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Note to: William L. Clements  
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From: Stephen H. Lewis, Deputy Assistant  
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SUBJECT: OI REPORT (BYRON)

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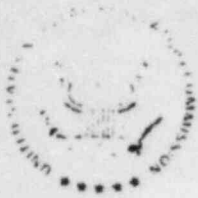
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Enclosure: OI Report 3-83-006  
(Byron) - 3 copies

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UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

TITLE:

Byron-Hatfield Electric; Alleged  
Improper Certification Testing of  
Quality Control Inspectors

CASE NUMBER: 3-83-006

DATE OF REPORT: JUL 18 1984

STATUS: Closed

LICENSEE/VENDOR/OTHER:

Commonwealth Edison Company  
Chicago, Illinois

RELATED DATA:

Inspection Number  
50-454/83-21  
50-455/83-16  
50-455/83-29  
50-455/83-22

DOCKET NUMBER: 50-454 & 50-455

BASIS OF INVESTIGATION:

In January, 1984, NRC Region III requested that the Office of Investigations (OI) conduct an investigation into alleged violations of the Hatfield Electric Company Quality Assurance program at Byron Nuclear Generating Station, Byron, IL. The allegations pertain to 10 CFR, part 50, Appendix B, and 10 CFR 50.7. This report is the result of OI's investigative effort.

DISTRIBUTION:

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## SYNOPSIS

Construction on the Byron Nuclear Generating Station (Byron Station) began in 1975 after the issuance of construction permits (CPR), CPR-130 and CPR-131. Byron Station is owned by Commonwealth Edison Company (CECo), Chicago, Illinois, and is located in Byron, Illinois, approximately 12 miles southwest of Rockford, Illinois, 125 miles west of downtown Chicago, Illinois, and has twin Westinghouse four loop nuclear generating units, each designed to supply 1,125 megawatts (MWE) of electricity. Hatfield Electric Company (HECo) is the major electrical contractor for Byron Station and provides all electrical and technical service support to CECo. This investigation involves the HECo quality assurance program at Byron Station.

Investigative assistance was requested after [redacted] alleged telephonically contacted the resident inspector's office of the Nuclear Regulatory Commission, (NRC) at the Byron Nuclear Generating Station and related that there were certain allegations and specific information relative to these allegations which they would like to discuss with a representative from the NRC. On November 23, 1982, [redacted] interviewed [redacted], by NRC Region III personnel. The alleged discussed what they perceived to be deficiencies regarding the HECo Quality Control Assurance program and/or its implementation. A total of 33 allegations were initially identified by the NRC interviewers as requiring additional investigation. Subsequent contact with [redacted] alleged in January 1983 surfaced seven additional allegations. Each allegation was independently evaluated by the NRC Region III technical staff, and the Office of Investigations, Region III. Subsequently, six allegations were referred to the Office of Investigations (OI) for resolution. The remaining allegations, due to their technical nature, were disseminated among various NRC Region III technical staffs. The following six allegations were identified as appropriate for an OI:RIII investigation:

1. [redacted] alleged that [redacted] electrical inspector training was incomplete, consisting only of "reading procedures and being tested," but recorded by HECo as being in compliance with all applicable regulation.

2. [REDACTED] alleged that [REDACTED] was encouraged and permitted to cheat on written electrical certification examinations.
3. [REDACTED] alleged that [REDACTED] was permitted to function as an electrical inspector at a particular level prior to actual certification by HECc at that level.
4. [REDACTED] Another individual alleged that weld document travellers were being filled out "post-facto", and welds were being accepted by HECc management personnel from their desks rather than as a result of physical inspection.
5. [REDACTED] alleged that discrepancy reports (DR) were being altered by HECc supervisory personnel after being completed by the QC inspector.
6. [REDACTED] alleged that HECc office telephones were being monitored by HECc management personnel to prevent contact between HECc employees and the Nuclear Regulatory Commission and Commonwealth Edison (CECo).

During the conduct of the investigation two additional allegations surfaced which also appeared to warrant OI resolution:

7. [REDACTED] stated that HECc training and certification records were being removed from official files and thrown away by the HECc QC supervisor preventing the NRC from access.
8. [REDACTED] alleged that sexual discrimination was employed by HECc management in preventing female employees of HECc from becoming certified Level I field inspectors.

Interviews of HECc management officials, HECc employees, witnesses, and a review of various applicable HECc welding, certification, and training records failed to develop evidence to substantiate either the allegers or [REDACTED] allegations.

#### Allegation 1:

A thorough review of HECc records pertaining to [REDACTED] allegers training resulted in the determination that the allegers education, experience and training indicated he met the minimum requirements for the activity he was certified to perform. This was confirmed through interviews of other HECc employees, and an analysis of ANSI Standards 145.2.6 which were reviewed for minimal acceptable qualification certification standards.



Allegation 2:

[REDACTED] was [REDACTED] provided sworn testimony contradicting [REDACTED] previously supplied information regarding certification testing. [REDACTED] stated essentially that [REDACTED] was not provided the answers to the questions as [REDACTED] originally alleged, rather [REDACTED] personally copied the answers to the test in lieu of being provided the answers. [REDACTED] also stated he "probably" did not take the failed Certification test approximately one-half hour after [REDACTED] failed the original test as [REDACTED] first stated. The [REDACTED] alleged, who was also reinterviewed, provided contradictory information with previously supplied information supporting the [REDACTED] alleged's contention that [REDACTED] "probably" did not take the second exam one-half hour after [REDACTED] originally failed the first exam.

Allegation 3:

A thorough review of HECO records was conducted involving all areas wherein the [REDACTED] alleged reportedly worked prior to certification. Based on the review of these records and discussion with HECO QC inspectors who worked with the alleged, and HECO management personnel, no evidence could be found to substantiate the assertion that [REDACTED] actually conducted inspections, or reviewed and evaluated results of inspections performed by other QC inspectors prior to [REDACTED] certification as an inspector at a certain level. The [REDACTED]

[REDACTED]

[REDACTED]

Allegation 4:

Interviews of welding QC inspectors and HECO supervisory personnel failed to substantiate that welds were arbitrarily "accepted" by HECO management personnel without inspection. However, one instance was identified where the QA manager did approve a weld on a weld traveller document after the QC inspector rejected the weld. The QA manager, when interviewed was unable to recall the specific situation. However, because his QC supervisor's name was on the document as inspecting the weld, the QA manager felt the weld had been completely inspected by the QC supervisor who in the manager's opinion apparently overlooked signing the traveller in the acceptance block. The QA manager asserted he signed the approval block of the weld traveller for this reason.

The QC supervisor when reinterviewed acknowledged inspecting the weld and he verified his signature as authentic in the examiner part of the weld traveler card.

Allegation 5:

Interviews of HECO QA/QC supervisory personnel confirmed that in some instances grammatical or administrative corrections were made to completed and submitted Discrepancy Reports (DR). However, they indicated the content of the altered DR was not changed to the extent it would change the meaning of the original report. A review of numerous DRs failed to identify any DR where the content appeared to be altered. Attempts to further corroborate this allegation met with negative results.

Allegation 6:

Interviews of HECO management and employees confirmed that HECO office telephones were monitored to reduce the number of personal telephone calls that were being received and initiated by HECO employees. HECO management denied the telephones were monitored to prevent contact between the NRC, CECO and HECO employees and produced a 2" by 3" card containing the telephone number of the Nuclear Regulatory Commission Senior Resident Inspector and Commonwealth Edison Quality Assurance Inspectors which had been provided to each employee. Interviews of random HECO employees confirmed the presence and issuance of this card, and these employees related that to the best of their knowledge no attempts were made by "management" to prevent contact with either the NRC or CECO.

Allegation 7:

When interviewed, the custodian of HECO records and HECO management personnel asserted that records were periodically purged of unnecessary and extraneous materials. Those individuals, however, denied removing and/or destroying any required records or preventing the NRC from access to such records. Attempts to further corroborate this allegation met with negative results.

Allegation 8:

Interviews of CECO and HECO management personnel confirmed that two female employees of HECO, who had been previously certified as inspectors at a certain level had been downgraded from their positions, and that other female HECO employees who were in the process of becoming certified inspectors at a certain level were eliminated from the inspector's certification program. CECO management officials explained HECO was in the process of certifying the female HECO record clerks as inspectors at a certain level when, as a result of an Institute of Nuclear Power Operations (INPO) Inspection, HECO was directed by CECO to terminate the certification program for the female HECO record clerks, and also to downgrade those record clerks who had been previously classified as inspectors at a certain level. Interviews of CECO personnel confirmed that HECO was directed to downgrade all female inspectors at that level due to CECO's contention that the HECO record clerks were document handlers and not field inspectors, and therefore should not have been certified as inspectors in the first place. Thus, all of the female record clerks were subsequently downgraded after the INPO inspection discovered HECO was carrying record clerks in inspection positions at the stated level.

This investigation is closed due to the lack of substantive leads to support any of the allegations, or [REDACTED] allegations.

### Regulatory Requirements

10 CFR 50, Appendix B, requires that licensees holding construction permits implement a QA program meeting the criteria of Appendix B for all activities, including inspections, which affect the safety-related functions of structures, systems and components that prevent or mitigate the consequences of postulated accidents that cause undue risks to the health and safety of the public. Further, Criterion I states in part, "the persons and organizations performing QA functions shall have sufficient authority and organizational freedom to identify quality problems...including sufficient independence from cost and schedule..."

10 CFR 50.7 "Employee Protection," prohibits discrimination by a licensee, contractor or sub-contractor against an employee for engaging in certain protected activities which includes providing the NRC with information concerning possible violations of requirements imposed under the Atomic Energy Act or the Energy Reorganization Act. Discrimination includes discharge and other actions that relate to compensation, terms, conditions, and privileges of employment.

### Background

On November 23, 1982 [REDACTED] (confidentiality requested [REDACTED]) [REDACTED] contacted William FORNEY, Senior Resident Inspector, NRC, Byron Nuclear Generating Station, and related their desire to talk to someone from the NRC relevant to the improper HECO QC/QA practices. [REDACTED] individuals were interviewed together on November 23, 1982 at [REDACTED] offsite residence. The individuals made allegations both collectively and separately, regarding what they believed to be deficiencies in the HECO Quality Assurance program and its implementation.

On January 10, 1983 [REDACTED] voluntarily reported to the NRC Resident Inspector's office and provided additional information relative to six of the allegations previously made to FORNEY on November 23, 1982. [REDACTED] stated that based on additional information which [REDACTED] was now aware of, [REDACTED] no longer had concerns regarding issues identified in two of six previous allegations. However,



██████████ did initiate three new allegations including two allegations in the area of quality control and inspection certification. On January 17, 1983 ██████████ contacted the NRC resident inspector by telephone and ██████████ also made three additional allegations, two of which had been previously received from ██████████ on January 10, 1983. The one new allegation from ██████████ was in the area of quality control inspector certification. On January 18, 1983 ██████████ was interviewed by Charles H. WEIL and James E. FOSTER, Office of Investigations, Region III, wherein ██████████ reported the new allegation ██████████ had made on the 17th of January which concerned ██████████ certification as a ██████████ Quality Control Inspector (Exhibit 2).

On March 10, 1983, William L. FORNEY, Senior Resident Inspector, Byron Station, was at the Hatfield Electric Company (HECo) Byron site offices for the purpose of reviewing training qualifications and certification records of quality control inspectors. During the conduct of this inspection, FORNEY utilized the following procedure. FORNEY would personally select the names of inspectors from a HECo employee roster, and then provide the names verbally to Mr. Allen KOCA, Level III QC supervisor. KOCA in turn would go to the QC record vault and retrieve the requested records ██████████

██████████ note read as follows: "Mr. FORNEY, Mr. KOCA should be accompanied in the vault when he is retrieving files because he is ripping out file pages." The note which was unsigned and undated, was kept by FORNEY who then attempted to determine who had typed and passed the note to him. ██████████ stated to FORNEY that in the past ██████████ observed KOCA removing documents from files requested by an NRC inspector. However ██████████ would acknowledge preparation and delivery of the note.

On April 25, 1983, HUGHES appeared before the Atomic Safety and Licensing Board hearing for Byron Station, Units 1 and 2 represented by Ms. Jane WHICHER, Staff Attorney, Business and Professional People for the Public Interest. WHICHER filed a motion to admit testimony of John HUGHES on April 27, 1983. Attached to the motion was a handwritten statement by HUGHES which contained approximately six allegations (Exhibit 3). A special inspection was conducted by the NRC Region III office between April 27 and May 10, 1983 to determine



whether or not these allegations could be substantiated. The details of these allegations and NRC inquiries into them, as well as the NRC findings relating to these allegations were documented in NRC Inspection Reports 50-454/83-21 and 50-455/83-16.

