V requires that activities affecting quality shall be accomplished in accordance with instructions, procedures, or drawings.

Brown & Root Procedure ST-QAP-2.2, Attachment 6-D requires that superseded QA program documents must be destroyed or stamped "void" or "superseded".

Contrary to the above:

Brown & Root QA Manual No. 19 contained Procedure ST-QAP-5.12 which had been deleted per a "Summary of Revision" dated October 13, 1973; however, the procedure had not been stamped "void" or "superseded".

This is a deficiency.

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

REGION IV

Report No. 50-498/79-13; 50-499/79-13

Docket No. 50-498; 50-499

Category A2

Licensee: Houston Lighting and Power Company  
Post Office Box 1700  
Houston, Texas 77001

Facility Name: South Texas Project, Units 1 & 2

Inspection at: Houston Offices and South Texas Project

Inspection conducted: August 6-10, 1979

Inspectors:

*for* W. G. Hubacek  
W. G. Hubacek, Reactor Inspector, Projects  
Section (paragraphs 1, 2, 3.k, 3.m, 7, 10,  
11, 12 & 13)

10/5/79  
Date

J. I. Tapia  
J. I. Tapia, Reactor Inspector, Engineering  
Support Section (paragraphs 3.i, 8 & 9)

10-2-79  
Date

*for* L. E. Foster  
L. E. Foster, Inspection Specialist, RII  
(paragraphs 2, 3.a, 3.b, 3.c, 3.e, 3.f, 3.g,  
4, 5, 6 and 7)

10/5/79  
Date

*for* H. S. Phillips  
H. S. Phillips, Resident Reactor Inspector,  
Projects Section (paragraphs 3.c, 3.d, 3.h,  
3.j, 3.l and 3.m)

10/5/79  
Date

*741130126*

Other  
Accompanying  
Personnel:

L. S. Waller, Engineering Aide (Co-op), Engineering Support  
Section

Approved:

W. A. Crossman  
W. A. Crossman, Chief, Projects Section

10/5/79  
Date

*for* R. E. Hall  
R. E. Hall, Chief, Engineering Support Section

10/5/79  
Date

Inspection Summary:

Inspection on August 6-10, 1979 (Report No. 50-498/79-13; 50-499/79-13)

Areas Inspected: Special, announced Mid-Term QA inspection of the establishment and implementation of the licensee's QA program for site related activities including design, procurement and construction. Areas inspected included QA management, procurement control, document control, design control, vendor surveillance, audits, QA/QC organization and site installation activities. The inspection involved one hundred thirty-two inspector-hours by four NRC inspectors.

Results: Of the eight areas inspected, five items of noncompliance were identified in three areas (failure to follow procedures for maintaining PDM QA Manuals - infraction, paragraph 3.m; failure to follow procedure for conduct of PDM site audits - infraction, paragraph 3.m; failure to delineate organizational change in the PDM QA Manual - deficiency, paragraph 3.m; failure to maintain completed audit checklists in audit files - deficiency, paragraph 3.k; and failure to destroy or stamp deleted QA procedure - deficiency, paragraph 3.c).

## DETAILS

### 1. Persons Contacted

#### Principal Licensee Employees

\*R. A. Frazar, Manager, Quality Assurance  
\*D. G. Barker, Manager, South Texas Project  
\*J. H. Ferguson, Technical Consultant to the Vice President, Power Plant  
Construction and Technical Services  
\*W. N. Phillips, Project QA Manager  
\*T. D. Stanley, Project QA Supervisor  
\*L. D. Wilson, Site QA Supervisor  
\*D. G. Long, QA Lead Engineer  
\*T. J. Jordan, QA Lead Engineer  
\*M. H. Smith, Plant QA Engineer  
\*S. A. Viaclovsky, Supervisor, Support Division  
\*R. L. Ulrey, Senior QA Specialist  
H. G. Overstreet, Lead QA Specialist, Vendor Surveillance  
\*A. J. Granger, Project Engineering Manager  
\*B. F. Duncan, Startup Manager  
A. E. Schoeneberg, Project Purchasing Manager  
\*R. C. Henson, Operations QA Supervisor  
J. L. Blau, Supervising Project Engineer  
J. R. Mollada, Lead Project Engineer - Mechanical  
D. R. Valley, QA Specialist - Audit Coordinator  
P. A. Swearingen, General Supervisor, Records Management Division  
M. S. Monteith, QA Technician  
G. A. Marshall, Senior QA Specialist  
J. A. Anderson, QA Specialist  
R. R. Hernandez, Lead Project Engineer - Civil  
S. C. Sims, Leader, Administrative Group  
C. L. Grosso, QA Associate Engineer

#### Other Personnel

J. Dodd, Senior Project Manager, Brown & Root (B&R)  
\*C. W. Vincent, Project QA Manager, B&R  
\*G. T. Warnick, Site QA Manager, B&R  
\*H. O. Kirkland, Acting Project General Manager, B&R  
\*J. M. Salvitti, Assistant Construction Project Manager, B&R  
\*S. A. Rasnick, Manager, Construction Engineering, B&R  
\*R. G. Withrow, Assistant Engineering Project Manager, B&R  
D. E. Sewell, QC Civil Inspector, B&R  
E. R. Vickery, Acting Lead Cadweld QC Inspector, B&R

- L. Tofte, QA Training Coordinator, B&R
- G. Mills, Chief Draftsman, Structural Group, B&R
- A. F. Holbrook, Assistant QA Manager, B&R
- R. Childers, Assistant to QA Coordinator, B&R
- R. Kimball, Project Vendor Surveillance Coordinator, B&R
- A. S. Goewey, NCR Supervisor, B&R
- J. Purdy, QA Turnover Supervisor, B&R
- D. Shumway, Day Shift Supervisor, QC Engineering, B&R
- C. M. Singleton, Area Supervisor, QC Engineering, B&R
- B. F. Mitchell, Quality Engineer, B&R
- C. Mudd, Supervisor, Document Control, B&R
- S. Horton, Site Internal Surveillance Supervisor, B&R
- D. Whittaker, Automotive System Specialist, B&R
- W. Abrams, QA Specialist, B&R
- R. Fountain, Lead Clerk, B&R
- C. Chaplin, Site QA Manager, Pittsburgh Des Moines (PDM)
- M. L. Self, Site Superintendent, PDM
- R. Barker, Site Engineer, PDM
- A. H. Ewton, Site Manager, Pittsburgh Testing Laboratory

## 2. Review of QA Program and Inspection and Enforcement History

The IE inspectors performed a review of the QA manuals and docket files of the licensee, architect engineer and constructors to include the following: inspections relative to QA programs and site; enforcement correspondence and responses; audits; responsibilities of key personnel; construction deficiency reports; organization; execution of the QA program and continued development of the QA program for the South Texas Project.

