

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 50-461/82-18(DETP)

Docket No. 50-461

License No. CPPR-137

Licensee: Illinois Power Company
500 South 27th Street
Decatur, IL 62525

Facility Name: Clinton Nuclear Power Station, Unit 1

Inspection At: Clinton Site, Clinton, IL

Inspection Conducted: September 27-30 and October 5-8, 1982

Inspectors: *W. A. Hasse*
R. A. Hasse

11/15/82

J. N. Kish for
J. N. Kish

11/16/82

J. M. Peschel for
J. M. Peschel

11/16/82

Approved By: *F. C. Hawkins*
F. C. Hawkins, Chief
Management Programs Section

11/16/82

Inspection Summary

Inspection on September 27-30 and October 5-8, 1982 (Report No. 50-461/82-18(DETP))

Areas Inspected: Training, Qualification, and Certification of QC personnel; Overinspection Program. The inspection involved a total of 156 inspector-hours onsite by three NRC inspectors (including 6 inspector-hours off-shift) and 24 inspector-hours in-office.

Results: In the areas inspected, two items of noncompliance were identified (Criterion I, failure to update the Quality Assurance Manual - Paragraph 2.a.(4)(a); Criterion V, failure to follow procedures - Paragraphs 2.a.(2), 2.a.(4), 2.b.(2), and 2.b.(4)).

DETAILS

1. Persons Contacted

Illinois Power Company (IPCo)

*D. Hall, Vice President, Quality
*A. Budnick, Director, Quality Assurance
*L. Brodsky, Director, Recovery Program
*W. Calhoun, Supervisor, Electrical Construction
*R. Canfield, Director, Construction
*R. Campbell, Supervisor, Programs and Procedures
K. Derbort, Training Coordinator
J. Spivey, Training Technician
G. Bell, Supervisor, Audits/Surveillance

Baldwin Associates (BA)

*C. Anderson, Manager, Quality Control
*W. Harrington, Project Manager
*J. Findley, Manager, Quality and Technical Services
*L. Schaffert, QC Training Coordinator
*E. Bryant, Assistant Manager, Quality and Technical Services
L. Gelbert, Manager, Project Training
G. Chapman, Manager, Technical Services
T. Yearick, Assistant Project Manager
J. Hoban, Manager, Personnel
B. Willoughby, Assistant Manager, Personnel

U.S. Testing Company (UST)

A. Blieweis, Vice President
C. Sheridan, Project Manager

Zack Company

M. Skates, Corporate QA Manager
G. Moseley, Quality Control Manager

USNRC

*H. Livermore, Senior Resident Inspector
*D. Hayes, Chief, Projects Section 1B
*F. Jablonski, Project Inspector
*F. Hawkins, Chief, Management Programs Section

*Denotes persons attending exit meeting on October 8, 1982.

2. Functional or Program Areas Inspected

a. Training, Qualification, and Certification of QC Personnel

A comprehensive review was conducted of the training, qualification, and certification of BA and Zack QC personnel.

(1) Procedure Review

The following procedures and documents were reviewed to assess their adequacy with regard to clarity, conformance to procedure development requirements, and consistency with general QA Program requirements.

Illinois Power Company

- . QA Department Training, Qualification and Certification Manual, Revision 0, September 24, 1982.
- . QAP-102.04, Revision 0, Quality Assurance Indoctrination and Training Program.

Baldwin Associates

- . Quality Control Training and Qualification Manual, Revision 6, July 12, 1982.
- . Technical Services Training Plan, Revision 4.
- . BQA 180, Revision 3, May 3, 1979, Quality Assurance Training Program.
- . BQA 181, Revision 2, February 12, 1982, Qualification and Certification of Quality Assurance Auditors.
- . BQA 182, Revision 2, February 12, 1982, Qualification and Certification for QA Procurement Personnel.
- . BTS 411, Revision 6, December 11, 1981, Certifications.
- . BTS 307, Revision 7, June 10, 1981, PQ-NDE Performance Specification and Personnel Qualification for Non-Destructive Examination Personnel.