On May 26, 1983, HUGHES was deposed before the Atomic Safety and Licensing Board. Based on additional information elicited from HUGHES during the deposition and the stipulated testimony of corroboration by witnesses OGSBURY and SOUDERS, the Board deemed that further inquiry into the HUGHES inspector certification allegation was warranted. Specifically, the training provided to HUGHES and possibly others was questioned based on what appeared to be a discrepancy between the dates shown on certain training records and HUGHES' own assertions as to when he was actually certified. Additionally, the question of whether or not cheating on QC Level I Inspector Certification exams was encouraged by HECO by allowing the inspectors to refer to written answers to the exams while being examined was raised as a result of HUGHES' testimony. In that testimony, HUGHES stated that the answers were available to him when he retook the exam. HUGHES also stated, however, that he did not use the answers even though they were available. These matters were never raised in the form of allegations prior to HUGHES' deposition on May 26, 1983. The one question relative to HUGHES' training was investigated by the NRC Region III office between June 23 and July 1, 1983. The results of this special inspection were documented in NRC Inspection Report Nos. 50-454/83-29 and 50-455/83-22.

Subsequently, the Office of Investigations was requested to conduct an investigation into the remaining eight allegations where "wrong-doing" violations appeared to exist.

Allegation 1:

John HUGHES alleged his Level II electrical inspector training was incomplete, consisting only of "reading procedures and being tested," but recorded by HECO as having complied with all applicable regulations.

Allegation 2:

HUGHES was encouraged and permitted to cheat on written Level II electrical certification examinations.

Allegation 3:

HUGHES was permitted to function as a Level II electrical inspector prior to actual certification by HECO as a Level II inspector.

Allegation 4:

[REDACTED] alleged that weld document travellers were being filled out "post-facto" and that welds were being accepted by HECO management personnel from their desks rather than as a result of physical inspections.

Allegation 5:

[REDACTED] and [REDACTED] alleged that discrepancy reports were being altered by HECO supervisory personnel after being completed by the QC inspector.

Allegation 6:

[REDACTED] alleged that HECO office telephones were being monitored by HECO management personnel to prevent contact between HECO employees and the Nuclear Regulatory Commission and/or Commonwealth Edison Company.

Allegation 7:

[REDACTED] alleged that HECO training and certification records were being removed from official files by HECO QC supervisory personnel and then being thrown away, thus preventing access by the NRC.

Allegation 8:

[REDACTED] alleged that sexual discrimination was being employed by HECO management in the form of preventing female employees of HECO from becoming certified Level I field inspectors.

## DETAILS

Allegation 1: John HUGHES' Level II Electrical Inspector training was incomplete, consisting only of "reading procedures and being tested," but recorded by HECO as being in compliance with all applicable regulations.

John HUGHES was an employee of Pittsburgh Testing Laboratories (PTL) and was assigned to Hatfield Electric Company (HECO) on October 4, 1982 as a QA/QC Inspector trainee for a Level II Quality Control (QC) inspector position. According to HECO records, on November 1, 1982, HUGHES was provided a limited certification as a Level II Quality Control inspector by the HECO QA/QC manager (Exhibit 4). On January 7, 1983 HUGHES' assignment to HECO was terminated by a HECO memo to Pittsburgh Testing Laboratories, and his employment by PTL at Byron Station was also terminated on that date (Exhibit 5).

In the position of a Level II inspector, HUGHES' job was to review and evaluate data recorded by other inspectors in accordance with Hatfield Electric Company Procedure No. 9A, Cable Pan Hanger Installation. The field data recorded by other inspectors was documented on Form HP-9A-1 titled "Class 1 Cable Pan Hanger Check List". HUGHES alleged that his training by Hatfield Electric Company for this position consisted only of reading procedures and taking tests and that there was no formalized training program that could be utilized with regard to training new employees (Exhibit 6). Specifically, HUGHES alleged he accompanied inspectors out to the field as they went out to check various items approximately only five times and that he had received approximately 1½ hours of formal class room training.

A review of John HUGHES' certification/training records maintained by Hatfield Electric Company disclosed that HUGHES received the following training that was consistent with the requirements and recommendations of ANSI Standards N45.2.6, "Qualification of Inspection, Examination and Testing Personnel for Nuclear Power Plants." HUGHES received 64 hours of "on-the-job-training" consisting of participation in 32 field inspections conducted by certified Level II inspectors. HUGHES also received indoctrination in 1) organization and responsibilities, authorities and technical objectives; 2) specification

contract F-2790 Division 2; 3) safety practices; 4) building location and electrical environmental qualification nomenclature; 5) tool and instrument familiarization; 6) ANSI N45.2, N45.222.2, N45.2.3, N45.2.4, N45.2.6, N45.2.9, N45.210, N45.211 and N45.213; 7) Sargent and Lundy Drawings; and 8) Sargent and Lundy Standards (Exhibit 7). Additionally, HUGHES attended three separate training sessions regarding Hatfield Electric Company Procedures 9A, 9B and 9E. HUGHES' Level II certification was limited to Procedure 9A, which concerned only the inspection of electrical cable pan hangers for location, dimension, configuration, surface conditions, and bolting (Exhibit 4).

Allan W. KOCA, QC Supervisor, HECO, was interviewed and he provided a statement wherein he identified when HUGHES first reported to Hatfield Electric Company. While HUGHES was in a training status KOCA stated he had direct supervision over him. KOCA acknowledged that as the QC supervisor, his primary function was to supervise the training program for HECO. KOCA related that at the time HUGHES underwent the training program, the HECO program was required to meet the standards established by Commonwealth Edison which were based on 10 CFR 50, Appendix B, Section 2 and ANSI Standards N45.2.6, 1978 edition. KOCA stated that using these as a guide for on-the-job training, minimum education and experience levels were established for each employee undergoing this type of training. KOCA related that generally at Hatfield, each inspector was required to possess a certain amount of education and pertinent work experience depending on the nature of the work which he performed at Hatfield. Additionally, KOCA stated each individual received classroom training and on-the-job training culminating in formal written examinations to insure they were qualified to perform the tasks they were hired to do. KOCA related that when HUGHES arrived at Hatfield Company he (KOCA) was required to insure that HUGHES had the correct education and work experience to become a Level II inspector. HUGHES was to be trained as a cable pan and cable pan hanger inspector. Based on HUGHES' previous work experience and education, KOCA stated that a training program for HUGHES was to be developed. KOCA stated that to the best of his recollection, HUGHES received all the training that was required in order for him to become certified as a Level II inspector (Exhibit 8).



On November 2, 1983, Scott K. WAGNER was interviewed at the South Texas Nuclear Project, Bay City, Texas. WAGNER acknowledged working for Hatfield Electric Company at Byron Station from January 1982 until May 1983. WAGNER related that while he worked at the Byron Station Project he actually worked for Pittsburgh Testing Laboratories and that his work location was Hatfield Electric where he was a Lead Cable Tray and Hanger inspector. WAGNER stated that HUGHES worked directly for him the entire time HUGHES was at Hatfield, and WAGNER confirmed that he was HUGHES' immediate supervisor. WAGNER related that while HUGHES was at Hatfield, to the best of his knowledge, HUGHES did undergo all of the required training that made HUGHES eligible to become a certified Level II inspector. WAGNER said that at approximately the end of October 1982, he submitted a letter to Jim BUCHANAN (QA manager) stating that HUGHES met all the requirements for certification and subsequently as a result of his memorandum, HUGHES was certified approximately November 1, 1982, as a Level II inspector. WAGNER emphasized that HUGHES was not certified, as HUGHES had alleged, during the middle of October 1982. WAGNER also stated that HUGHES never conducted any inspections by himself even after he was certified, due to the poor quality of HUGHES work. Continuing, WAGNER stated that he would send HUGHES out to assist other HECO certified Level II inspectors with the instruction to HUGHES to observe them and the proper manner in which the inspectors conducted their inspections. However, according to WAGNER, HUGHES was unable to pick up HECO's program quickly enough. Subsequently, HUGHES, according to WAGNER, developed a negative attitude toward the entire HECO Quality Assurance program as a result of the criticisms that he was receiving from both WAGNER and KOCA (Exhibit 9).

On July 29, 1983, Mr. James K. BUCHANAN was interviewed and he confirmed that he was the HECO QA supervisor during the time period John HUGHES worked for HECO. BUCHANAN acknowledged that the overall training responsibility for HECO rested with him as the QA manager. However BUCHANAN stated he delegated that responsibility to Alan KOCA who worked directly for him as a QC supervisor. BUCHANAN stated that when HUGHES arrived at HECO, HUGHES became an immediate problem that began when HECO management personnel learned that HUGHES did not meet all of the requirements needed for a Level II inspector certification. This was because HUGHES was lacking a high school diploma and at the time, did



not have a GED equivalent. BUCHANAN stated that HUGHES subsequently obtained his GED from the State of Illinois and after meeting all of the additional requirements was certified as Level II QC inspector on November 1, 1982. BUCHANAN acknowledged that Scott WAGNER was HUGHES' immediate supervisor during the time that HUGHES worked for HECO and that WAGNER provided a memorandum stating that HUGHES was qualified to perform Level II inspections (Exhibit 5). BUCHANAN stated that to the best of his knowledge HUGHES did not conduct any Level II inspections by himself prior to certification.

No evidence could be found either in the Pittsburgh Testing Laboratories office files or CECO personnel files on HUGHES to support HUGHES' claim that he received notification of his Level II quality control inspector's certification prior to November 1, 1982.

The HECO quality assurance program requirement for the time period in question, November 1, 1982 to January 7, 1983, mandated that the qualification of inspection, examination, and testing personnel be accomplished in accordance with ANSI Standards N45.2.6 1978. HECO's Procedure No. 17 titled Qualification and Training of Inspection and Audit Personnel implements this requirement (Exhibit 10). The CECO and HECO quality assurance programs in ANSI N45.2.6 required that each person who verifies the conformance of work activities to qualifying requirements shall be certified as being qualified to perform his assigned work. This certification must be supported by appropriate measures such as education, and/or training, testing evaluation and periodic review to assure initial and continued proficiency in the individual area for which the individual is certified. A total review of all of HUGHES' education, experience and training files indicated that he did meet the minimum requirements for activities that he was certified to perform and that he did not conduct independent Level II certification inspections prior to being certified on November 1, 1982.

Marvin R. TALLENT, Jr., Site Supervisor, Pittsburgh Testing Laboratories, was interviewed and he related that one of the responsibilities of his job at Byron Station is to provide a work force to various contractors assigned at Byron who are unable to find qualified workers elsewhere. HUGHES was employed

by Pittsburgh Testing Laboratories and was assigned to work at Hatfield Electric Company under the direct supervision of Hatfield management personnel. Administrative responsibility and accountability was to remain with Pittsburgh Testing Laboratories. TALLENT related that once HUGHES was at Hatfield he (TALLENT) basically lost contact with HUGHES. TALLENT subsequently heard that HUGHES became certified approximately 3 or 4 weeks after arriving onsite. TALLENT related that shortly after HUGHES did arrive onsite HUGHES apparently became disenchanted with the HECO program and commented to him on several occasions that he (HUGHES) did not agree with several of the policies established by HECO. TALLENT was unable to furnish any further information with regard to HUGHES' certification at HECO. TALLENT stated that while at PTL, HUGHES did undergo the eye examination certification and a briefing on the Pittsburgh Testing Laboratories safety program which were two of the requirements for certification as a Level II inspector (Exhibits 12/13). TALLENT also related that he personally ensured HUGHES underwent and subsequently passed the Illinois State High School equivalency (GED) testing program once he became aware that HUGHES did not have the required education.

(Paragraphs deleted)

Allegation 2: HUGHES was encouraged and permitted to cheat on written Level II certification examinations.

John HUGHES was interviewed on [REDACTED] 1983 by OI Investigators James E. FOSTER and Charles H. WEIL and related that during about October 1982, he was given a multiple choice type test which he believed was based on Procedure 9A, "Hanger Installations" (Exhibit 2). HUGHES related he took the test and then provided the completed test to the QC supervisor, Allan KOCA. KOCA scored and evaluated the test and advised HUGHES that he had scored a few points less than the required passing grade of 70 points (Exhibit 16). The test was returned to HUGHES by KOCA and HUGHES stated that both he and KOCA discussed the test and the missed questions and that he (HUGHES) was subsequently advised to study it. HUGHES related that he reviewed the evaluated test, recognized his errors, and retook the same examination approximately one-half hour later. HUGHES related he scored approximately 90% on the second examination (Exhibit 17). HUGHES related that this testing procedure was a common practice at Hatfield wherein each individual that failed a test would then be immediately reissued the same test after KOCA had reviewed all missed questions with them.

[REDACTED]

[REDACTED]

[REDACTED]

HUGHES further related that "sometime" after New Year's Day 1983 he observed a Mexican employee of HECO identified as Ramon (NFI) being given a Level II welding test which he failed on his first attempt. This first test was graded by KOCA and Ramon was given a second test, identical to the first test, which RAMON passed. No additional names were provided during this interview.