QA procedures for the control of activities within the Houston Lighting and Power Company (HL&P) QA, Engineering, and Purchasing Organizations are contained within the organization's respective QA manuals. In the case of HL&P delegated activities, the QA procedures for control of design, procurement and construction are contained within the B&R and W QA manuals. Major subcontractors (Pittsburgh Testing Laboratory and Pittsburgh Des Moines Steel Company) have their own QA manuals which have been approved by the licensee.

It was noted that the HL&P organization for project management, which is described in the Project Quality Assurance Plan (PQAP), Revision 4, dated July 20, 1979, differs from that shown in Chapter 17 of the South Texas Project (STP) PSAR. The functions previously performed by

several HL&P departments have been consolidated in the STP organization under the direction of the Manager, STP who reports to the Vice President, Power Plant Construction and Technical Services. The Manager, STP is responsible for engineering, construction, startup, cost and schedule activities and results of STP.

Changes have also been made in the licensee's Quality Assurance department. The QA Manager now reports to the Vice President, Power Plant Construction and Technical Services rather than to the Executive Vice President as stated in the STP PSAR. The position of Projects QA Manager has been added and has responsibility for planning, development, implementation, coordination, and administration of the Quality Assurance program for power plant projects (including STP) during engineering, design, procurement and construction activities. The Projects QA Manager reports to the QA Manager. The position of Supervising Engineer has been changed to Project QA Supervisor with continued responsibility for development, implementation, coordination and administration of STP quality activities. The Project QA Supervisor reports to the Projects QA Manager. The Supervisor, Site QA, who is assigned to the site, is responsible for site quality assurance surveillance of activities for STP during construction and startup operations. The Supervisor, Site QA, reports to the Project QA Supervisor.

The review findings indicate that HL&P has developed and is continuing to upgrade the QA program consistent with the SAR commitments relative to design, procurement, construction, enforcement response and reporting of deficiencies. QA manuals and procedures are being revised to depict organization changes and improvements to the overall program. The licensee advised the IE inspectors that the PSAR was not revised to depict changes as NRC licensing does not desire to review the changes.

### 3. On-Site Review of QA Manual and QA Manual Implementation

#### a. QA Manual Reviews (HL&P and B&R)

The HL&P QA manual, identified as the STP Quality Assurance Plan (SQAP), describes the HL&P Quality Assurance plan. It delineates the policies, organizational responsibilities and methods used by HL&P to conform to the eighteen "Quality Assurance Criteria" set forth in Title 10, Part 50, Appendix B of the Code of Federal Regulations.

HL&P has provided their position descriptions for QA personnel, QA forms and QA procedures in a bound volume and has identified it as the STP Quality Assurance Manual. This manual details the requirements to meet their commitments made in the PSAR.

B&R has provided a QA manual which specifies their QA program for design, procurement and construction activities associated with STP. The B&R QA manual and associated procedures for STP were reviewed and approved

by the licensee to ensure that B&R's QA program meets the requirements of the HL&P QA program. The B&R QA manual specifies that STP is to be constructed in accordance with ASME, Section III, 1974 Edition, Division I with Winter 1975 Addenda. The licensee has also committed to ASME, Section III, Division II. The B&R QAM also specifies that the requirements of 10 CFR 50, Appendix B will be met and that the QA procedures will meet the QAM requirements.

Several sections of the B&R and HL&P QA manuals and procedures were examined in detail to determine if the manuals and procedures were being updated to correct programmatic deficiencies, changes in QA/QC organizational structure, technical requirements and if the changes were being reviewed and approved by the licensee. B&R manual sections and QA procedures examined in detail were:

- (1) Section 10, "Examination, Inspections and Tests" (revised 8/8/79)
- (2) Section 9, "Special Processes" (revised 2/5/79)
- (3) Section 1, "Organization"
- (4) Section 2, "Training"
- (5) QAP-2.6, "Nonconformances" (revised 3/15/79)
- (6) QAP-2.7, "Stop Work Authority"
- (7) QAP-2.4, "QA Document Review" (revised 3/1/79)
- (8) QAP-2.3, "Document Administration"
- (9) QAP-5.4, "Structural Integrity Tests" (revised 2/24/79)
- (10) QAP-5.6, "Post Tensioning" (revised 2/24/79)
- (11) Quality Assurance Training Manual

HL&P manuals examined in detail included:

- (1) HL&P Project Engineering Procedures Manual No. PEP-01, "Preparation and Control of Project Engineering Procedures"
- (2) HL&P Project Quality Assurance Plan, Revision 6, dated 6/20/79 (Sections 1, 2, 3, 6 and 8)

Procedures are being revised to eliminate deficiencies and to improve the effectiveness of program execution. Comparison of

B&R manuals in the corporate office and at the site confirmed that the manuals are being maintained current with the latest revisions. During discussions with B&R QA personnel, the IE inspector was informed that the site organization chart shown in the manual had not been updated to show the latest site QA structure. The basic responsibilities of the B&R QA department have not changed, but the Quality Control Engineering Groups have been assigned QC responsibilities for certain areas of the plant instead of the previous discipline assignments. QC Engineering personnel continue to report to the QA department.

Examinations of the QAMs, procedures and documentation revealed that the licensee and constructor have adequate QA programs and appear to be implementing the specified programs.

No items of noncompliance or deviations were identified.

b. QA Manual Document Control (HL&P)

The licensee's PQAP Manual is issued to define and control activities at the licensee's corporate office and STP site.

The PQAP Manual delegates responsibilities for control of contractor's QA manuals to the contractors. The licensee is responsible for auditing the contractor's control of their QA manuals.

PQAP Manual, Revision 6, dated June 20, 1979, describes the methods used for preparing and controlling quality related activities. Sections 3, 6 and 7 specifically address document control. The Records Management Division under the QA department is responsible for maintaining copies of the STP records which include drawings, copies of all in-house correspondence, B&R's design manual and typical reference documents, audit reports, procurement documents, specifications and correspondence between the licensee and major vendors (B&R and W). This Division does not issue and distribute information but is mainly a filing operation; however, items can be checked out for use by licensee personnel. The IE inspector was advised that the licensee is developing a computer system for control of documents.

Responsibility for the development, control and implementation of the PQAP Manual is assigned to the HL&P Corporate QA Manager. Departmental procedures are prepared by each QA Division and are compiled into a Quality Assurance Procedures (QAP) Manual. Responsibility for control of the PQAP and QAP Manuals has been assigned

to the Support Division of the QA Department. Each manual is numbered and each holder of a manual is assigned a controlled manual number. The leader, Administrative Support Section (AS) keeps a record of all manual holders, latest revision to sections, date of issue and acknowledgement of receipt by the manual holder. A master folder is kept up to date and includes a list of all revisions to the PQAP and QAP Manuals.

The IE inspector selected two persons assigned unrelated QA/QC functions and interviewed them concerning their responsibilities associated with the control of the manuals and verified that procedures and manuals necessary for their responsibilities were available.