Zack Company

- . Quality Assurance Manual, Section IIA, Revision 0, June 25, 1982, Certification of Inspection Personnel.
- . Quality Assurance Manual, Section IIB, Revision 0, June 25, 1982, Training.

CB-FQCP-11, Revision 3, May 24, 1982, Training, Certification, and Evaluation of Quality Assurance/Quality Control Personnel.

The procedures which were reviewed provided appropriate guidance within their intended scope and were consistent with general QA Program requirements.

(2) Qualification Records Review

The training, qualification, and certification records for 87 BA QC personnel, 21 BA Technical Services personnel (NDE and welding inspectors), and 12 Zack Company QC personnel were reviewed for compliance with the controlling procedures reviewed under Section 2.a.(1) above. The results of that review are as follows:

- (a) The BA QC Training Qualification Manual, Section 10, requires that the qualification records, retained in the Document Records Center, contain visual examination results, certification records, and examination results. Contrary to the above, numerous QC qualification records, located in the Document Records Center, were missing required documentation as noted below:
- Nine records did not contain visual examination results to support certifications. The failure of qualification records to contain visual examination results is considered to be an item of noncompliance with 10 CFR 50, Appendix B, Criterion V (50-461/82-18-01a).
 - Five records did not contain examination results to support certifications. The failure of qualification records to contain examination results is considered to be an item of noncompliance with 10 CFR 50, Appendix B, Criterion V (50-461/82-18-01b).
 - Two records did not contain the certification record to support the individuals' Level III certification. The failure of qualification records to contain a record of certification is considered to be an item of noncompliance with 10 CFR 50, Appendix B, Criterion V (50-461/82-18-01c).
- (b) The BA QC Training Qualification Manual, Revision 6, requires that QC personnel be recertified at two-year intervals. Revision 5 of the manual required that the recertification be at three-year intervals. Contrary to the above, two instances were identified in which BA certified Level III personnel for the term of employment. The failure of BA to certify QC personnel at the

intervals specified by the QC Training Qualification Manual is considered to be an item of noncompliance with 10 CFR 50, Appendix B, Criterion V (50-461/82-18-01d).

- (c) The BA QC Training Qualification Manual allows the education, training, and experience requirements of ANSI N45.2.6-1973 to be waived when an individual possesses the ability and aptitude to perform a higher activity than documented education and experience allow. The manual requires that when requirements are waived it shall be documented by an explanatory letter of waiver. The waiver letters are required to be maintained in the qualification record.

During the review, three qualification records did not contain the waiver letter when it was used as a basis for certification. This is contrary to BA QC Training Qualification Manual and is considered to be an item of noncompliance with 10 CFR 50, Appendix B, Criterion V (50-461/82-18-01e).

In addition, two instances were identified in which qualification records contained waiver letters dated after the date of certification. This is contrary to BA QC Training Qualification Manual and is considered to be an item of noncompliance with 10 CFR 50, Appendix B, Criterion V (50-461/82-18-01f).

- (d) In July of 1982, BA Quality Control (QC) began a review of the personnel qualifications of all presently employed QC personnel who were certified with the use of a waiver. Thirty five personnel were identified with waivers. Of these personnel, five were identified to not have required waivers, and eight were identified to have been certified to a level that the waiver and education/experience would not justify. Present inspection activities for the eight personnel in question have been suspended. The BA QC Manager stated that in his opinion, none of the waivers issued provided justification of the "other factors" that influenced the waiver of education/experience requirements.

As a result of this review, BA ceased issuing waivers and has commenced a complete review of the qualifications of all QC inspectors presently employed with BA and also of those previously employed by BA. The review will consist of an evaluation to establish certification validity and, when required, an evaluation of previous work performed by the inspector. This evaluation will be used by BA to provide assurance to the NRC that work performed by the inspector in question is of acceptable quality.

The review is a four phase program scheduled to be completed by January 1, 1983. The evaluation of certifications for currently employed inspectors without waivers is scheduled to be completed by October 22, 1982. The licensee stated that similar reviews would be conducted in the BA Quality Assurance (QA) and Technical Services (TS) departments.