KOCA, who administered all certification testing for HECO, stated that in the past it was his practice to review test results with the inspector and to discuss the correct answer to the missed questions at that time (Exhibit 8). If the individual who took the test failed the examination, KOCA allowed the inspector to review the material covered on the test and would then readminister the same test. KOCA also related that because he did not sign the test HUGHES failed, he did not consider it to be a valid test and he subsequently destroyed it. KOCA said this practice has now been terminated and HECO

presently maintains all tests. KOCA further related that HECO Procedure No. 17, which was recently revised as a result of a discussion with NRC and Commonwealth Edison, requires that when an individual fails an examination he waits a minimum of 2 days prior to being re-tested and then would receive a different examination.

INVESTIGATOR's NOTE: Neither the NRC Regulations nor ANSI N45.2.6 Standards contain detailed requirements relative to the administration of QC inspector written tests.

In January 1983, [REDACTED] was interviewed by OI Investigators WEIL and FOSTER. During that interview [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

BUCHANAN was interviewed and he stated that the old procedure for the testing of Level II inspectors by HECO was for the examinee to review all missed questions with the QC supervisor (KOCA) and that the examinee would then be retested (Exhibit 18). BUCHANAN related that on occasion an individual would be given the same test the same day. However, BUCHANAN did not believe that anyone received the same test one-half hour after failing the original test. BUCHANAN also emphasized that as a result of inquiries into this allegation by the NRC, Procedure 17, the training procedure for HECO inspectors, has since been revised and it contains essentially the same information as provided by KOCA with regard to the new procedures for certification testing (Exhibit 18). Tracey HILL, BUCHANAN's predecessor as HECO QA manager was contacted and essentially confirmed the same information provided by KOCA and BUCHANAN.

On August 17, 1983 HUGHES was interviewed by OI Investigator David M. GALANTI, Charles H. WEIL, and HUGHES' requested Attorney, Ms. Jane M. WHICHER, Business and Professional People for the Public Interest, at her office, 109 North Dearborn, Chicago, Illinois (Exhibit 6). During this interview HUGHES essentially presented the same information as he had provided previously with

regard to failing the first test, being provided the answers, and then subsequently taking the second test approximately one-half hour after he had taken the first test. However, when shown the copy of the first test which contained the date of October 8, 1982, and a copy of the second test which contained the date of October 12, 1982, HUGHES commented that he probably did not take both the tests the same day as he originally alleged. When questioned further about the answers that were written on the last sheet of the first test, HUGHES acknowledged that he wrote those answers down and that he wrote them down based on discussions he had with KOCA as well as his own personal recollection. HUGHES stated that KOCA did not give him the answers to each one of the questions but rather simply reviewed all missed questions with him and told him to restudy the test (Exhibit 6).

(Paragraphs deleted)



[REDACTED]

HECo QC Inspector Thomas E. AHLQUIST was interviewed on October 12, 1983 and he acknowledged failing one of the certification tests required by HECo. AHLQUIST related that KOCA did review all the missed questions with him on the test and stated he was given the test to study over the weekend and upon returning took and passed the reexamination. QC Inspector John Wolcott WOOD reported that he never failed any of the examinations required by HECo for a Level II certification, but he did fail one Level I test and was given the same test approximately 1 week after he failed the first test. Terry R. MAAS, prior QC Group Leader for HECo, said he was responsible for assisting KOCA with the testing of Level II examinees. MAAS said that there was, as far as he knew, no cheating going on during any of the examinations. MAAS related that to the best of his knowledge all individuals received different examinations from the original tests that they had failed and these examinations were administered approximately 1 to 2 days after the failed first test. Robert C. EUBANKS, General Foreman, HECo was interviewed and he confirmed that KOCA was responsible for the training at HECo. EUBANKS reported he was never aware of anyone being given the same test on the same day, but it was possible that the same test could have been taken on a different day. EUBANKS related that he did not fail any of the examinations. QC Inspector Jan E. EGGUM was interviewed and he confirmed that he failed one test. However, EGGUM said he was given a different retest and was not sure if the second test was given on the same day. Donald J. OPATRY, Level II QC Inspector, HECo, was interviewed and confirmed he took the Level II test and failed it the first time he took it. OPATRY said the failed test was returned to him for review and then he was retested. OPATRY felt the retest was similar but was not the same as the original test. OPATRY said that to the best of his knowledge there was no cheating and no one was given any answers to the examination test questions. Ramon QUIJAS, Level II Welding Inspector, was interviewed and confirmed he took a Level II test and failed it the first time he took it. KOCA then reviewed all the missed questions with him and QUIJAS said he retook the examination approximately 1 or 2 days later. QUIJAS said he was not given the answers to the examination and he did not have any knowledge pertaining to cheating on the examination.

Allegation 3: HUGHES was permitted to function as a Level II Electrical Inspector prior to Certification:

All cable pan hanger inspection check lists, Form HP-9A-1, were reviewed for the period HUGHES was a Level II QC Inspector at Hatfield. These inspection reports were reviewed to determine if HUGHES conducted independent inspections or performed reviews and evaluations of results of inspections performed by others prior to his certification as a Level II inspector on November 1, 1982. All reviewed reports encompassed the period of time HUGHES was employed by Pittsburgh Testing Laboratories and was assigned to the Hatfield Electric Company at Byron Station. In all cases, HUGHES' signatures on these reports were subsequent to his certification date as a Level II inspector on November 1, 1982.

Scott WAGNER confirmed that he was HUGHES' immediate supervisor during the entire time HUGHES was employed by PTL and assigned to work at Hatfield. WAGNER reported that under no circumstances did HUGHES ever work independently conducting Level II electrical inspections on work performed by HECO employees or any other employee assigned at Byron Station (Exhibit 9). WAGNER related HUGHES' performance of work was of such a low standard that he felt that he could not trust HUGHES to work independently. T. HILL provided a copy of a statement made by WAGNER which was taken by HECO management personnel at the onset of his investigation (Exhibit 20).

KOCA reported that during HUGHES' certification period HUGHES spent the majority of his time in the HECO office and that KOCA was not aware of any instances where HUGHES was asked to conduct any type of Level II electrical inspection prior to certification. KOCA acknowledged that HUGHES' immediate supervisor, Scott WAGNER, was not confident in HUGHES' ability to perform cable pan inspections and that based on WAGNER's remarks, KOCA felt that WAGNER would never have permitted HUGHES to perform independent Level II electrical inspections. BUCHANAN, when interviewed, related that to the best of his knowledge HUGHES never conducted any Level II electrical inspections prior to certification and BUCHANAN also confirmed that he was cognizant of WAGNER's lack of confidence in HUGHES' ability to operate independently.

Based on the review of all cable pan inspections that were identified containing HUGHES' signature no evidence could be found to substantiate HUGHES' assertion that he conducted inspections or reviewed and evaluated results of inspections performed by other inspectors prior to his certification as a Level II inspector on November 1, 1982.

Allegation 4: Weld Document Travellers were being filled out "post-facto" and welds were being accepted by HECO management personnel from their desks rather than as a result of a physical inspection.

[REDACTED] was interviewed on January 25, 1983 by WEIL and FOSTER and was identified as being the [REDACTED] inspector for Pittsburgh Testing Laboratories assigned to work at Hatfield Electric Company. In approximately October 1982, [REDACTED] stated he was contacted relevant to a problem pertaining to welds and drawings, in that they did not match. [REDACTED] stated that he had the weld rod issue sheets in front of him and he used them to find the welder who was thought to be involved with the particular problem. Subsequently [REDACTED] found that the weld rods of record had not always been issued to the welder shown on the card. [REDACTED] stated that he took this information to KOCA, Hatfield's QC supervisor, discussed the problem with him, and was told by KOCA to change the dates of the weld on the weld traveller card. [REDACTED] believed KOCA wanted him to change dates from October 1, 1982 to October 4, 1982 (Exhibit 21).

[REDACTED] advised KOCA that he would not change any dates and that if any dates were changed, he would write up a Discrepancy Report on KOCA for changing the date. Later, as he was preparing a Discrepancy Report on another matter [REDACTED] came across the same weld rod issue sheet which showed that the weld rod had in fact not been issued to the welder as was indicated on the weld traveller card dated October 1, 1982 (Exhibit 22). [REDACTED] stated the dates were never changed by anyone including KOCA or himself on that particular card. [REDACTED] was reinterviewed on September 15, 1983 at [REDACTED] and stated that to the best of his knowledge Hatfield Electric was in compliance with established procedures on weld traveller packages and he was unable to site any specific deviation from the established standard (Exhibit 23). [REDACTED] stated in his statement of

January 25, 1983, that although no dates were physically changed on the weld traveller cards, KOCA had requested that the dates be changed. [REDACTED] said that when he refused to change the dates KOCA appeared to back down on his request.

(Paragraphs deleted)

[REDACTED] stated that he was very satisfied with the welding inspection area at Hatfield and he thought that it was operating very smoothly in comparison to some of the other plants where he had worked.

[REDACTED] reported he could not recall any deliberate act of wrong-doing on the part of any Hatfield QA/QC inspector or management individual.

BUCHANAN, when asked to recall the [REDACTED]

[REDACTED]

(Section deleted.)

BUCHANAN stated that if an inspector had a problem with regard to either acceptance or rejections of a particular inspection area, one of the QA/QC inspectors' supervisors would go to the field, physically inspect the problem, and then make the appropriate decision with regard to either acceptance or rejection. BUCHANAN further stated that the allegation of weld documentation being filled out after the weld was physically made was new to him. BUCHANAN said he was never aware of that allegation before, nor had he ever heard anyone in the Hatfield inspection program even insinuate such activity occurred. [REDACTED]

[REDACTED]

[REDACTED]

KOCA, when interviewed, could not recall the conversation with [REDACTED] wherein he allegedly requested [REDACTED] to change the dates on a weld package. KOCA also emphasized that it was not the policy of any welder or QC inspector to fill out any documentation after all welding had been completed. However, the paperwork would be filled out as the welder and the inspector were actually completing the work.

(Paragraphs deleted.)



All attempts to find additional corroboration for this allegation met with negative results. Interviews of additional QC welding inspectors elicited opinions that no weld document travellers were to their knowledge filled out after welds had been completed, nor were HECO management officials accepting the welds from their desks.

Allegation 5: Discrepancy Reports (DR) were being altered by HECO supervisory personnel after being completed by the QC inspector.

On January 25, 1983 [REDACTED] was interviewed by Investigator FOSTER and WEIL and he alleged that Discrepancy Reports (DR) that originally had been prepared by individual inspectors to document findings were subsequently altered by the QC supervisor (Exhibit 29). [REDACTED] provided an example of an alteration to a Discrepancy Report by adding the word "factory welds" to the bottom of the Discrepancy write-up area (Exhibit 22).

KOCA, when interviewed, stated the allegation that he had either altered, thrown away, destroyed or prevented anyone from submitting Discrepancy Reports was totally incorrect. KOCA stated that all Nonconformance Reports and DRs had to be clear, concise statements understandable to the reader. KOCA related that his inspectors had very little experience in writing up DRs and that over the course of his career he had written up thousands of them. KOCA admitted to changing a word here or there on DRs but in his view, changes never altered the content of any DR. KOCA also denied ever destroying any DR initiated by any of the inspectors. He advised he only threw away DRs or Nonconformance Reports when he found extra copies in the file system. KOCA continued by stating that sometimes some of the inspectors would approach him and tell him that they had a DR to write up and he would tell them, "fine, go ahead and do it and bring it back to me for my review". Subsequently, the

inspector would write up the DR in an unacceptable way. KOCA stated he then would send the inspectors back and have them attempt to rewrite the DR. On several occasions KOCA said he had to tell some of the inspectors to rewrite the DRs three and four times for the sake of clarification and yet he still ended up making grammatical corrections. KOCA stated that even though one of the requirements for QC inspector certification was to have a high school education some of the inspectors did not have strong writing ability (Exhibit 8).


BUCHANAN when interviewed, confirmed that KOCA probably made grammatical corrections in DRs. However, BUCHANAN stated he had never known KOCA to arbitrarily alter the contents of any DR submitted by an inspector (Exhibit 26).

██████████ when interviewed on September 15, 1983, stated neither BUCHANAN or KOCA ever altered his inspection procedures which were in accordance with applicable guidelines. ██████████ initially confirmed that DRs submitted by him had been altered. However, upon reevaluating the particular change to the DR, ██████████ concurred that the content of the DR was not in fact changed, but rather the change was grammatical in nature (Exhibit 23).

(Paragraphs deleted.)

(Sections deleted.)

Allegation 6: HECO office telephones were being monitored by HECO management personnel to prevent contact between HECO employees and the NRC and/or CECo.