The IE inspector selected five PQAP Manuals (No. 50, 51, 65, 84, and 85) and four QA Manuals (No. 5, 10, 11, and 29) for examination. The IE inspector visited the offices of the manual holders and confirmed that each individual had manuals assigned to him. The IE inspector also reviewed the latest list of revisions to the procedures and verified that the manuals had been updated to include the latest revisions.

No items of noncompliance or deviations were identified.

c. QA Manual - Document Control (B&R)

Brown & Root, Incorporated provides written procedures for controlling the preparation, review, approval and issuance for documents affecting quality. The QA Manager is responsible for the control of these documents.

The IE inspector reviewed B&R Procedures QAP-2.3, "Document Administration," QAP-2.2, "Control of Project Program Documents," QAP-6.1, "Project QA Records," and QAP-6.3, "Codification of Documents," to determine if these procedures were adequate. The IE inspector held discussions with responsible management personnel, examined the files and observed the facilities provided for the control of manuals.

B&R uses a "Form Control" described in Procedure QAP-2.11 for transmittal of revised procedures. All revisions to the QA/QC manuals are prepared and issued by the Houston QA Department. The Revision Record Sheet is prepared and summarizes the manual page number, description of changes and revision date, plus instructions for entering into the manual. A cover letter is utilized to transmit revisions to each manual holder and this cover letter is signed by the receiver and returned to the QA Department. If the QA Department does not receive the acknowledgement receipt within 30 days, the manual holder is sent a notice requesting

that he check his manual for the revision and return the signed acknowledgement. The QA Department also performs audits of the manuals.

Controlled manuals No. 10, 15, 17 and 19 were examined to determine if the latest revision to the manuals had been incorporated by the manual holders. The IE inspector found that Manual No. 19 contained a procedure (QAP-5.12) which had been deleted per the "Summary of Revision" dated October 13, 1978. The IE inspector was informed by the manual holder that he kept a complete set of procedures in his manual for reference purposes and had inadvertently forgotten to stamp the procedure "void" as specified in the procedure. Although the holder stamped the procedure "void" in the presence of the IE inspector, the failure to keep the QA manual current as specified in QAP-2.2 is a deficiency.

The IE inspector also observed that ST-QA-2.3, "Documentation Administration," paragraph 5.3.1 shows examples of stamps to be used on documentation. The stamp imprint is not legible and should be corrected. ST-QAP-2.2, "Control of Project Program Document," paragraph 5.3 requires transmittal memorandum or record be returned. While reviewing this area, the IE inspector noted that the procedures do not clearly state the effective date of revised procedures.

The matters concerning illegible procedures and effective date of revised procedures are considered unresolved.

d. HL&P Audit of B&R's Control of Manuals

After reviewing the controlled manuals, the IE inspector requested the latest audit of document control which was Audit No. BR-26, dated June 1-4, and 11-15, 1979. The audit identified a finding concerning the control of B&R QA Training Manual No. 24. The response to this audit finding addressed only the correction of Manual No. 24. The corrective action did not include review of other QA training manuals or similar manuals. Therefore, corrective action was not taken by B&R QA to identify the cause of the condition nor was action taken to promptly identify similar conditions adverse to quality.

The IE inspector reviewed this audit prior to HL&P review and follow up. HL&P informed the IE inspector at the exit interview that not only was this answer inadequate but responses to several other findings in the same report were inadequate. The IE inspector stated that HL&P follow up was not questioned since they were in the process of reviewing the responses.

The matter concerning the inadequate B&R response to the audit findings is considered unresolved.

e. QA Manual - Document Control (Site)

The IE inspector examined B&R QA Manuals No. 20, 21, 37 and 46 assigned to site personnel to determine if the manuals were controlled and if the latest revisions to Procedures No. QAP-2.6, 2.12, 5.1, 5.4, 5.5, 5.6 and 7.1 had been incorporated into the manuals.

Discussions with personnel revealed that they were knowledgeable of the procedures for the control of documents and the review of their manuals verified that the manual procedures were current.

No items of noncompliance or deviations were identified.

f. Drawings - Document Control (B&R Corporate Office)

The IE inspector discussed the control of drawings, specifications and design changes with B&R Corporate Office responsible personnel (Project Quality Engineer and Lead Clerk) to determine their knowledge and implementation of the procedures. A physical examination was performed of the Engineering Document Control Center where the receipt, storage and distribution of drawings, specifications and other QA documents are controlled. Access to the Engineering Document Control Center is restricted to certain personnel and a list of authorized personnel is posted.

The IE inspector selected thirteen current drawings from the master index and performed an inspection of the records (microfilms and original vellums) to verify that all of the drawings were of the latest revision and if they were stored and filed per procedure.

The IE inspector selected eight other drawings from the master list and examined all QA documentation associated with the drawings, from the original review and approval to the latest review, approval and distribution. Records of comments made during design review and resolutions of these comments were also reviewed by the IE inspector. B&R issues a drawing revision list each week and a current revision list of all drawings and Design Change Notices are issued every two months to personnel specified on the standard distribution list.

Procedures and other documents examined were as follows:

- (1) Procedure STP-DC-002-1, "Engineering Procedure for Drawing Control"

- (2) Procedure STP-DC-010, "Codification System"
- (3) Procedure STP-DC-005-R, "Preparation and Control of Specifications"
- (4) Procedure STP-DC-014, "Engineering Procedure for Review and Comment"
- (5) Procedure STP-DC-013, "Engineering Procedure for Document Change Notice Control"
- (6) Procedure STP-DC-015, "Design Verifications"
- (7) Drawings associated with concrete, piping and electrical activities:
  - (a) 11C1509
  - (b) 1C1512-5
  - (c) 1C1540-6
  - (d) 1C1542-5
  - (e) 1C1544-8
  - (f) 1P5051-1
  - (g) 1P5052-0
  - (h) 1P5231-1
  - (i) 1P5234-0
  - (j) 1E1909-2
  - (k) 1E1916-0
  - (l) 1E2472-0
  - (m) 1E1940-2
  - (n) 1C1509-6
  - (o) 1C4193-1

- (8) Engineering Review, Design, Change Notices and comments on the following drawings: 1C4213-A; 15-4082-0; 0-5-0014C; 1-C4026-0 and 1-C4031-1.
- (9) Complete History Card No. 3C01-1C1509 which included a history of everything done on this drawing from April 25, 1978, to July 23, 1979.

No items of noncompliance or deviations were identified.

g. Drawings - Document Control (Site)

To verify that the site was controlling drawings, specifications and design changes as required by the procedures (see above paragraph), the IE inspector discussed the control of these items with the Document Control Supervisor and the CRT Supervisor. A walk-through inspection of the site document control center and discussions with other personnel confirmed that documentation was controlled, drawings and specifications were readily retrievable, access to the area was restricted and personnel were knowledgeable of their responsibilities.