The acceptability of work performed by BA QC, QA, and TS personnel is considered an open item (50-461/82-18-02).

- (e) Section 7.0 of the BA QC Training Qualification Manual, Revision 6, lists eight basic categories of certification for inspection, examination and testing personnel. The basic categories are very broad and as an example allow certification of an inspector as a Level I - Electrical Inspector with no limitations on what may be inspected within the electrical area. Although limited certifications are referred to in Section 3.0 of the manual, BA does not specify position descriptions to define a limited certification within a discipline, nor is the minimum on-the-job/classroom training specified, which is required for a limited certification.

As part of the BA four phase certification review program described in Section 2.a.(2)(d), the records of individuals who were certified under broad categories will be evaluated to assess the original certification's validity and if necessary, the work performed after the original certification will be reinspected. BA has committed to institute a training/certification plan for QC inspectors that will provide for limited certification definition and establish minimum OJT/classroom training for each job description. The plan will also provide for standardization of qualifications to include more formal classroom training; verification of education and experience; and a demonstration of proficiency. The new training/certification plan will be instituted by January 1, 1983. A similar training/certification plan will be developed for the QA and TS sections of BA.

The development and implementation of the training/certification plans for BA QC, QA, and TS is considered an open item (50-461/82-18-03).

- (f) The BA procedure for certification of NDE inspectors, BTS 307, Revision 7, requires that all levels of NDE personnel be recertified at least once every three years.

Contrary to the above, one individual was found to have exceeded the three year recertification period. The failure of BA to recertify this individual at the required interval, as specified by BTS 307, is considered an item of noncompliance with 10 CFR 50, Appendix B, Criterion V (50-461/82-18-01g).

- (g) The BA procedure for certification of welding inspectors, BTS 411, Revision 6, states that the education and/or experience requirements in the procedure (which is based on the requirements of ANSI N45.2.6-1973) are not to be considered absolute and may be waived when other factors provide reasonable assurance that an individual can competently perform a particular task. The procedure requires that the basis for waiving requirements for an individual shall be clearly indicated in the personnel certification records for that individual.

Contrary to the above, three qualifications records were identified which did not contain waivers as a basis for certification when the individual failed to meet the minimum education and experience requirements specified by the procedure at the date of certification. Further review revealed the waivers were added at a substantially later date. The worst case identified was an individual who was certified in September, 1976, but whose waiver was dated in December, 1979. The failure of BA to provide the basis for the initial certifications, by means of a waiver letter in accordance with BTS 411, is considered an item of noncompliance with 10 CFR 50, Appendix B, Criterion V (50-461/82-18-01h).

- (h) Section 17.1.1.5 of Amendment 8 to the PSAR states that the Manager of Quality and Technical Services (Q&TS) of Baldwin Associates must have managerial experience in Quality activities in nuclear power plant applications. A review of the resume of the Manager, Q&TS, located in his personnel file, did not indicate that he possessed such experience. The licensee indicated that this item was considered at the time of his appointment to the position, and that documentation is available to show that the requirement was adequately addressed. The licensee agreed to research its files and locate such documentation.

The basis for the appointment of the BA Manager, Q&TS, is considered an unresolved item and will be reviewed further during a subsequent inspection (50-461/82-18-04).

- (i) Zack Company procedure CB-FQCP-11, Revision 3, requires that candidates for Level II certification complete the

Zack Company Training program for Level II certification or have a High School education plus four years of specified testing or inspection experience.

Contrary to the above, a Level II certification for HVAC mechanical inspections, dimensional receiving inspection, calibration, and visual inspections was awarded to one individual without completing the training program or having the required experience. The failure to certify personnel in accordance with CB-FQCP-11 is considered an item of noncompliance with 10 CFR 50, Appendix B, Criterion V (50-461/82-18-01i).

The licensee stated that this individual's certification has been withdrawn and they have committed to research inspection records to determine if the individual had performed inspections. Reinspections will be performed as necessary.