 Alleged on November 23, 1982 that HECO office telephones were being monitored by HECO management personnel to prevent HECO employee contact with the Nuclear Regulatory Commission and Commonwealth Edison. This allegation was reiterated in January 1983 during interviews with OI Investigators WEIL and FOSTER.

(Paragraphs deleted.)

Pages 26, 27, and 28 deleted.

(Sections deleted.)

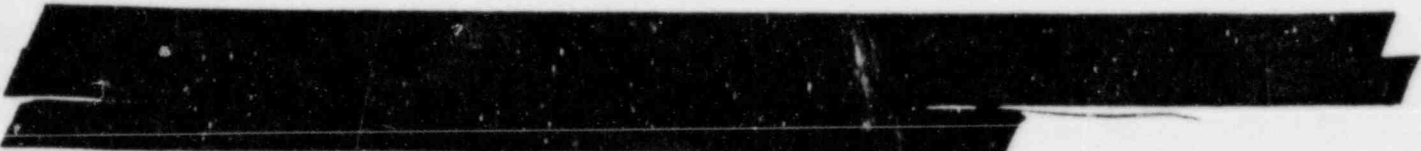
Allegation 7: HECO Training and Certification Records were being removed from official files by a HECO QC supervisor preventing NRC from access to the material.

On March 10, 1983, William L. FORNEY, Senior Resident Inspector, Byron Station was at the Hatfield Electric Company (HECO) Byron site offices for the purpose of reviewing the training qualification and certification records of quality control inspectors. In order to accomplish this task, FORNEY would select the name of the personnel whose records he desired from an employee roster, provide that name to KOCA, and have KOCA go into the QC record vault and retrieve the requested records. This was the same procedure that had been utilized by FORNEY in the past for other record reviews.

(Sections deleted.)



Pages 30 and 31 deleted.



BUCHANAN denied any destruction of records which HECO was required by either Commonwealth Edison or the NRC to maintain. BUCHANAN identified KOCA, acting in his capacity as a QC supervisor, as directly responsible to BUCHANAN for the maintenance of the records in the vault. BUCHANAN said the only records KOCA was allowed and authorized to destroy were those records which Hatfield was not required to maintain or those records where there were duplicate copies in the files system (Exhibit 26).

KOCA related that part of his job was to insure that all records were maintained in accordance with the established Hatfield procedure. KOCA said he would sometimes go into the vault containing certified records, employee records, and inspection records, and while he was going through the records if he happened to discover a duplicate copy of a record or a paper that in his opinion was not required to be in the files in the first place, he would remove it from the files. KOCA stated he would always be sure there was an original on file or that the document actually needed to be in the files first before he removed anything. KOCA stated that in March when FORNEY was inspecting the HECO records, if he (KOCA) found something that should not be in the files he removed it, but in his opinion it was nothing that was needed or required by FORNEY at the time he requested the records. KOCA stated he had also thrown away NCRs and DRs in the same fashion. However, KOCA said, he only did this when there was a duplicate copy available in the file system. KOCA denied ever deliberately destroying any records which were required to be maintained by either the NRC or Commonwealth Edison without either first checking to see that the record could in fact be destroyed or there was a duplicate copy of the original in the files. (Exhibit 8).

Allegation 8: Sexual discrimination was being employed by HECO Management by preventing female employees of HECO from becoming Certified Level I Field Inspectors.

[REDACTED] when discussing the allegation of HECO training and certification records being removed from official files by KOCA, voluntarily stated that female employees at HECO, in [REDACTED] opinion were being discriminated against by HECO management which was preventing the women from becoming Level I Certified Field Inspectors. [REDACTED] related that both [REDACTED] and [REDACTED] were at one time certified Level I Field Inspectors, and [REDACTED] female record clerks in Hatfield were being processed for training and subsequent certification as Level I electrical field inspectors. However, for some reason both [REDACTED] and [REDACTED] certifications were voided by BUCHANAN. BUCHANAN, when queried by [REDACTED] about decertification, stated it was apparently some type of trade off between Commonwealth Edison and HECO and that he personally was against the decertification of the female Level I inspectors program. BUCHANAN said he received a directive from Jim BENDER (CECO) who directed that all female Level I employees at Hatfield, who were in either a Level I Inspector position or were being trained for a Level I Inspector position were to be down-graded and reassigned back to the HECO QA clerk position. [REDACTED] and interviewed relevant to this allegation. [REDACTED] confirmed knowledge of the pending implementation of the certification to Level I positions of all the record clerks at Hatfield, but were unable to explain why the program was terminated.

KOCA, when interviewed regarding this issue commented that BUCHANAN was responsible for the certification of the female clerks at Hatfield. KOCA felt all of the females were hired as clerks and none of the women ever did a field inspection, therefore, they should not have been classified into a Level I certification inspector's position in the first place. KOCA stated he did not oppose the certification of the female HECO record clerks. He did tell BUCHANAN that BUCHANAN's interpretation of the ANSI Standards (which BUCHANAN apparently thought authorized the certification) was not the same as KOCA's. Further, KOCA did not think the female record clerks should be certified

because they were not doing actual physical field inspections. KOCA said the clerks were insuring the paperwork generated by the field inspectors was in fact completed and signed off by the field inspectors. KOCA stated he was in the process of certifying the remaining females in the HECO office when he was told to stop all certification proceedings and to decertify the two record clerks who had been previously certified. KOCA stated he did not know the background of this decision (Exhibit 8).

INVESTIGATOR'S NOTE: KOCA when originally queried about this allegation reported that his interpretation was different from BUCHANAN's with regard to the certification of female Level I inspectors. KOCA stated that the old ANSI Standard, N45.2.6 1973 was used in determining who was eligible for certification and it was simply a matter of interpretation of who should be certified. BUCHANAN apparently thought that because the old Standard said that experience as a document handler could be one of the criterion used for certification, that two of the females, KRITSINGER and JOHNSTON, were actually certified. However, ANSI Standard, N45.2.6 1978 eliminated that criterion. KOCA provided copies of ANSI Standards, N45.2.6 1973 and 1978.33/34.

BUCHANAN stated that he was in the process of certifying all of the female record clerks as either Level I or Level II inspectors when he received a directive from Jim BENDER, Commonwealth Edison, to stop all certification programs involving the female record clerks. BUCHANAN stated that two of the record clerks, JOHNSTON and KRITSINGER were actually certified as Level I inspectors and one of the females, BAKER, was certified as a Level I Inspector and working on a Level II Inspector certification when he was ordered to terminate the program. BUCHANAN stated that none of the females who were classified as Level I inspectors actually conducted any inspections in the field. Although they answered directly to the QA manager, BUCHANAN stated there was always a question about who they actually worked for because of their organizational relationship with the Hatfield office manager who worked in the production area. BUCHANAN stated that CECO apparently felt that all the record clerks were hired as clerks and because they were not doing the tasks of a Level I field inspector they should not be carried as Level I inspectors on HECO records. BUCHANAN stated that he was opposed to the elimination of the program, but, after the discussion with the Hatfield project manager and Commonwealth Edison, he had no alternative but to comply with the CECO directive (Exhibit 26).

James BENDER, Commonwealth Edison Lead Electrical Engineer/Supervisor, was interviewed on October 13, 1983 and he confirmed that he directed BUCHANAN to down-grade the two HECO female Level I inspectors to their original QA record clerk position and to terminate the program of certification of record clerks into Level I inspectors. BENDER said Commonwealth Edison first became cognizant of the HECO program during an INPO inspection when it was discovered that Hatfield was carrying several of the record clerks in Level I positions on their organizational chart. Discussions with Hatfield and Commonwealth Edison resulted in the decision that all Hatfield record clerks were hired for a record clerk position. Since they never did actual Level I field inspection certifications. HECO's classification of Level I inspectors for these individuals was misleading.

Richard TUETKEN, Commonwealth Edison, Assistant Superintendent, Project Construction Department, was contacted regarding to this matter and confirmed essentially the same information provided by BENDER. TUETKEN stated, although Hatfield was carrying two certified Level I female inspectors, they were simply data takers versus true field inspectors. TUETKEN related that although the women met the educational requirements and probably met the certification training requirements they had never really conducted actual onsite Level I field inspections.



EXHIBITS

1. Confidentiality Agreement, [REDACTED]
2. [REDACTED]
3. Handwritten Letter from JOHN HUGHES, dtd April 28, 1983
4. Certification of Qualification, RE: HUGHES, JOHN, dtd November 11, 1983
5. Memo from [REDACTED]
6. Sworn Testimony of [REDACTED]
7. CA/QC Memorandum No. 44B, Training Summary, Re: HUGHES, dated October 29, 1982
8. Statement of A. KOCA, dated October 20, 1983
9. Results of Interview with S. WAGNER, dated November 2, 1983
10. Procedure No. 17, Qualification and Training of Inspection and Audit Personnel, dated July 21, 1983
11. Statement of M. TALLENT, dtd October 11, 1983
12. [REDACTED]
13. PTL Safety Program Review, dtd October 4, 1982
14. Letter from HECO to PTL [REDACTED]
15. [REDACTED]
16. HECO Certification Examination (1st Test), undated
17. HECO Certification Examination (2nd Test), dtd October 12, 1982
18. Results of Interview with JAMES K. BUCHANAN, dtd July 27, 1983
19. Results of Interview with [REDACTED]
20. Statement of [REDACTED]
21. Statement of [REDACTED]
22. HECO Discrepancy Report No. 1099, dtd May 4, 1982
23. Results of Interview with [REDACTED]
24. Confidentiality Agreement, [REDACTED]
25. Results of Interview with [REDACTED]
26. Results of Interview with JAMES K. BUCHANAN, dtd October 21, 1983
27. HECO Weld Traveler Card No. 15640 dtd September 9, 1982
28. Statement of A. KOCA, dtd December 27, 1983
29. Statement of [REDACTED]
30. Confidentiality Agreement, [REDACTED]

31. Statement of [REDACTED]
32. Results of Interview with [REDACTED]
33. ANSI N45.2.6, dtd 1973
34. ANSI/ASME N45.2.6, dtd 1978

ATTACHMENT 1

3-82-46

CONFIDENTIALITY AGREEMENT

(original to source of information, NRC to retain copy or duplicate original)

I have information that I wish to provide in confidence to the U.S. Nuclear Regulatory Commission (NRC). I request an express pledge of confidentiality as a condition of providing this information to the NRC. I will not provide this information voluntarily to the NRC without such confidentiality being extended to me.

It is my understanding that, consistent with its legal obligations, the NRC, by agreeing to this confidentiality, will adhere to the following conditions:

- (1) The NRC will not identify me by name or personal identifier in any document, conversation, or other communication released to the public. I understand the term "public release" to encompass any distribution outside of the NRC with the exception of other public agencies which may require this information in furtherance of their responsibilities under law.
- (2) The NRC will disclose my identity within the NRC only to the extent required for the conduct of NRC activities.
- (3) The NRC will avoid taking actions that could be reasonably expected to allow my identity to be deduced by persons contacted by the NRC or by including the information that I provide in any public document, conversation, or other communication in such a manner as to allow my identity to be deduced.

I understand that even though the NRC will make every reasonable effort to protect my identity, my identification could be compelled by orders or subpoenas issued by courts of law, hearing boards, or similar legal entities. The NRC will attempt to inform me of any such actions before disclosing my identity.

I also understand that the NRC will consider me to have waived my right to confidentiality if I take any actions that may be reasonably expected to disclose my identity. I further understand that the NRC will consider me to have waived my right to confidentiality if I provide (or have previously provided) information to any party that contradicts the information that I provide to the NRC.

Other conditions: ~~(if any)~~ none

I have read and understand the foregoing agreement. I agree with its provisions.

[Redacted signature area]

Signature of source of information  
Printed Name and Address

Agreed to on behalf of the U. S. Nuclear Regulatory Commission

*[Handwritten Signature]*  
Signature and Title

ATTACHMENT 2 (OMITTED)



ATTACHMENT 3

My Name is John Wagner, I work  
for Pettibone testing Lab at Exron  
from October 1, 1952 - to Jan 7 1954.  
As a Q A electrical inspector, I have  
been a Q C inspector ten years, I  
have been cracked on Nuclear plants  
for 4 years including, Surrey VA,  
~~Hammond~~ Syracuse NY, Zimmerman Ohio.

I have been certified as a  
electrical inspector at Surrey VA  
and Exron also with Low Boy  
in Raleigh N.C., I was certified as  
a Welding inspector 3 years at  
Richardson Eng Co. Richmond VA.  
Also Zimmerman in Ohio,

My training at Exron was by Kettle  
and consisted of reading procedures  
and being tested,

I failed my first exam and was  
retested about 1/2 hour later and  
~~was~~ was given the answer for the  
the questions which I missed the  
first time before taking the test for  
the second time,

I was ask to sign off Exron  
for inspection I did not prefer.