To verify that the site had the latest revisions of drawings and that they were distributed to required personnel, the IE inspector requested that the site check the latest revisions to eleven drawings previously selected by the IE inspector from the corporate master list. Five concrete drawings, four piping drawings and two electrical drawings were checked against the revisions reviewed at the corporate office (see above paragraph) and they agreed.

No items of noncompliance or deviations were identified.

h. HL&P Procurement Document Control

The STP QA Supervisor and the Manager of Project Purchasing were interviewed to review the substance of QA manual provisions relating to assigned procurement activities and determine the location of HL&P storage facilities for procurement documents and evaluate the adequacy/control of documents.

The IE inspector reviewed procurement documents for material or components for installation activities relating to major site contractors. Westinghouse Electric Corporation Purchase Order (PO) 8141 for electric penetrations; Southwest Fabrication P.O. 6014 for ASME Section III Piping 2½" and larger; Analog Control

P.O. 4105 for instrumentation and controls I & C, (change order); and Hayward Tyler Pump Co. P.O. 4122 (change order) for ASME III Class 3 pumps were reviewed to assure that purchase orders contained the scope of work, technical requirements, QA requirements, right of access and documentation requirements.

No items of noncompliance or deviations were identified.

i. Design Control

The Houston Lighting & Power Company Quality Assurance Manual (QAM) implementation was reviewed with specific attention to those sections of Criterion III which require that the design control measures provide for checking the adequacy of design by the performance of design reviews and for subjecting design changes, including field changes, to design control measures commensurate with those applied to the original design. The program established by HL&P is documented by written policies, procedures and instructions contained or referenced in the QAM, in departmental procedures and in the STP PQAP.

Project Engineering Procedure PEP-05, Revision 0, "Performance of Design Reviews," was reviewed for conformance with Section 4.3 of the QAM. This section entitled, "Review of Design by HL&P," delegates to the HL&P engineering groups the responsibility for performing technical reviews of design documents developed by the Architect/Engineer (A/E).

The procedure was also reviewed for conformance to Section 4.4 of the PQAP. This section describes the process for the design review performed by HL&P. Implementation of Procedure PEP-05 was verified during this inspection by discussions with the Lead Project Engineer-Civil who was in the process of generating a Document Review Sheet for a revision to B&R Procedure STP-PMO-21, "Procedure for Field Request for Engineering Action." The Document Review Sheet generated by the Lead Project Engineer-Instrumentation and Control for the same document was also reviewed.

Requests originating from the STP site to change, deviate from, or clarify design drawings and specifications are controlled through a system called Field Requests for Engineering Action (FREA), which provides for review and approval of field changes by the Engineering Department through control of the FREA form. B&R Procedure STP-PMO-21, "Procedure for FREA," Revision 7 provides the requirements for the origination, coordination, review, disposition,

distribution and control of the FREA. Brown & Root Procedure No. STP-DC-023, "Engineering Procedure for FREA," Revision W provides direction for the engineering activities involved in processing the FREA.

Implementation of the FREA system was confirmed by reviewing the field request for modifying the height of concrete placement number 7 for the Unit 2 Reactor Containment Building (RCB). The Engineering Department was in the process of reviewing the site originated request to make the location of the eight inch channel liner plate stiffener coincide with the top of all subsequent concrete placements so that the probability of void formation beneath the channel, such as that which occurred in Unit 1, will be reduced.

No items of noncompliance or deviations were identified.

j. Brown & Root Vendor Surveillance

The IE inspector interviewed the B&R Project Vendor Surveillance Coordinator. The vendor surveillance program is broken into five regions across the United States. The IE inspector reviewed the following:

- (1) B&R Vendor Surveillance Schedule Job No. CR-0421 for April, May and June 1979.
- (2) Surveillances performed in Regions I, II, III, IV and V during July 1979.
- (3) Vendor Surveillance Reports:

<u>Report</u>	<u>Manufacturer</u>	<u>Item</u>
K085-92	Kerotest	ANSI B31.1. Valves
CO-95-006	Capital Pipe & Steel	Flanges
P365-31	Prescon	Tendons
W 12050	Westinghouse	1000 & 1200 KVA transformers
P097-189	PDM Des Moines	NR Structural Steel

No items of noncompliance or deviations were identified.

k. Licensee Audits of QA Program Elements

The IE inspector reviewed selected reports of licensee audits performed to verify implementation of QA program elements related to design control, procurement, document control, material

receiving, construction and QA records. The audit records were examined to determine if audited organizations received copies of the audit reports; to determine if appropriate standards were used for measuring performance; to ascertain if auditors were selected in accordance with QA manual provisions; to review corrective actions; and to review identification of substantive design or hardware deficiencies. The following audit reports were reviewed:

BR-7, audit of B&R Document Control Center and Engineering, performed January 29-31, 1975

BR-9, audit of B&R QA program implementation, performed March 15-18, 1976

BR-14, audit of B&R personnel qualifications, records, document control, receiving inspection and storage, performed October 26-28, 1976

BR-21, Audit of B&R Purchasing, performed August 22-23, 1978

BR-22, audit of B&R Civil Design, performed November 13-17, 1978

BR-26, audit of B&R QA program implementation, performed June 4-6 and 11-13, 1979

R-27, audit of B&R welding program, performed June 11-12, 1979

HL-7, audit of HL&P Purchasing Department, performed April 18, 1978

HL-60, audit of HL&P Construction Department, performed February 19-20, 1979

HL-67, audit of HL&P Records Management Division, performed June 13-14, 1979

The IE inspector observed that the checklist for audit BR-7 was not completed and that the file for audit BR-9 did not contain a checklist. The IE inspector noted that failure to maintain audit checklists had previously been identified by the NRC<sup>1/</sup> and the licensee response indicated that corrective action had been implemented to assure that audit checklists are maintained.

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<sup>1/</sup>IE Inspection Report 50-498/77-12; 50-499/77-07, dated December 9, 1977

During review of audit HL-60, the IE inspector noted that numerous (13) items on two audit checklists in the file were incomplete. During discussions with licensee representatives, it was pointed out that one of the checklists was used as a "feeder" to the other (record) copy; however, it was observed that one item on the record copy was not checked "sat", "unsat" or "N/A".

It was noted that the licensee's audit reports summarize areas covered during audits and that only deficient areas are described in detail in Audit Deficiency Reports issued with the reports. The complete audit scope cannot be determined without referring to the audit checklists. The presence of the incomplete audit checklists in the HL-60 file was contrary to the licensee's response to previous inspection findings and to paragraph 7.2.4 of HL&P QA Department Procedure QAP-5B which requires that completed audit checklists shall be maintained in the QA audit files. This is an item of noncompliance with the requirements of 10 CFR Part 50, Appendix B, Criterion XVII, in that a QA audit file was not properly maintained.