(3) Interviews With BA QC Personnel

Seven BA QC inspectors were interviewed to obtain their evaluation of the BA training program. During the interviews, the following concerns and observations were elicited:

- (a) Training and indoctrination programs are generally considered by the interviewees to be adequate.
- (b) The BA training program has improved over the last year.
- (c) It was the opinion of several personnel, that too much emphasis was placed on paperwork and that training should focus more on practical inspection techniques.
- (d) Adequate management support exists within BA.

(4) Quality Procedure Implementation

A general review of the implementation of BA QA Procedures revealed the following:

- (a) The description of the QA organization identified in the BA Quality Assurance Manual, Section I, Revision 3, does not match the organization presently being implemented. This is contrary to 10 CFR 50, Appendix B, Criterion I, which requires that authorities and duties of persons performing quality assurance functions to be clearly established and delineated in writing.

The failure of BA to clearly establish and delineate the duties and authorities of quality assurance personnel is considered an item of noncompliance with 10 CFR 50, Appendix B, Criterion I (50-461/82-18-05).

- (b) BTS 411, Revision 6, states that the Technical Services Training Manual shall be reviewed and updated at least annually by the Manager of Technical Services or his designee.

Contrary to the above, there are no provisions for annually reviewing the Training Manual and there is no documentation verifying the annual review of the Training Manual. The failure of BA to annually review the Training Manual is considered an item of noncompliance with 10 CFR 50, Appendix P, Criterion V (50-461/82-18-01j).

(5) Training Recovery Plan

In response to a Confirmatory Action Letter dated January 27, 1982, a Training Recovery Plan is being developed by IPCo. Selected portions of the IPCo draft Training Recovery Plan were reviewed in an attempt to gain an insight into the proposed training programs for IPCo and BA.

IPCo will be basing its future training upon the proposed IPCo Management Guide 2-1, "Administration of Nuclear Training Activities." Management Guides are second level QA documents, upon which are based the lower level QA procedures and QA instructions. IPCo has issued a Quality Assurance Indoctrination and Training Program, QAP 102.04 and a Quality Assurance Department Training, Qualification, and Certification Manual. Section I of the training manual contains the general training process, requirements, and responsibilities regarding training. Sections II, III and IV are still being developed and will be continually evolving. These three sections will contain the specific training and qualification requirements (TQR); training outlines, lesson plans, and forms.

BA has reorganized the Quality and Technical Services Department to include a Training Department. The Training Department will operate according to the BA Training Plan and will provide training for all BA personnel at Clinton. Minimum training requirements will be established for all BA personnel by position. The Training Department will develop lesson plans, administer the training, and maintain the records. A computer based Training Requirement/Record System will be developed to aid in the planning and reporting of training activities.

BA has identified 68 lesson plans to provide the required training. Approximately 13 of these 68 are up to date and reflect current BA procedures and construction requirements. Lesson plans are being written/revised on a daily basis with the emphasis on areas related to major problems and presently imposed stop work orders. The training that will

be provided by these lesson plans will concentrate on the procedural aspects of site activities with essentially the same training being provided to all personnel. Specific technical or "hands on" training in each discipline will be provided in the departments through the individual department training manuals.

The training programs of IPCo and BA are still very much in development. Definite conclusions regarding their acceptability cannot be reached until major elements such as Management Guide 2-1 are issued; lesson plans and TQRs are finalized; and department training manuals are revised.

b. Overinspection Program

A review was conducted relative to the training, qualification, and certification of QC personnel assigned to the overinspection program.

(1) Procedure Review

The following procedures were reviewed to assess their adequacy with regard to clarity, conformance to procedure development requirements and consistency with general QA Program requirements.

Illinois Power Company

- . QAI-310.01, Revision 0, Quality Assurance Instruction for performing and documenting overinspection activities.
- . QAI-710.01, Revision 0, Quality Assurance Instruction for directing overinspection activities (superseded QAI-310.01).
- . QAP-102.04, Revision 0, Quality Assurance Procedure for the Quality Assurance Department Training, Qualification, and Certification Programs.