I did this ~~for~~ until Dec 1 the  
I refused to do this for you

They supervisor ask me if I did  
not like this program, I said  
it ~~was not the~~ then I replied it  
is not your program it is the  
way you are going about it, after  
refusing to sign documentation I was  
given other tasks and then laid off  
after about a month.

While I was at Ayrton I  
saw many problems with welding  
including welding brace to a pressure  
pipe, also welding cable tray support  
while cable was laying in tray.

I also saw welds with uneven  
profile, ~~and~~ of course uneven cut  
and fining of welds.

I then first went to the  
H.R.C Nov. 1982 with two of my co-  
workers, I told Mr. Bill Fourny of  
<sup>signing of the program</sup> that I had never inspected.  
but nothing ever changed.

After I was laid off I then went  
back to the H.R.C and then gave  
them a statement about things that  
I have mentioned above, I then  
then gave them documents.

In or about the first of Feb 1983  
I talked with Betty Johnson and  
Stanley Campbell and was ask to

to be a witness but I decided  
to stick with the M.H.C., so last  
night I decided to call Jean Wicker  
because I needed a lawyer. She  
ask me to be a witness so I  
said yes, the reason why is I  
want people to be aware of  
the problems which exist.

Jason W. Hughes

4-25-83

UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20548

OFFICIAL BUSINESS  
PENALTY FOR PRIVATE USE \$300



BT  
26  
A76

NO POSTAGE  
NECESSARY  
IF MAILED  
IN THE  
UNITED STATES

44  
20  
843  
48

**BUSINESS REPLY MAIL**

FIRST CLASS PERMIT NO. 17864 WASHINGTON DC

POSTAGE WILL BE PAID BY ADDRESSEE

NRC REGION III  
759 ROOSEVELT RD  
GLENN BLVD, ILL. CRIST  
[ATTN: OIA, MR. PRULICK]



APR 20 1983

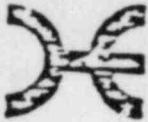


NRC FORM 188  
1-82



ATTACHMENT 4

FORM HF-176  
Revision #5  
Date 7-9-82



**HATFIELD** ELECTRIC COMPANY

ELECTRICAL  
CONTRACTORS

EXECUTIVE OFFICES • 6478 WEST NORTH AVENUE • CHICAGO, ILLINOIS 60635 • AREA 312 • PHONE 622-7080

CERTIFICATE OF QUALIFICATION

Employee Name: J. Hughes  
Date of Employment: 10-4-82 Job Title: Level II QC Inspector

ACTIVITIES QUALIFIED TO PERFORM

Procedure #9A  
(Class I Cable Pan Hanger Installation)

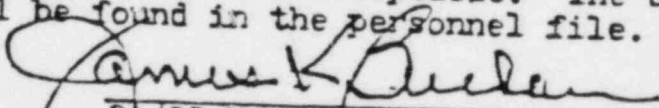
CERTIFICATION BASED ON

Education: High School Education (G.E.D.)  
Training: Memorandum #343  
Experience: Over one year experience working as a Level II  
to programmatic Quality Control Inspections  
Examinations: On file  
Visual Examination Date: 10-14-82

Comments:

I hereby certify that the above employee meets the requirements of Procedure #17 and ANSI N45.2.6-1978. The capabilities of the employee have been determined by evaluation and are acceptable. The documentation of the evaluation will be found in the personnel file.

Expiration: 11-1-83

  
QA/QC Manager  
Hatfield Electric Company

Date 11/1

ATTACHMENT 5 (OMITTED)

ATTACHMENT 6 (OMITTED)

ATTACHMENT 7



HATFIELD ELECTRIC COMPANY

QA/QC Memorandum #448

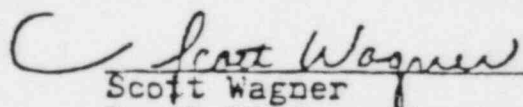
TO: File 3.01, John Hughes  
FROM: Scott Wagner, Lead Inspector  
DATE: 10-29-82  
SUBJECT: Training Summary

John Hughes has completed and exceeded the minimum requirements established in QA/QC Memorandum #343, dated October 6, 1982. His training began October 5, 1982 and was completed October 29, 1982. The training followed the attached detailed training outline for Procedures #9A, #9B and #9E. He was given a minimum of eight (8) hours of classroom training and 64 hours of on the job training in Procedure #9A.

The training has been documented with the following objective evidence:

- approved detailed training outline (procedures 9A, 9B and 9E)
- records of on the job training
- classroom attendance records
- QA program examination - 85%
- general Level II Inspectors test - 90%
- Cable Pan and Hanger Inspectors Examination - 86 1/4 %
- (Procedures #9A, #9B and #9E)

Mr. Hughes has demonstrated that he has the capabilities to report inspection results, evaluate the validity and acceptability of the results. He is capable of planning and preparing for inspect. He has shown the ability to supervise and maintain surveillance over Level I inspectors and their activities. He is capable of reinspect: questionable data.

  
Scott Wagner  
Level II Inspector

NOTE: Certification in procedures #9B and #9E may come later when on the job training is completed.

The above information and tests were reviewed with the inspector immediately following each test or activity in order to clarify any questions.

ATTACHMENT 8

PLACE: BYRON STATION  
20 October, 1983

*AK -*  
*10/20/83*

I, Alan W. KOCA, do hereby make the following voluntary statement to Mr. David M. GALANTI, who has identified himself to me as an Investigator with the U.S. Nuclear Regulatory Commission. I make this statement freely with no threats or promises of reward having been made to me by Mr. GALANTI.

*AK 10-20-83*  
*Don*  
*LA 3C*  
*10/20/83*

I am presently employed as a quality assurance supervisor for Hatfield Electric Company and work at the Byron Nuclear Generating Station, Byron, IL. I have been in my present position since November 1982, and prior to this I was Hatfield Electric Company Quality Control Supervisor. Before I came to Hatfield I worked for Baldwin Associates at the Clinton Nuclear Power Station as a quality control engineer for approximately four years. My present responsibilities include the supervision the Hatfield Electric audit and surveillance activities; development of all quality assurance procedures; training and certification documentation of all personnel and evaluation of Hatfield personnel for the levels of inspection qualification. As the quality control supervisor I was responsible for the inspectio activities including training and certification of inspection personnel.

*Alan W. Koca*

This statement contains my explanation on allegations initiated by Mr. John HUGHES surrounding the Hatfield Electric quality control program and the inspector certification program. HUGHES worked for Hatfield fro approximately four months beginning in Oct 1982 until he was released back to Pittsburg Testing Laboratories on Jan 7 1983. While he worked at Hatfield I supervised HUGHES in my capacity as quality control supervisor. When HUGHES first reported to Hatfield to work he was in a training status and I had direct supervision over him while he was in that mode; however once he became certified on 1 November 1982 his immediate supervisor was Mr. Scott WAGNER, and I was his second line supervisor. At the time HUGHES underwent the training program, Hatfield's program was required to meet the standards established by Commonwealth Edison Company which were based on 10 CFR 50, appendix B, section 2, and ANSI standard N45.2.6 - 1978. Using these as a guide on the job training, minimum education and experience levels were established. Generally at Hatfield, each inspector was required to possess a certain amount of education (high School) and pertinent work experience depending on the nature of work that he performed at Hatfield. In addition each individual received classroom training and ~~informal~~ on the job training culminating in formal written examinations to ensure they were qualified to perform the tasks they were hired to do. When HUGHES arrived at the Hatfield Company I was required to insure that he had the correct educational and work experience to become a level II inspector. HUGHES was to be trained as a cable pan and cable pan hanger inspector. Based on HUGHES work and education we developed a training program for him. To the best of my recollection HUGHES received all the training that was required in order for him to become certified as a Level II inspector. HUGHES was also administered six written examinations ~~the general level II inspector's test, a series of three test on various Hatfield procedures 9A, 9B and 9E, and two additional tests which the exact numbers are unknown to me at this time.~~ I am aware that HUGHES said that he took ~~XXXXXX~~ one of the tests, failed the test then was given the answers to the test, and a second retest within 4 hour. I can only say that I think this highly unlikely. It was a standard practice for me to review all missed questions on any test with an individua who failed a test, but he was never given the answers to any questions by me or anyone else for that matter. It is also possible that he might have taken the same test the same day; however, it certainly was not within the time frame that he stated. As I stated earlier the testing program has changed a great deal within the last year. We now give different tests and always after a two day waiting period. I can not state exactly what the situation was with HUGHES but I do not believe that he was given the answers to the test.

*10/20/83*

*AK*

*W*  
 I am also familiar with the allegation that HUGHES was conducting inspections prior to actually becoming certified. To the best of my knowledge he never conducted any inspections by himself, and signed off of any travellers approving the inspections prior to his certification date of 1 Nov 1982. I think that HUGHES might have thought that by passing the general level II test that ~~that~~ would automatically make him certified; however, if that is the case then he was wrong. He never received anything stating that he was certified until 1 Nov, and then it was only because his immediate supervisor, Scott WAGNER advised me that he was ready to become certified and that all training, and educational requirements had been satisfied.

I would also like to comment about the additional allegations that have surfaced since the original allegations were presented by HUGHES. With regard to the telephones being monitored by Hatfield Electric Management personnel to prevent Hatfield employees from contacting the NRC or Commonwealth Edison I can say that if it was done it was done without my knowledge. I know that Hatfield was concerned with personal telephone calls coming into the office and employees making personal telephone calls on work time, but we were never advised not to contact the NRC or Edison. As a matter of fact we told all of our people that if they had a problem for them to go through the chain of command first, and if they felt uncomfortable with that then they could go right to the NRC or Edison. Jim BUCHANAN held a meeting around the end of November 1982, and at that time he passed out cards to everyone stating that the point of contacts for both the NRC and Commonwealth Edison were so and so, and also gave their telephone numbers.

*Alan W. Koca*  
 I also did not tell the inspectors to carry a pocket knife around with them to use if they come across a weld that contains too much slag. What I told them was " If I was a QC inspector and doing my job, and I saw a pin head piece of slag on a weld I would try to get it off with my fingernail or pocketknife to see if it was hiding some defect. I did not give orders to anyone to carry a pocket knife.

As far as the allegation that I have altered, thrown away, destroyed or prevented anyone from submitting Discrepancy Reports it is totally ~~XXXXXXXX~~ incorrect. All nonconformance reports and DR's had to be clear, and when I say that I mean that a person ~~XXXXXXXX~~ should be able to understand what they are reading. My people have had little experience at writing up DR's and I have written up thousands. I have changed a word here or a word there on DR's before, but they never changed the content of the DR. I have never destroyed any DR initiated by any of my inspectors, and the only time that I have ever thrown any DR's or nonconformance reports away is that when I was going through the files and I found another copy of one besides the original. Sometimes some of the inspectors would tell me that they have a DR to write up and I told them fine, go do it. Well, they would write one up that was totally unacceptable and I would tell them to go back and try it again. On several occasions they would have to be told to go back and rewrite the DR three and four times, and I would still have to make a word change here or there. Even though one of the requirements for certification is to have a high school education, some of the inspectors just do not have that strong of a writing ability.

With regard to signing off of welds without first inspecting the weld totally I would like to say ~~that I have signed off on welds in place of an actual inspector~~ however I have never done it without first physically going out and inspecting the weld first. To the best of my knowledge no Hatfield supervisor has ever done that.



AMK

Part of my job was to insure that all records are maintained in the established Hatfield procedure; therefore, I would sometime go into the vault containing certification records, employee records and inspection records, and if I happen to come across a duplicate copy of a record, or in my opinion, that paper was not required to be in the files in the first place I would remove it. I would always be sure that there was the original there first or that the paper actually needed to be in the files first before I removed anything. In March, when Mr. FORNEY was inspecting our records, ~~I went through each one of them first,~~ <sup>but to the best of my knowledge,</sup> if I found something that should not be there I removed it, but it was nothing that was needed or required by Mr. FORNEY at the time he requested the records. I once found a Boy Scouts of America certificate in one of the files and I removed it because it had no bearing on the files being maintained. That was one of the things I meant when I said "if it had no need to be in the files I removed it". I have also thrown away NCR'S and DR'S in this fashion however, I only did MXXX this when there was a duplicate copy.

The last area that I guess I need to talk about is the certification/decertification of all female Level I inspectors. From the onset Jim BUCHANAN was responsible for the certification of the female clerks in the Hatfield office. ~~The old ANSI standard 15.2.6 was used in determining who was or was not eligible for certification and it was a matter of interpretation of who should or should not be certified. BUCHANAN thought that because the standard said that document handlers could be one of the criteria for certification two of the girls, Peggy and Melody were actually certified, because they were the oldest ones in the office at the time.~~ <sup>AMK</sup> All of the females were hired as clerks, and none of the girls ever did a field inspection. I did not oppose the certification of the girls however, I did tell BUCHANAN that his interpretation of the ANSI standard was MXXX not the same as mine and that I did not think the girls should be certified because they were not doing actual physical field inspection, they were simply insuring that the paper work generated by the field inspectors was <sup>in fact correct.</sup> ~~in fact correct.~~ <sup>AMK</sup> In any event, ~~I~~ <sup>we</sup> certified two of the girls mentioned above, and we were in the process of certifying several other girls in the office when I was told to stop all certification proceedings on the girls and to decertify the two that had been previously certified. I do not know the background on this decision, I just did what I was told.