The IE inspector also observed that certification records of one HL&P employee who participated in audits HL-7 and BR-21 and another employee who participated in audit BR-14 could not be found in the QA auditor qualification file. Discussions with licensee representatives revealed that supporting documents, including completed examinations, were on file but the actual certifications of the two individuals had apparently been removed from the auditor qualification file.

This matter is considered unresolved pending completion of a records review for the missing documents by the licensee and subsequent review by IE.

1. Pittsburgh Testing Laboratory QA Manual Implementation

The HL&P Quality Assurance program requirement for the establishment of a test program to meet the requirements of Criterion XI of Appendix B to 10 CFR 50 was reviewed with respect to concrete testing services. The Pittsburgh Testing Laboratory (PTL) QA manual for inspection and testing services was reviewed for conformance to Section 4, "Inspection of Concrete Construction," of ANSI N45.2.5-1974, "Supplementary Quality Assurance Requirements for Installation, Inspection and Testing of Structural Concrete and Structural Steel During the Construction Phase of Nuclear Power Plants."

Implementation of PTL Procedure QA-1A, "Internal Audits," was reviewed. Specific attention was given to the site initiated corrective action response required for all audit report findings and observations.

The following records were specifically reviewed:

- (1) PTL Corporate QA Audit Summary Reports of PTL Site Laboratory Operations No. 1 through 8, covering the period from May 11, 1976, to March 12, 1979
- (2) STP PTL Audit Reports No. 1 through 3 Responses
- (3) PTL Corporate Close-out Reports

Brown & Root corporate audits of PTL were also reviewed. These audits were performed in accordance with B&R Procedure ST-QAP-7.1, "Houston QA Audits," Revised February 24, 1979. B&R QA Audit Reports No. P262-1, -2, -5, -6, and -7 were reviewed. Audit Reports No. P262-3 and -4 were not located in the site QA vault as required by B&R Procedures ST-QAP-7.1 and ST-QAP-2.3, "Document Administration," revised August 28, 1978. Discussions with the HL&P site QA Supervisor indicated that this deficiency had been identified in HL&P audit of B&R Report No. 26 as Audit Deficiency Report (ADR) No. BR-26-D-01. The IE inspector was informed that the audit reports were located at the B&R QA home office facilities but were to be routed to the STP site QA vault for filing and retention in response to the HL&P audit.

Inclusion of the audit reports in the vault is considered an unresolved item to be reviewed at a later date.

PTL Procedure No. QC-CRN, "Control & Reporting of Nonconformances," Revision 3 was reviewed for conformance to the PTL QA program and for implementation. PTL internal nonconformance reports No. 82, 83, 84, 85 and 86 were reviewed with specific attention made to the requirement for reinspection and verification of all nonconformances. In addition, the log of all nonconformance reports was also reviewed.

The training and indoctrination requirements of ANSI N45.2.6, "Qualifications of Inspection, Examination, and Testing Personnel for the Construction Phase of Nuclear Power Plants," were applied to the personnel record of one randomly selected Level II concrete field inspector. The file indicated conformance to the requirements of the ANSI standard.

No items of noncompliance or deviations were identified.

m. Pittsburgh Des Moines (PDM) QA Manual Implementation

(1) QA/QC Organization

The IE inspector interviewed the site QA Manager to determine whether individuals were assigned to QA manual identified positions relative to the following:

- (a) Continued development of QA/QC procedures and instructions
- (b) Inspection
- (c) Audits
- (d) Management of the site related program implementation

The IE inspector found that procedures are controlled by the organization located off site and audits are performed by the same group. PDM has on-site inspectors and a QA Manager. The PDM QA Manager was selected for the position in the last three weeks. He was formerly a lead inspector. When the interview was conducted, he appeared to be performing the responsibilities of lead inspector and QA Manager. He stated that his workload was declining and felt he would be able to perform both functions.

This individual was also interviewed to determine if, while as an inspector and QA Manager, he had and now has the authority and organizational freedom to identify nonconformances and seek resolution from appropriate levels of management. He stated that as an inspector and QA Manager he had received adequate support from QA personnel and QA Managers. It was also stated that he had not been subjected to threats or undue pressure from anyone which would have influenced the performance of his duties.

The IE inspector determined that recent organizational changes had been made; however, such changes were neither described in the QA manual nor shown on organizational charts. A new position was created between the Division QA Manager and the Site QA Manager.

The finding regarding the QA position not being described represents a noncompliance with 10 CFR 50, Appendix B, Criterion I and HLSP QA manual, Section 2.

(2) PDM QA Manual Control

The IE inspector viewed the control and development of QA/QC procedures and instructions and found the following:

- (a) PDM QA manual document Control measures. Section 12, "Manual Revision and Distribution," did not describe how supplements would be integrated into the manual after receipt. Also there is an apparent conflict between the

supplements as used now and revision instructions described in Section 12.0 of the manual. (i.e., supplements which changed paragraphs were not annotated in the margin as required by the procedure.) ANSI N45.2, paragraph 2 states in part, "Participating organizations shall have procedures for control of the documents and changes thereto to preclude the possibility of use of outdated or inappropriate documents."

Section 13, "Audits," was another example supporting the NRC finding that the PDM manual does not fully incorporate the provisions of ANSI N45.2. PDM Procedure No. 13 does not state lead auditor and auditor qualifications requirements nor does it describe how they are qualified. The basis of audit frequency was not described, that is, prior to and immediately after award of contracts, after significant changes in functional areas of quality assurance or when the safety performance or reliability of items are suspected. This same procedure was found to contain a reference to audit report form 17949CP which had been superseded by 17949DR listed in Section 15, "Sample Forms," Revision 3, dated November 19, 1976.

Four QA Manuals (No. 67, 132, 150 and 177) were reviewed to determine if manuals contained current revisions and to determine if procedures were properly distributed. The following discrepancies were noted:

Manual 150 did not contain Section CP-1, "Calibration Procedures." Manual 177 did not contain Section CP-1 and Section IT-1, "Indoctrination and Training Procedures."

Manuals 67, 132, 150 and 177 did not contain the same supplements (documents pertaining only to South Texas Project). That is manuals 67 and 150 lacked Supplement 210; manual 132 lacked Supplement 211; manual 177 contained no supplements.

The indoctrination and training procedure which had been superseded by a new procedure was in the manual; however, the old procedure was not marked "void" "superseded" or "for information only."

Manual 67 contained a policy memorandum which imposed additional requirements; however, the QA manual Section 12.0 does not authorize the manual to be revised or

supplemented by memoranda. One such memorandum, "Audit Response Cycle Policy," dated September 28, 1978, stated that Audit Deficiency Reports will be resolved within 20 days of receipt.

These are typical examples of lack of document control. The IE inspectors identified other examples which were similar to those described above.

PDM QA manual, Section 12.0 states in part, "This manual shall be reviewed semiannually or more frequently by the QA Committee . . . . The intent of this review shall be to keep the manual current with Code addenda and with PDM construction and quality assurance procedures . . . . Revisions to the manual shall be highlighted by revision numbers in the margin."