U.S. Testing Company

- . UST-TQ-1, Revision 14, September 30, 1981, Training and Qualification of Inspection, Test, and Audit Personnel.
- . PQAM 5067, Revision 1, September 3, 1981, Project Quality Assurance Manual for Quality Control Services - Clinton Station.
- . PI 5067/1075, Revision 4, August 26, 1982, Project Instruction for Illinois Power Company, Clinton Project.
- . UST (CL) - QAP-1, Revision 2, September 1, 1982, Quality Instruction for the conduct of overinspection activities by UST at Clinton Power Station.

The procedures which were reviewed provided appropriate guidance within their intended scope and were consistent with general QA Program requirements.

(2) Qualification Records Review

The training, qualification, and certification records for 19 UST QC personnel assigned to the Overinspection Program were reviewed for compliance with the controlling procedures reviewed under Section 2.b.(1) above. The results of the review are as follows:

- (a) UST-TQ-1 states in Section 4.1 that "The qualifications of personnel to be certified in accordance with this procedure shall be determined by oral interview and practical demonstration...." The results are to be recorded in the Proficiency Evaluation Record (PER).

Contrary to the above, 10 of the 19 records reviewed indicated that the individuals were certified prior to the completion of the PER. The failure of UST to certify personnel in accordance with their procedure UST-TQ-1 is considered an item of noncompliance with 10 CFR 50, Appendix B, Criterion V (50-461/82-18-01k).

- (b) QAI-310.01 states in Section 4.1.5 that overinspection personnel shall comply with the indoctrination and training requirements of QAP-102.04. QAI-710.01 (which supersedes QAI-310.01) states in Section 4.1.3 that overinspection personnel shall comply with the "applicable indoctrination and training requirements."

Contrary to the above, 17 of the 19 records reviewed contained no evidence of indoctrination and training in accordance with QAP-102.04 or other documented, approved and controlled requirements. The failure of IPCo to assure that overinspection personnel were trained in accordance with approved procedures is considered an item of noncompliance with 10 CFR 50, Appendix B, Criterion V (50-461/82-18-011).

- (c) UST-TQ-1 requires a proficiency evaluation in the areas for which an inspector is to be certified (Section 4.1). It further requires that an inspector be reevaluated in any area in which he has not performed inspection or testing activities for a period of one year (Section 7.1.3).

Contrary to the above, one individual was certified to perform inspections in areas not covered in the proficiency evaluation and in which the individual had not performed inspections or tests within the last year. The failure of UST to certify personnel

in accordance with their procedure UST-TQ-1 is considered an item of noncompliance with 10 CFR 50, Appendix B, Criterion V (50-461/82-18-01m).

(3) Interviews With UST QC Personnel

Three UST QC inspectors were interviewed to determine if they felt that the site-specific training they had received was adequate. All three felt the training received was adequate.

(4) Review of Overinspection Logs

A review of the overinspection logs was conducted to determine if the overinspections performed to date had been performed by certified inspectors (notwithstanding the improper certifications noted in 2.b.(2)(a) above) as required by QAI-310.01, QAI-710.01, and UST (CL) - QAP-1.

It was determined that one visual weld inspection had been performed by two inspectors not certified to perform visual inspections. The failure of UST to utilize certified personnel in the performance of this overinspection is considered to be an item of noncompliance with 10 CFR 50, Appendix B, Criterion V (50-461/82-18-01n).

(5) Confirmatory Action Letter

The overinspection program was discussed during a meeting held between IPCo and Region III staff members in the Region III office on September 30, 1982. As a result of concerns identified during this meeting and the item discussed in Paragraph 2.b.(2)(b) related to training of overinspection personnel, a Confirmatory Action Letter (CAL) was issued on October 6, 1982. The CAL stopped the overinspection program until an Overinspection Program Plan has been developed and the NRC has reviewed and concurred in the Plan.

3. 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. An unresolved item disclosed during the inspection is discussed in Paragraph 2.a.(2)(h).

4. Exit Interview

The inspectors met with licensee representatives (denoted in Section 1) at the conclusion of the inspection on October 8, 1982, and summarized the inspection scope and findings. The licensee acknowledged the noncompliances and stated that appropriate action would be taken.