I have read the foregoing statement consisting of three typewritten pages. I have made any necessary corrections and have initialed them. I have signed my name on the margin of each page. This statement is the truth to the best of my knowledge and belief. I declare under penalty of perjury that the foregoing is true and correct. Executed on Oct 20 1983 at 10:30 AM.

*I sign this report for no gain for myself or to bring fault on others, but for the respect I have for the NRC and the employees and the work they are doing.*

Subscribed and sworn to before me, the undersigned, this 20 day of October 1983 at Byron Station, IL.

*David M. Salanti*  
 DAVID M. SALANTI  
 Office of Investigation  
 Region III, NRC

AUTH: SEC. 161c AEA 1954 as amended

ATTACHMENT 9



RESULTS OF INTERVIEW WITH SCOTT K. WAGNER AS RECORDED BY INVESTIGATOR DAVID M. GALANTI ON 2 NOVEMBER 1983 AT SOUTH TEXAS NUCLEAR PROJECT.

Scott K. WAGNER was interviewed by Investigator David M. GALANTI on 2 November 1983, at the South Texas Nuclear Project, relevant to his knowledge of questionable certification procedures while he worked for Hatfield Electric Company, Byron Station, Byron IL. WAGNER provided biographical information stating he has worked within the Nuclear Industry since September 1981. WAGNER stated that he is presently the Senior Raceway Inspector for Ebasco Services Inc., and has occupied that position since leaving Byron Station in May 1983. WAGNER worked for Hatfield Electric from January 1982 until May 1983. WAGNER acknowledged he was familiar with the ongoing investigation at Byron Station, and the allegations initiated by John HUGHES, Irv SOUDERS and June OGSBURY.

WAGNER stated that while he was at the Byron Station project he actually worked for Pittsburg Testing Laboratories (PTL), and his work location was Hatfield Electric where he was the lead cable tray and hanger inspector. WAGNER stated that HUGHES worked directly for him the entire time that he (HUGHES) was at Hatfield and he was HUGHES immediate supervisor. WAGNER stated that HUGHES work was below average with regard to his inspection technique's and knowledge, and stated that HUGHES did not pick up on the Hatfield program very well. WAGNER stated that when he first met HUGHES on 4 October 1982 he had a terrible attitude and immediately began to tell everyone, and anyone who would listen, how he was solely responsible for the investigation at the Zimmer Nuclear Plant, and that he would do the same thing at BYRON, if "things" did not work out for him there. WAGNER said that it was amazing to him that a total new guy would immediately begin to downgrade HATFIELD, without fully understand their program and what was expected of him. WAGNER said that throughout the entire time that HUGHES worked for Hatfield he continually criticized Hatfield on their program. HUGHES work performance was of such a poor quality that WAGNER said he never let HUGHES work alone, because he did not have the expertise that was necessary to be an independent worker. WAGNER said that to the best of his knowledge HUGHES never signed off on any documentation by himself which included the time after he became fully certified as a Level II inspector.

WAGNER said that HUGHES did undergo all of the required training that made him eligible to become a certified Level II inspector; however he recommended against his becoming certified to AL KOCA, but was over-ruled. WAGNER said that around the end of October 1982 he submitted a letter to Jim BUCHANAN stating that HUGHES met all of the requirements for certification and HUGHES was certified around 1 November as a Level II inspector. WAGNER emphasized that HUGHES was not certified, as he alleged, during the middle of October 1982, and never worked by himself.

WAGNER stated that he did not have any direct information with regard to HUGHES cheating on the Level II certification test; however, he did state that it was a common practice to review all missed questions with the individual immediately following the failing of an examination, and then, depending on the time remaining in the day either take the same test over that day, or whenever he could get around to it. WAGNER said that he was unable to recall if HUGHES took the second test the same day that he failed the first test. WAGNER said he did not have any knowledge about any questions and answers being written down on the back of HUGHES test. One area that WAGNER did disagree with in regard to the testing was pertaining to keeping the failed tests. WAGNER said that KOCA always threw away failed tests and never put them in the files where they belonged; however, CECO convinced Hatfield to keep all test and their policy was changed shortly to his leaving Hatfield in May 1983.

WAGNER confirmed that he discussed certification practices with Marvin TALLENT, PTL supervisor, but denied ever stating that HUGHES cheated on the examination. WAGNER said the conversation surrounded examinees being given the same test on the same day, not outward cheating on the part of HUGHES or anyone else. WAGNER said that if an inspector was physically working inside the Hatfield office, and he failed one of the certification tests, that person would generally get re-test the same day; however, if the individual that took the test was in the field and he failed the test, then it was a hit or miss type of situation, and that individual might wait as long as two weeks before being re-tested, although at the time, the individual would always get the same test that he failed.

WAGNER confirmed that telephones were being monitored by Hatfield management personnel; however, he stated the telephones were being monitored for the restriction of personal telephone calls rather than prevention of Hatfield employee's from contacting the NRC or Commonwealth Edison. WAGNER also confirmed he was contacted by Irv SOUDERS shortly after he was laid off at Hatfield and SOUDERS requested a procedural guide that he wanted to take with him. Continuing, WAGNER said as soon as he hung up the telephone, BUCHANAN called him into the office, and was aware of his conversation with SOUDERS. WAGNER said BUCHANAN told him they were trying to restrict the personal telephone calls coming into and going out of the Hatfield office and he did not think the telephone call from SOUDERS was appropriate. WAGNER said that in November 1982, BUCHANAN held an office meeting that was attended by everyone, and he passed out a card containing the telephone numbers of both the NRC and Commonwealth Edison in the event anyone wanted to contact them. WAGNER said that he was never told that he could not contact either of the agencies if he so desired. To the best of his knowledge HUGHES was never told that he could not contact either the NRC or Commonwealth Edison either, and he did not have any additional restrictions placed on him by management personnel that the rest of the employee at Hatfield did not also have placed on them. HUGHES said that the problem was simply one of wasting Company time and identified HUGHES, SOUDERS and OGSBURY as three of the most frequent abusers of the telephone at Hatfield.

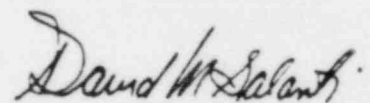
In December 1982, WAGNER said that he participated in a meeting in which HUGHES and SOUDERS were given their final warning about causing a disturbance in the office. WAGNER said that HUGHES had been talked to several times before about his "bull sessions" however, disregarded previous warnings. WAGNER said he knew that HUGHES was being considered expendable by Hatfield management, and several discussions concerning his possible lay-off were held. HUGHES had told him in the past if an opportunity ever came up in which he could be layed off to go ahead and lay him off because HUGHES told WAGNER that he would rather be layed off than work for Hatfield. WAGNER said that when HUGHES was finally layed off in January 1983 he was extremely happy with the fact that he was being layed off. WAGNER did not know why but for some reason both he (HUGHES) and SOUDERS had it in for Hatfield and were trying to "take them down". WAGNER felt that low pay by Hatfield, loss of per diem on 1 December 1982, and some of the personal policies such as the telephone restriction were the main reasons HUGHES felt, and acted the way he did. WAGNER also recalled that at the time HUGHES was layed off by Hatfield that PTL was not hiring any inspectors and therefore, TALLENT did not have a job for either HUGHES or SOUDERS. WAGNER said that he was not sorry to see HUGHES leave; however, he considered SOUDERS to be a good solid inspector and he hated to see SOUDERS leave. He felt that SOUDERS was used by HUGHES and influenced his behavior.

WAGNER felt that Hatfield Electric QA/QC program was a good program that got better the longer he was there and cited an example of when he arrived they, meaning Hatfield QC inspectors, were only inspecting 10% of all hangers in the various locations where they were working, and by the time he got thoroughly indoctrinated into the Hatfield system they were doing 100% of all inspections of hangers. WAGNER said that the QA/QC program worked independently of production and there was no outward signs of production directing QA/QC. WAGNER said there was no interference on the part of production and he was never directed to sign anything that he did not personally inspect. WAGNER felt that it was a good system because he worked for PTL, as did many of the inspectors, and therefore, Hatfield did not control the quality of their work. WAGNER said that he could always express his opinion, and although there were arguments with production personnel, BUCHANAN always appeared to have the final word on how a particular procedure or problem would be resolved. WAGNER said that he was also never prohibited from writing up Discrepancy reports (DR'S) or NCR'S although normally if the problem was something that could be done by Hatfield, management would encourage the inspector to write a DR vice a NCR. HATFIELD apparently desired to use NCR'S sparingly and only write up NCR'S when they were unable to fix or repair a particular problem.

WAGNER said he has now worked at three different Nuclear Plants and has had the opportunity to observe various programs, and he still feels that Hatfield did have a good program, with little interference from management. WAGNER felt the main problem with Hatfield was a lack of caring about their people and low pay, and was unable to cite any direct disregard toward compliance of requirements and directives established by Commonwealth Edison. WAGNER felt that if procedures were violated, it was a misinterpretation of established guidelines.

WAGNER was unable to provide any additional pertinent information and the interview was terminated at 1005.

RECORDED BY:



DAVID M. GALANTI  
Investigator  
NRC

ATTACHMENT 10





Hatfield Electric Company

Units 1 & 2

Training and Qualification of Inspection and Audit Personnel

1.1 PURPOSE

1.1 The purpose of this procedure is to provide methods and guidelines for the training and certification of Quality Control and Quality Assurance personnel.

2.0 SCOPE

2.1 This procedure applies to personnel who perform inspections, examinations, surveillances, and audits of safety related items or activities.

2.2 This procedure does not cover the qualifications or capabilities of testing personnel since electrical testing is not performed by Hatfield Electric Company

3.0 DEFINITIONS

3.0.1 Examination - an element of inspection consisting of investigation of material, components, supplies or services to determine conformance to those specified requirements which can be determined by such investigation. Examination is usually nondestructive and includes simple physical manipulation, gauging and measurement (ANSI N45.2.10).

3.0.2 Inspection - a phase of quality control which by means of examination, observation or measurement determines the conformance of materials, supplies, components, parts, appurtenances, systems, processes, or structures to predetermined quality requirements (ANSI N45.2.10).

3.1 REFERENCES

3.1.1 Hatfield Electric Company Quality Assurance Manual Section I, II

3.1.2 ANSI N45.2.6-1978

3.1.3 ANSI N45.2.23-1978

4.0 RESPONSIBILITIES

4.1 The QA/QC Manager is responsible for implementing this procedure.



4.2 The President of the company or the QA/QC Manager shall certify personnel to the various inspection or audit levels. The certification's shall be to the specific areas listed below, or to individual procedure if necessary to meet the inspection demands of the project.

- 1) Cable Pan and Hanger Inspector
- 2) Conduit and Hanger Inspector
- 3) Visual Weld Inspector
- 4) Field and Engineering Design Change Inspector
- 5) Equipment Turnover, Cable Installation and Terminations Inspector
- 6) Equipment Receiving Inspector
- 7) Auditor

4.2.1 The President of the company shall administer and evaluate a predetermined testing program for Level III Inspectors certified by the Hatfield Electric Company. He shall provide written concurrence to all the CW- requirements regarding the certification of Level III Inspectors.

4.3 The QA/QC Manager shall anticipate the personnel requirements as deemed necessary by the project schedule and shall provide sufficient staff to meet these requirements. The QA/QC staff shall be depicted on an organizational chart which identifies areas of responsibility (QA Manual, Section I).

4.3.1 If the QA/QC Manager, during an evaluation, or at any other time, determines that an individual's demonstrated capabilities are not to be in accordance with this procedure, his certification will be invalidated. That individual will be required to recertify in accordance with this procedure.

4.4 It is the responsibility of the QA/QC personnel to perform only those audits, surveillances, inspections and examinations for which they are certified.

4.5 The QA/QC personnel shall be physically capable of performing their duties. Their vision shall not interfere with their ability to perform specific inspections. Eye examinations shall be given annually.

4.5.1 QA/QC personnel shall pass the J-1 test (or equivalent). Those personnel shall be limited to inspections which do not require color perception. A test for color blindness of degrees of color blindness do not require color

4.5.2 QA/QC personnel shall pass the J-1 color vision test (or equivalent) for visual acuity. Corrective lenses may be used.