The IE inspector's findings showed that the manual was not current nor adequately controlled.

This finding represents a noncompliance with 10 CFR 50, Appendix B, Criterion V.

(3) Control of PDM Site Originated Procurements

The IE inspector selected, for review, two site originated purchase requisitions for weld materials and structural steel. The procurement documents were located offsite at the various plants or corporate QA records centers. Therefore, the IE inspector reviewed Field Receiving Reports (Form 18047) No. 101 (3 dome plates) and 108 (dome plate stiffeners) and structural steel purchased under contract No. 15680; FRR No. 51 (E 6010 and E 7028, 3/16 welding rod) under contract No. 15679 for certification that:

- (a) Specification of standards was proper.
- (b) Material physical and chemical certifications met requirements.
- (c) Receipt inspection/testing was performed.

No items of noncompliance or deviations were identified.

(4) PDM Audits of PDM Site Activities

The following audit reports were reviewed. The IE inspector's findings are described under "Comments" applicable to the respective audits.

Audit Report			Comments Describing IE																				
No.	Date	Location	Inspector's Findings																				
76-208 and 76-212	9/15/76 and 11/11/76	Site	Review of audit records indicated that the following Sections of the QA manual were not audited in 1976:																				
			<table><tr><th><u>Section</u></th><th><u>Description</u></th></tr><tr><td>1.0</td><td>Design Control</td></tr><tr><td>7.0</td><td>Control of Measuring and Test Equipment</td></tr><tr><td>8.0</td><td>Heat Treatment</td></tr><tr><td>9.0</td><td>Storage and Handling</td></tr><tr><td>10.0</td><td>Examination and Testing</td></tr><tr><td>11.0</td><td>Indoctrination and Training</td></tr><tr><td>12.0</td><td>Manual Revision/ Distribution</td></tr><tr><td>13.0</td><td>Audits</td></tr><tr><td>14.0</td><td>Documentation Corrective action complete, signature and date missing</td></tr></table>	<u>Section</u>	<u>Description</u>	1.0	Design Control	7.0	Control of Measuring and Test Equipment	8.0	Heat Treatment	9.0	Storage and Handling	10.0	Examination and Testing	11.0	Indoctrination and Training	12.0	Manual Revision/ Distribution	13.0	Audits	14.0	Documentation Corrective action complete, signature and date missing
<u>Section</u>	<u>Description</u>																						
1.0	Design Control																						
7.0	Control of Measuring and Test Equipment																						
8.0	Heat Treatment																						
9.0	Storage and Handling																						
10.0	Examination and Testing																						
11.0	Indoctrination and Training																						
12.0	Manual Revision/ Distribution																						
13.0	Audits																						
14.0	Documentation Corrective action complete, signature and date missing																						
77-201	1/2/77 and 1/7/77	Site	Section 12.0 "Manual Revision and Distribution," found acceptable by PDM, yet NRC findings show the manual in need of revision.																				
77-201	1/3/77	Site	Section 1.0, "Design," (control of design documents, procedures, specifications) Section 8.0, "Heat Treatment," and Section 14.0, "Documentation," were not audited in CY 1977. Note: Documentation																				

and Heat Treatment were not audited for two years and additionally, no record justifying why the Sections were not audited.

77-208	9/27 - Des 30/77 Moines	This audit identified document control problems in audit Deficiency Reports No. 12 and 13, yet site follow up was not apparent. Corrective action signature blank, lead auditor not identified and report not signed.
77-202	2/1-2/78 Site	Section 12.0 audit by PDM found acceptable, yet NRC found areas need correction. Lead auditor not identified. Corrective action signature blank.
78-210	6/5-8/79 Des Moines	Corrective action signature blank
79-203	3/28 - Site 29/77	Lead auditor not identified. Corrective action signature blank. PDM audit of Section 12.0 acceptable while NRC findings showed correction needed.

The IE inspector reviewed the above audit results for trends and found the following discrepancies:

Section 2.0 (2.1, "Drawing, Preparation and Issuance", 2.2, "Drawing Distribution") was identified in each PDM audit as (c), corrections required, however, the areas remained deficient from September 15, 1976, until March 27, 1979. Corrective action was not adequate.

Section 12.0 was repeatedly audited, yet the IE inspector found that follow up to assure correction of document control deficiencies on site was not adequate.

Additionally, the IE inspector found that only negative audit findings were documented. When audit results are so documented, it is impossible for the reviewer to determine on what basis acceptable findings are made. That is, if Section 12.0 were audited at the site, did the

auditor look at one manual or all manuals? Did the auditor check each Section for current revisions or only one Section? Specifically, the audit findings were not supported by reference to the areas audited.

PDM QA Manual Section 13.0, "Audits," states in part, "The Corporate Chief Engineer and Division Chief Engineer shall initiate annual, or more frequent, audits of each field construction site. The purpose of these audits shall be to determine the effectiveness of the QA program . . . . The Division Chief Engineer shall bring deficiencies and recommend corrective action to the attention of the respective department managers for their action. Audit results shall be reviewed by responsible management to determine the required corrective action . . . . The Division QA Manager shall initiate reaudits as required to assure correction of deficiencies."

Based on the findings described above, follow-up actions were not taken to assure that deficiencies were corrected. In one case, recurring deficiencies were identified in 1977, yet the deficiencies have not been corrected to date (8/16/79). Documented audit results did not reference what was reviewed/observed when areas were found acceptable. The audit report did not identify lead auditors and the procedure did not state auditor qualifications requirements. The QA program was not totally audited in 1976. Management had not signed off the corrective action statement on the audit report form dating back to 1976.

These findings represent a noncompliance with 10 CFR 50, Appendix B, Criterion V.

(5) PDM Inspection Personnel Qualification

The IE inspector reviewed three PDM inspector's files to determine if welding and NDE inspectors were qualified. Of the three files reviewed, one inspector's qualifications was considered inadequate.

The PDM QA manual, Section 1.0, paragraph 10.3.1 states in part, "Level I, II, and III NDE personnel shall be certified in accordance with PDM Written Practice QAS I, II or III which meets the requirement of the Code." The PDM Written Practice QAS II requirements are basic education plus nine months of experience.

The licensee's representative interpreted nine months laboratory experience as work experience. The IE inspector did not concur with this interpretation.

The IE inspector consulted NRC management and NDE specialist who concurred that the individual did not initially meet Level II

requirements in that the first nine months he worked he was not qualified. However, he would be qualified subsequent to working in this area for nine months. Work performed during the first nine months should be reviewed by the licensee to assure that radiographs were correctly dispositioned.

Additionally, the PDM QA manual does not state minimum inspector qualifications. The licensee representative informed the IE inspector that the licensee had committed to ANSI N45.6.