## 5.0 METHODS

5.1 The QA/QC Manager shall develop an evaluation, indoctrination and training program which will ensure that personnel will meet the requirements of this procedure.

- 5.2 An evaluation will be performed prior to employment and will be documented on Form HP-171. The evaluator shall verify via letter or telephone any prior employment certifications, education and prior experience. He shall also indicate the basis for any exceptions to recommended practices and shall obtain CECO Project Construction Department concurrence prior to certification of the individual.
- 5.2.1 Related inspector experience may include time spent as a craftsman installing similar material or equipment which was subject to programmatic quality control inspections which is counted toward the experience requirement for certification.
- 5.2.2 Non-electrical experience which is not directly related to an area of certification will require additional OJT beyond that stated in Appendixes B and C. (ie past welding experience may be applied only to certification in the area of welding and is not applicable towards other areas).
- 5.2.3 Related inspection experience may also include time spent as an inspector using sufficiently detailed inspection criteria in the area of certification.
- 5.2.4 Related experience used to meet the requirements for certification requires an account describing previous jobs and the amount of time allotted to each.
- 5.3 The indoctrination will be performed in accordance with QA/QC Personnel Indoctrination Checklist, Form HP-172. This form shall be used to document the dates various items are completed by reading or familiarization. A Level II or higher inspector shall verify the completion of items by signing in the space provided on the form. The trainee will initial all dates of completion.
- 5.4 Training shall be provided for each QA/QC employee entering the Hatfield QA/QC Program. Training outlines for certification of personnel shall be approved by a Level III Inspector.
- 5.4.1 General training shall be documented for inspectors or auditors on the following training checklists:
- Form HP-173, Inspection Training Checklist
  - Form HP-174, Audit Training Checklist
  - Form HP-175, Lead Auditor Training Checklist
- 5.4.2 Specific training for inspectors, auditors and lead auditors will be established by a training outline which describes the minimum requirements for certification. Completion of the training outline will be documented and included with the certification which is kept in the individuals personnel file. The training outlines for Quality Control and Quality Assurance personnel shall consist of the following:

QUALITY CONTROL

- 5.4.2.1 The training outline will state the minimum required hours of classroom training, on-the-job training and the testing necessary to meet the requirements of Appendixes B and C. The outline will be approved by a Level III.
- 5.4.2.2 The classroom training shall be a combination of formal lectures, classroom/field instructions and demonstrations following detailed training outlines or lesson plans. These training outlines or lesson plans shall be detailed enough that they can be used by anyone with the basic knowledge of the area being taught. A procedure may be used if it is written in a logical format that lends itself to the training. All the detailed training outlines or lesson plans will be approved by a Level III. Video tapes may be used, but must include the above requirements. At least one hour of formal lecture shall be designed to give the trainee the knowledge required to pass the general tests and to prepare him for the additional classroom and field demonstrations. These demonstrations will show the trainee how to perform the inspections and what material is required to prepare him for his on-the-job training and practical tests.
- 5.4.2.3 The on-the-job training will be a minimum of 40 hours and will continue until the trainee achieves 100% proficiency in accordance with Appendixes B and C. A handwritten Level II Inspector's Summary of Training will be included along with the documented inspections performed and hours.
- 5.4.2.3.1 Those inspectors lacking the required experience or crossing over to unrelated areas such as visual weld inspection will require additional hours of on-the-job training.
- 5.4.2.4 The testing will be divided into closed book and practical tests with a minimum of 80% accuracy to demonstrate the specific and practical knowledge of the inspection activity.
- 5.4.2.4.1 The specific test(s) for the procedure or area of certification shall be a minimum of 40 questions and answers approved by the Level III. The incorrect answers will be discussed with the trainee. All failed tests will be retained for reference only and will be included with the certification package. Additional closed book tests will be given covering the QA program and will contain 10 or more questions relating to the Hatfield QA/QC program.

5.4.2.4.2 The practical tests will be designed to test the trainees ability in using the current checklists and inspection tools. The practical tests will cover all major types of inspections to be performed by the individual after certification. The tests will be given after completion of the OJT and will not be included in the OJT.

5.4.2.4.3 Trainees who fail to pass a test will be required to take a different make-up test. The trainee will not take the make-up test until a minimum of two days has elapsed and additional reading or review has been performed.

#### QUALITY ASSURANCE

5.4.2.5 General training including Form HP-174 to develop the fundamentals, objectives, characteristics, organization, performance and results of quality auditing with a minimum participation in two formal audits.

5.4.2.6 Specialized training in the form of reading or lecture to develop competence in performing required audits. The competence level of an auditor may be developed by documenting one of the following methods:

- a. Orientation to provide a working knowledge and understanding of ANSI N45.2, ANSI N45.2.23 and the Hatfield QA Program and Procedures
- b. Specific reading and lecture to be given by a Lead Auditor.
- c. On the job training, guidance and counseling under the direction of a Lead Auditor beyond the minimum two required audits. A handwritten Lead Auditor's Summary of Training is also required.

5.4.2.7 An examination with a minimum acceptable performance level of 80%. The test may be oral, a written closed book test, practical or any combination of the three types to evaluate the ability of the auditor or lead auditor.

5.4.2.8 Trainees who fail to pass a test will be required to take a different make-up test. The trainee will not take the make-up test until a minimum of two days has elapsed and additional reading or review has been performed.

#### 5.5 Personnel qualifications and capabilities

INSPECTORS

5.5.1 Level I Inspector Education and Experience Requirements

- 5.5.1.1 Two years of related experience in equivalent inspection activities, or;
- 5.5.1.2 High school graduation and six months of experience in equivalent inspection activities, or;
- 5.5.1.3 Completion of college level work leading to an Associates degree in a related discipline, plus three months of related experience in equivalent inspection activities.

5.5.2 Level I Inspector Capabilities

- 5.5.2.1 The inspector shall be capable of recording inspection data and performing routine inspections in accordance with documented procedures and/or common industry practices.
- 5.5.2.2 The inspector shall be familiar with and proficient in the use of the tools and equipment used in the inspection .
- 5.5.2.3 The inspector shall be capable of determining that the condition and calibration status of his tools are acceptable and current.
- 5.5.2.4 The inspector shall be capable of determining that procedures applicable to his work are current and approved.

5.5.3 Level II Inspector Education and Experience Requirements

- 5.5.3.1 One year of satisfactory performance as a Level I inspector in the corresponding inspection category or class, or;
- 5.5.3.2 High school graduation plus three years of related experience in equivalent inspection activities, or;
- 5.5.3.3 Completion of college level work leading to an Associates degree in a related discipline plus one year related experience in equivalent inspection activities, or;
- 5.5.3.4 College graduation plus six months of related experience in equivalent inspection activities.

5.5.4 Level II Inspector Capabilities

- 5.5.4.1 The inspector shall have the capabilities of a Level I inspector for the areas of inspection.



- 5.5.4.2 The inspector shall have demonstrated capabilities in planning inspections.
- 5.5.4.3 The inspector shall have demonstrated capabilities in supervising or maintaining surveillances over inspection activities, Level I inspectors, data takers, and inspectors-in-training.
- 5.5.4.4 The inspector shall have demonstrated capabilities in reinspection results and in evaluating the validity and acceptability of inspection results.

5.5.5 Level III Inspector Education and Experience Requirements

- 5.5.5.1 Six years of satisfactory performance as a Level II inspector in the corresponding inspection category or class, or;
- 5.5.5.2 High school graduation plus 10 years of related experience in equivalent inspection activities; or high school graduation plus 8 years experience in equivalent inspection activities, with at least 2 years of this experience associated with nuclear facilities and at least 2 years as a Level II or, if not, at least sufficient training to be acquainted with the relevant quality assurance aspects of a nuclear facility, or;
- 5.5.5.3 Completion of college level work leading to an Associates degree plus seven years of related experience in equivalent inspection activities, with at least two years of this experience associated with nuclear facilities or, if not, at least sufficient training to be acquainted with the relevant quality assurance aspects of a nuclear facility, or;
- 5.5.5.4 College graduation plus five years of related experience in equivalent inspection activities with at least two years of this experience associated with nuclear facilities, or, if not, at least sufficient training to be acquainted with the relevant quality assurance aspects of a nuclear facility.

5.5.6 LEVEL III Inspector Capabilities

- 5.5.6.1 The inspector will have all the capabilities of a Level II Inspector.
- 5.5.6.2 The inspector will be capable of evaluating the adequacy of programs used to train and test the inspection personnel.
- 5.5.6.3 The inspector will be capable of evaluating the qualification of both lower level and the same level inspector.



- 5.5.6.4 The inspector will be capable of reviewing procedures and evaluating the adequacy to accomplish the inspection, examination, and test objectives.

AUDITORS AND LEAD AUDITORS

5.5.7 Auditors

- 5.5.7.1 An auditor may be any individual who performs any portion of an audit, including Lead Auditor, and others such as management representatives who may be required to assist in an audit.
- 5.5.7.2 An Auditor shall complete the appropriate training prior to performing audits and surveillances in order to develop competence in those activities.

5.5.8 Lead Auditors

- 5.5.8.1 A Lead Auditor will be an individual who is capable of organizing and directing an audit, reporting audit findings, and evaluating corrective actions. He shall have the capability to communicate effectively, both written and orally.
- 5.5.8.2 Unless certified as a Lead Auditor prior to employment, the Lead Auditor shall complete the appropriate training prior to functioning as a Lead Auditor in order to attain competence in auditing skills.
- 5.5.8.3 A Lead Auditor must participate in a minimum of five (5) quality assurance audits within a period of time not to exceed three (3) years, prior to qualification, with one (1) nuclear audit within one (1) year prior to qualification.
- 5.5.8.4 In order to qualify and be certified as a Lead Auditor, in addition to the above, the individual shall have verifiable evidence that a minimum of ten (10) credits under the following scoring system have been accumulated.

- a. Education (4 points maximum) An Associates degree from an accredited institution score one (1) credit or if the degree is in engineering, physical sciences, mathematics, or quality assurance, score two (2) credits, or;

A Bachelors degree from an accredited institution score two (2) credits or if the degree is in engineering, physical sciences, mathematics, or quality assurance, score three (3) credits; in addition, score one (1) credit for a Masters degree in engineering, physical sciences, business management or quality assurance from an accredited institution.

- b. Experience (9 points maximum) Technical experience in engineering, manufacturing, construction, operation or maintenance, score one (1) credit for each full year with a maximum of five (5) for this aspect of experience.
- If two (2) or more years of this experience have been in the nuclear field, score one (1) additional credit, or,
  - if two (2) or more years of this experience have been in quality assurance, score two (2) additional credits, or,
  - if two (2) or more years of this experience have been in auditing, score three (3) additional credits, or,
  - if two or more years of this experience have been in nuclear quality assurance, score three (3) additional credits, or,
  - if two (2) or more years of this experience have been in nuclear quality assurance auditing, score four (4) additional credits.
- c. Other Credentials of Professional Competence (2 points maximum) Certification of competency in engineering, science or quality assurance specialties issued and approved by a State Agency or National Professional or Technical Society, score two (2) credits.
- d. Rights of Management (2 points maximum) The company President or his designee, or the QA Manager, may grant up to two (2) credits for other performance factors applicable to auditing which may not be explicitly spelled out in this procedure. These factors may be such items as leadership, sound judgement, maturity, analytical ability, tenacity, past performance, and QA training.

5.5.8.5 Qualification of Lead Auditors for certification shall be documented on Form HP-177, Evaluation for Lead Auditor Certification.

## 5.6 Certification

- 5.6.1 Quality Control and Quality Assurance personnel shall be certified in accordance with ANSI N45.2.6 and N45.2.23. These certifications shall be as follows:

- 5.6.1.1 Quality Control (ANSI N45.2.6-1978)
  - a. Level I Inspector
  - b. Level II Inspector
  - c. Level III Inspector
- 5.6.1.2 Quality Assurance (ANSI N45.2.23-1978)
  - a. Auditor
  - b. Lead Auditor
- 5.6.2 Certifications shall not be made until the minimum requirements established in this procedure have been met for education, experience, training, and testing per the requirements of Appendixes B & C.
  - 5.6.2.1 Personnel who fail to meet the minimum experience requirements shall be assigned additional on-the-job training by the QA/QC Manager or a Level III Inspector which shall also be approved by the owner. This applies to original and expansion (crossover) certifications.
- 5.6.3 Certifications will be invalidated for inspectors who have not performed inspections in an area of certification for one year; for auditors who have not participated in an audit for one year; and for lead auditors who fail to maintain their proficiency for a period of two years. These individuals shall be required to re-certify in accordance with this procedure.
- 5.6.4 DELETED
- 5.6.5 The Level III candidate shall meet or exceed Education and experience requirements and shall demonstrate Level II capability in each area of certification by:
  - a. having administered or taken the practical examination for each area of certification.
  - b. successfully having passed the Level II tests in each area of certification or a CECO prepared and administered test for each area of certification.
- 5.6.6 A Level III candidate who cannot meet the Level II capability requirements of paragraph 5.6.5 for an area of certification will be required to complete the following for that area of certification:
  - a. perform the read/study
  - b. receive instruction through formal lecture

- c. successfully complete the practical examination
- d. complete the OJT training requirements
- e. complete re-examination per paragraph 5.6.5

5.6.7 Level II tests written or approved by the Level III candidate are not acceptable for satisfying the requirements of paragraph 5.6.5 and the candidate may elect one of the following options to meet the requirements.