The above matters are considered unresolved pending additional inspection in these areas.

(6) PDM Construction Personnel

(a) PDM Site Superintendent

The site superintendent was interviewed to determine how welders are qualified; determine the number of personnel supervised and cooperation of crafts and QA/QC personnel.

The IE inspector found that the superintendent and site QA Manager are located in adjacent offices for ease of interface between these two groups. The foreman stated that relations between the two groups were good. He stated that some welders who were not qualified in each position had welded in positions which they had not been qualified. This happened at the beginning of work at STP. The NRC, licensee and constructor identified this problem and corrected it early in the project.

Welder qualification records were reviewed for the following welders: Weld Symbol 104, 112, 120, 150, 156, 163, 176, 192, 194, 195, 197 and 199. The IE inspector was unable to view radiographs because they were sent off site to record storage.

No items of noncompliance or deviations were identified.

n. Bowen Industries, Inc. QA Manual

The IE inspector reviewed the Bowen Industries, Inc. (Bowen) QA manual for adequacy and implementation of program requirements. The IE inspector was informed that Bowen's (the contractor for heating, ventilating and air conditioning (HVAC) systems installation) QA manual was accepted for site use, but work has not commenced on safety-related HVAC systems. The IE inspector observed that implementing procedures related to the Bowen QA manual have not been issued and were not available for review.

During the review, the IE inspector observed that the manual stated that nondestructive testing procedures shall be prepared and approved by a "Level II Examiner" and the QA Manager. Discussions with licensee representative failed to resolve the IE inspector's questions concerning approval of the procedures by a Level III person. In the absence of Bowen representatives, it could not be determined if the "Level II Examiner" was a typographical error or if the QA Manager was a Level III person authorized to approve the procedures.

This matter is considered unresolved and will be reviewed during a subsequent IE inspection.

4. QA/QC Organization (B&R)

Brown & Root, Incorporated the constructor of South Texas Plant was inspected to determine if individuals had been assigned to the QA manual identified QA/QC positions.

Review of the B&R QAM and discussions with personnel revealed the following:

- a. B&R QA Procedures No. ST-QAP-1.0 and 1.1, dated March 1, 1979, define the B&R QA organization.
- b. The B&R corporate office develops the basic QA requirements (QA manual) and the site QA group develops the site procedures and instructions.
- c. Inspection activities at the site are controlled and implemented by the Project QA Manager, Site QA Manager and the Quality Control Engineering Supervisor. Area engineering supervisors have a staff of quality engineers who actually perform QA/QC activities. A QA Specialist, Document Control Supervisor and an Administrative Supervisor and staffs are responsible for other QA/QC activities such as preparing procedures, reviewing drawings, control of documentation and administrative duties.
- d. Audits are performed on the site activities by the Corporate QA staff, responsible to the Corporate QA Manager. Surveillance activities are performed by site QA/QC personnel. Audits and surveillances are performed according to procedures.
- e. Overall management of the site related QA program implementation is performed by the Project QA Manager.
- f. The B&R Site QA Manager is responsible for surveillance of activities performed by other subcontractors as specified in Procedures No. ST-QAP-5.5, 5.4 and 5.3.

No items of noncompliances or deviations were identified.

5. Control of Site Installation

The IE inspector selected the Reactor Containment Building structure and examined records and documentation associated with the placement of concrete and reinforcing steel. These operations are controlled by Procedures No. 5.4, 5.5, 4.6, 2.6, CCP-3 and CCP-4.

The following records of concrete placement were examined and all QA/QC records were properly signed.

- a. Pour No. ME1-W251-02
- b. Pour No. ME1-W928-1
- c. Pour No. ME1-W217-13

Discussions were held with responsible B&R and HL&P personnel regarding the activities associated with construction inspection and documentation of the containment building.

No items of noncompliance or deviations were identified.

6. Audits and Surveillances of Construction Activities

The IE inspector examined several audit and surveillance reports applicable to construction activities. Some of the audits and surveillances were conducted both by HL&P and B&R corporate office and site personnel. The IE inspector also reviewed training and qualification records of four B&R QA/QC personnel. Discussions were held with the B&R Training Coordinator and QA/QC personnel of HL&P and B&R.

Audits and surveillance reports examined were as follows:

- a. ST-23, Hoisting, Rigging and Champion (supplier)
- b. ST-22, Geotech and Vibroflotation
- c. ST-14, Concrete Construction
- d. ST-13, Cadwelding and Reinforcing Steel
- e. BR-24, HL&P Audit of B&R's Vendor Surveillance Group
- f. BR-19, HL&P Audit of B&R's Corporate Office and Site
- g. BR-22, HL&P Evaluation of Civil Engineering QA Program
- h. Site Internal Surveillance (SIS)-17, "Field Fabrication of Steel"

- i. SIS-3, Documentation Administration, Turnover
- j. SIS-3, Surveillance of Calibration Facility
- k. B&R's Surveillance Reports of Pittsburgh Testing Laboratory's Site Work, dated January 15, 1979, and February 1, 1979
- l. Site Internal Surveillance Log Book
- m. Status Report of Site Internal Surveillance issued on August 2, 1979

The IE inspector also reviewed corrective action reports for several of the above audits and surveillances. During discussions with personnel, the IE inspector was informed that the audited organization had ten days in which to answer adverse findings; however, if responses are not received in ten days they usually receive a formal letter requesting extension of time. The audit group evaluates the response and if answers are not adequate, they are not accepted. The IE inspector reviewed the response to corrective actions relative to surveillance No. SIS-17, "Requirement for Field Fabrication of Steel to ASW D1.1."

The IE inspector noted that the audit report folders, at the site, did not contain complete information on the audit as required by ST-QAP-2.3. The audit reports examined did not contain approved checklists, therefore, the IE inspector could not determine if the audits were adequate. The folders only contained a summary, deficiency report, pre-audit meeting and post audit meeting. The licensee explained that the entire audit report and checklists were kept at the corporate office and that the site only retained the referenced documents. The IE inspector informed the licensee that Procedure ST-QAP-2.3 states that "only referenced documents will be kept at the home office and that all QA and NS records originating within the home office shall be routed to the site for filing." Contrary to Procedure ST-QAP-2.3, the site audit records did not contain an approved audit checklist; therefore, the IE inspector could not confirm whether the audits were performed in accordance with written instructions or an approved checklist.

This is an unresolved item and will be examined during subsequent inspections.

#### 7. Review of QA/QC Program

The IE inspectors held discussions with several licensee and contractor personnel to determine the following:

- a. Adequacy of training on new or revised procedures
- b. Knowledge of their position responsibilities and procedures
- c. Access to management and feedback from management concerning resolution of problems

- d. QA orientation and training for new employees
- e. Identification of nonconformances and methods for resolution
- f. Ability to perform their job functions and stop work authority
- g. Morale of QA/QC Personnel
- h. Adequacy of document control measures
- i. Adequacy of support of QC personnel by QA
- j. Ability of construction personnel to identify and correct problems
- k. Staffing of QA/QC positions
- l. Working relationship with other licensee and contractor groups
- m. If they contact other licensee about problems they encounter and discuss solutions to generic type problems which may be present at the South Texas Project

Results of these interviews revealed the following: site personnel have access to high management; feedback from management appears satisfactory; personnel appeared to be knowledgeable of their discipline and responsibilities; orientation of new employees on QA requirements and importance of QA/QC activities is minimal; most people are indoctrinated by production; staff meetings are held every week and the QC supervisor attends daily meetings with construction supervisors; staffing of positions is a continual problem as the site is isolated; the licensee and contractor are trying to increase staffing of the mechanical QC group and presently have fourteen new QC personnel and have eight more reporting soon; the overall working relationship between QA/QC and construction has improved over the past four months; inspectors identify nonconformances and deficiencies when they find them and most of the findings are corrected; the licensee and constructor have been evaluating the problems associated with voids in concrete and they believe that they have a solution to the problem; they don't frequently contact other licensees to discuss problems they have encountered with construction, vendors and installation of equipment.

No new concerns were identified during these discussions; however, a licensee representative reported recent alleged incidents of intimidation of two Brown & Root QC inspectors by Brown & Root construction personnel. It was alleged that the construction personnel threatened the QC inspectors

and used abusive and vile language during conversations with the inspectors during the performance of their inspection duties. The IE inspector reviewed the results of licensee and Brown & Root investigations into this matter but did not discuss the allegation with the individuals involved. The allegations will be the subject of a detailed investigation which will be addressed in a separate IE investigation report.

8. Nonconformances

Criterion XV of Appendix B to 10 CFR 50 requires that measures be established to control equipment, material, services, or activities which do not conform to requirements. HL&P QAM implementation of this requirement was reviewed during this inspection. B&R Quality Assurance Procedure ST-QAP-2.6, "Nonconformances," Revised March 15, 1979, and Engineering Procedure STP-DC-022, "Engineering Procedure for Processing Nonconformance Reports," Revision D were reviewed for conformance with HL&P QAM and PQAP requirements. The procedures establish a system for documenting the identification, description, disposition, approval, verification and close out of nonconformances, and for providing direction for the engineering activities involved in reviewing, processing, controlling and dispositioning of nonconformance reports (NCRs) originating on site.

Discussions with the site Quality Assurance Manager indicated that NCRs are being analyzed for quality trends by a site NCR Supervisor and subsequently transmitted to the Quality Assurance Management Review Board for review as required by Section 17.1.15B of the STP Preliminary Safety Analysis Report. NCRs originated at the home office and at vendor shops are summarized and included in the Monthly Activity Report which is also transmitted to the Review Board. Monthly Activity Report No. 44 was reviewed during this inspection.

Implementation of the NCR system was evaluated by reviewing NCR No. S-C2706 which deals with the void investigation for the Unit 1 RCB. The trend analysis program NCR Report No. 3 was also reviewed during this inspection.

No items of noncompliance or deviations were identified.

9. Equipment Storage and Maintenance

Implementation of Criterion XIII of Appendix B to 10 CFR 50 by B&R for measures to control the storage of equipment in accordance with work and inspection instructions was reviewed. B&R Quality Construction Procedure No. A040KPGCP-35, "Storage and Maintenance," Revision 0,

Section 3.6 requires an Equipment Storage and Maintenance Instruction (ESMI) card for safety related equipment. The ESMI for the High Head Safety Injection Pump No. 3 was reviewed. It was determined that the ESMI card equipment number being used for the pump was actually the equipment number for the pump motor. Discussions with the H&P Lead QA Engineer-Mechanical indicated that this discrepant condition had been identified by H&P and documented in Site Discrepancy Memo (SDM) M-051. This memo addresses the Containment Spray Pump Motor ESMI card as listing the equipment number for the pump instead of the motor. H&P has required a new plan of B&R to provide for total and accurate implementation of the requirements in the B&R Storage and Maintenance Procedure. As a result of this required action on the part of B&R, the ESMI numbering system will be revised at a later date.

Implementation of the revisions to the ESMI system is considered an unresolved item to be reviewed at a later date.

#### 10. Cadwelding Activities

The IE inspector reviewed Cadweld inspection records and the status of the ongoing Cadweld records review initiated as a result of the licensee's speed letter C-046 which requested that Brown & Root undertake a thorough review of all Cadweld records. The IE inspector was informed that the Cadweld records review was approximately 50% complete as of August 8, 1979. A Brown & Root representative estimated that completion of the review will require approximately six additional months of effort.

The IE inspector observed that Cadweld inspection results were recorded in Cadweld Inspection Books as required by Procedure CCP-11, "Reinforcing Steel Mechanical Splicing (Cadwelds)," Revision 9. The Acting Lead Cadweld QC Inspector stated that most inspection results are entered directly in inspection books which are taken into the field by QC inspectors or, if direct entry is not possible and field notes are used, inspection results are entered into the inspection books by the responsible inspector.

A licensee representative stated that Cadwelder helpers are no longer used and all Cadwelding steps are performed by qualified splicers. The licensee representative also stated that appropriate protection is provided if Cadwelding is performed during wet weather conditions. Cadwelding work activities were not observed by the IE inspector during this inspection.

During review of Cadweld QC Inspector Certification records, the IE inspector observed that one individual was certified as a "Structural Metallic Material Technician (SM) L II," (Limited to Cadweld Inspection),

but the IE inspector was unable to determine from records in the file how the individual met the experience requirements for Level II stated in the Brown & Root training manual. The Brown & Root Corporate Level III individual who signed Caldwell inspector's certification record was not available for interview.

This matter is considered unresolved pending clarification of the individual's experience record and review by IE during a subsequent inspection.

11. Site Drafting Activities

The IE inspector reviewed site drafting activities with the Brown & Root Chief Draftsman, Structural Group. The group is currently engaged in producing drawings for cable tray and structural components fabricated on site. Drawings completed by the group are approved on site and sent to the Brown & Root Houston office for verification.

The group consists of eleven individuals, two of which are engineering students in training status. The remainder of the individuals have three or more years of drafting experience.

No items of noncompliance or deviations were identified.

12. Unresolved Items

Unresolved items are matters about which more information is required in order to ascertain whether they are acceptable items, items of noncompliance, or deviations. Nine unresolved items disclosed during the inspection are discussed in paragraphs 3.c, 3.d, 3.k, 3.l, 3.m, 3.n, 6, 9 and 10.

13. Exit Interview

The IE inspectors met with licensee representatives (denoted in paragraph 1) at the conclusion of the inspection on August 10, 1979. The IE Inspector summarized the purpose and the scope of the inspection and the findings. A licensee representative acknowledged the statements of the IE inspectors concerning the unresolved items.