- a. successfully take the CECO test previously mentioned
- b. request that the organization's upper management prepare, administer, and grade tests for each area of certification
- c. successfully take a test for each area of certification which an independent agency develops, administers, and grades.

5.6.8 Auditors and Inspectors will be re-evaluated each year after certification to assure satisfactory performance or redetermination of capability before re-certification takes place. Lead Auditors will be re-evaluated every two years or prior to the date of expiration.

## 5.7 Re-Certification

5.7.1 The QA/QC Manager shall re-certify personnel each year at any time, but not to exceed the expiration date if the individual is to keep working in the area of certification. He may choose to allow a certification to expire if the individual is no longer required in that area of certification. Inspections, examinations, surveillances, and audits may not continue if the certification in an area has expired.

5.7.2 Prior to re-certification, the re-evaluation shall document either the continued satisfactory performance in the area or procedure or a redetermination of capability by testing. The test shall be either a practical or specific examination with a passing score of 80%.

5.7.2.1 Auditors shall maintain their proficiency by participating in one formal audit prior to the expiration date of their certification.

5.7.2.2 Lead Auditors shall maintain their proficiency prior to the expiration date of their certification by one of the following:

- a. participation in one formal audit;
- b. a review and study of predetermined subject matter such as codes, standards, instructions and other documents related to the quality assurance program;
- c. participation in or training auditors to predetermined training programs.

5.7.2.3 Inspectors shall maintain their proficiency prior to the expiration date of their certification by completing at least one inspection in each of the procedures which make up the area of certification. If a procedure does not require an inspection, a surveillance, audit, or documented procedural activity shall be sufficient.

5.7.3 Supervisory personnel for the individual inspection or audit activities shall be responsible for assuring that personnel maintain their proficiency in the areas or procedures they are certified in.

5.7.4 Previously certified Hatfield Level I and II ANSI inspectors must complete all requirements as stated in Appendixes B or C. The 40 hours of OJT may be excluded if the inspector has been working as a certified inspector in that area and this work can be documented.

## 5.8 Requalification for Certification

5.8.1 Inspectors and auditors who fail to maintain their proficiency or are re-hired after termination shall be re-evaluated, re-indoctrinated, and retrained per a training outline approved by the QA/QC Manager.

5.8.2 Lead Auditors who fail to maintain their proficiency for a period of two years or more shall requalify for certification by documenting the completion of all of the following:

- a. retraining per Paragraph 5.4.2.5
- b. re-examination per Paragraph 5.4.2.6
- c. participation as an Auditor in a least one nuclear quality assurance audit.

6.0 DOCUMENTATION

- 6.1 Form HP-171, Personnel Evaluation
- 6.2 Form HP-172, Personnel Indoctrination Checklist
- 6.3 Form HP-173, QC Inspector Training Checklist
- 6.4 Form HP-174, Auditor Training Checklist
- 6.5 Form HP-175, Lead Auditor Training Checklist
- 6.6 Form HP-176, Certificate of Qualfication
- 6.7 Form HP-177, Evaluation for Lead Auditor Certification
- 6.8 Form HP-178, Summary of Inspection Level Capabilities
- 6.9 Appendix A, Deleted
- 6.10 Appendix B, Minimum Requirement of Level I Inspector
- 6.11 Appendix C, Minimum Requirement of Level II Inspector



File 3.01

HATFIELD ELECTRIC COMPANY  
 Byron Units 1 & 2

QA/QC Personnel Indoctrination Checklist

EMPLOYEE: _____			
	<u>ITEMS</u>	<u>DATE/INITIAL</u>	<u>PERFORMANCE VERIFIED BY</u>
1.	Organization Responsibilities, & Authorities; Technical Objectives	_____	_____
2.	Specification Contract F-2790 Div.II	_____	_____
3.	Safety Practices:		
	a. Alarm Signals	_____	_____
	b. Emergency Phone location and procedure	_____	_____
4.	Familiarization		
	a. Building Nomenclature and location	_____	_____
	b. Electrical EQ Nomenclature and location	_____	_____
5.	Tool & Instrument Familiarization		
	a. Torque Wrenches	_____	_____
	b. Compression Tools	_____	_____
	c. Gauge Blocks	_____	_____
	d. Dynamometers	_____	_____
	e. Welding Machine Tester	_____	_____
	f. Film Gauge	_____	_____
6.	Hatfield Electric Q.A. Manual (18 Sects.)	_____	_____
7.	NRC-10CFR50-Appendix B	_____	_____
8.	ANSI N45.2, 2.2, 2.3, 2.4, 2.6, 2.9, 2.10, 2.11, 2.13	_____	_____
9.	Hatfield Procedures Manual	_____	_____
10.	S & L Drawings	_____	_____
11.	S & L Standards	_____	_____

This employee has read or received instruction to achieve a general familiarization with those items listed above.

Verified by: \_\_\_\_\_ Date: \_\_\_\_\_

HATFIELD ELECTRIC COMPANY

General Training Checklist for Quality Control Inspectors

Trainee _____		Date Started _____	
<u>ITEMS</u>		Trainee Date/Initial	Performance Verified by
A. Reading and General Knowledge			
1. Procedures 1, 4, 7 and 29		_____	_____
2. Procedures 5, 6, 14 and 30		_____	_____
3. Procedures 17, 22 and 24		_____	_____
4. _____		_____	_____
B. General Examination Scores			
1. Procedures 1, 4, 7 and 29 ( %)		_____	_____
2. Procedures 5, 6, 14 and 30 ( %)		_____	_____
3. Procedures 17, 22 and 24 ( %)		_____	_____
4. _____		_____	_____
COMMENTS: _____			
_____			
_____			
General Training complete and acceptable by: _____			
Date: _____			

HATFIELD ELECTRIC COMPANY

Auditor Training Checklist

Trainee \_\_\_\_\_ Date started \_\_\_\_\_

Trainee  
Initial/Date

PERFORMANCE VERIFIED BY

A. FORMAL

- 1. HECO QA Manual
- 2. Project Procedures
- 3. IOCFR50, Appendix B
- 4. ANSI N45.2.12
- 5. ANSI N45.2.23
- 6. ANSI N45.2
- 7. ANSI N45.2.9

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

B. ON THE JOB TRAINING

- 1. Audit Participation  
(min. of 2 required)
- Audit # \_\_\_\_\_
- Audit # \_\_\_\_\_
- Audit # \_\_\_\_\_

_____	_____
_____	_____
_____	_____

C. EXAMINATION

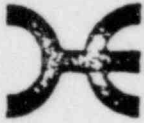
Score \_\_\_\_\_

_____	_____
-------	-------

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Auditor Training complete and acceptable by: \_\_\_\_\_

Date: \_\_\_\_\_



**HATFIELD** ELECTRIC COMPANY

ELECTRICAL  
CONTRACTORS

Procedure 1 /  
Revision 10  
Date 6-2-83  
Form HP-176

EXECUTIVE OFFICES • 6478 WEST NORTH AVENUE • CHICAGO, ILLINOIS 60635 • AREA 312 • PHONE 622-7080

CERTIFICATE OF QUALIFICATION

Employee Name:

Date of Employment:

Job Title:

Activities Qualified to Perform

Certification Based On

Education:

Training:

Experience:

Examinations:

Visual Examination date:

Comments:

I hereby certify that the above employee meets the requirements of Procedure #17 and ANSI N45.2.6-1978. The capabilities of the employee have been determined by evaluation and are acceptable. The documentation of the evaluation will be found in the personnel file.

Expiration: \_\_\_\_\_

\_\_\_\_\_  
QA/QC Manager  
Hatfield Electric Company

Date \_\_\_\_\_

HATFIELD ELECTRIC COMPANY

PERSONNEL EVALUATION

Employees Name \_\_\_\_\_ Date of Evaluation \_\_\_\_\_

Position or title \_\_\_\_\_

Qualification Criteria ANSI N45.2.6-1978	I				II				III				
	1	2	3	4	1	2	3	4	1	2	3	4	
1.0 <u>Education</u>													
1.1 High school grad		⬡				⬡					⬡		
1.2 Associates Degree			⬡				⬡					⬡	
1.3 B.S. Degree				⬡				⬡					⬡
2.0 <u>Related Experience</u>													
2.1 3 months			⬡	⬡									
2.2 6 months		⬡						⬡					
2.3 one year <input type="checkbox"/> Level I Experience <input type="checkbox"/> Related Experience					⬡		⬡						
2.4 2 years	⬡												
2.5 3 years						⬡							
2.6 5 years (2 years nuclear)													⬡
2.7 6 years (as Level II)										⬡			
2.8 7 years (2 years nuclear)												⬡	
2.9 8 years (2 years Level II)											⬡		
2.10 10 years											⬡		
3.0 specific training nuclear													

Evaluation By: \_\_\_\_\_ Date \_\_\_\_\_  
 ⬡ Indicates Minimum Recommended by ANSI N45.2.6-1978

Basis for Evaluation: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

File 3.01

Form #HP-175

HATFIELD ELECTRIC COMPANY

LEAD AUDITOR TRAINING CHECKLIST

Trainee \_\_\_\_\_ Date started \_\_\_\_\_

Trainee Initial/Date PERFORMANCE VERIFIED BY

A. FORMAL

- |  |       |       |
|--|-------|-------|
| 1. 10CFR50, Appendix B                                     | _____ | _____ |
| 2. ANSI N45.2  | _____ | _____ |
| 3. ANSI N45.2.2  | _____ | _____ |
| 4. ANST N45.2.3  | _____ | _____ |
| 5. ANSI N45.2.4  | _____ | _____ |
| 6. ANSI N45.2.6  | _____ | _____ |
| 7. ANSI N45.2.9  | _____ | _____ |
| 8. ANSI N45.2.10   | _____ | _____ |
| 9. ANSI N45.2.11   | _____ | _____ |
| 10. ANSI N45.2.12  | _____ | _____ |
| 11. ANSI N45.2.13  | _____ | _____ |
| 12. ANSI N45.2.15  | _____ | _____ |
| 13. ANSI N45.2.23  | _____ | _____ |
| 14. AWS D1.1-75  | _____ | _____ |
| 15. Audit plan, Report,<br>Follow-up, Close-out<br>and Log | _____ | _____ |

B. ON THE JOB TRAINING

- |  |       |       |
|--|-------|-------|
| 1. Audit Participation<br>(Min. of 5 audits) |       |       |
| Audit # _____                                | _____ | _____ |
| Audit # _____                                | _____ | _____ |
| Audit # _____                                | _____ | _____ |
| Audit # _____                                | _____ | _____ |
| Audit # _____                                | _____ | _____ |

C. EXAMINATION

Score \_\_\_\_\_

Training complete and acceptable by \_\_\_\_\_ Date \_\_\_\_\_



HATFIELD ELECTRIC COMPANY

Evaluation For Lead Auditor Certification (ANSI N45.2.23)	Name	Date
2.3.1 QUALIFICATION POINT REQUIREMENTS		CREDITS
2.3.1.1 EDUCATION (University/Degree/Date)	4 Credits Max.	
Undergraduate Level		
Graduate Level		
2.3.1.2 EXPERIENCE (Company/Dates)	9 Credits Max.	
Technical (0-5 pts.) and ( )		
Nuclear Industry (0-1 pts.), or ( )		
Quality Assurance (0-2 pts.), or ( )		
Auditing (0-1 pts.), or ( )		
2.3.1.3 PROFESSIONAL ACCOMPLISHMENT (Certificate/Date)	2 Credits Max.	
P.E.		
Society		
2.3.1.4 MANAGEMENT	2 Credits Max.	
Explain:		
Total Credits (10 required)		
2.3.2 AUDIT COMMUNICATION SKILLS		
Explain:		
2.3.3 AUDIT TRAINING		
SUBJECT	Date	
1.		
2.		
3.		
2.3.4 AUDIT PARTICIPATION		
(Audits)	(Subject)	(Date)
1.		
2.		
3.		
4.		
5.		
2.3.5 EXAMINATION and SCORE	Date:	
5.2 EVALUATED and CERTIFIED BY:		
QA/QC Manager	Date:	
3.2 ANNUAL EVALUATION DATES		
QA/QC MANAGER		

HATFIELD ELECTRIC COMPANY

BYRON UNITS 1 & 2

SUMMARY OF INSPECTION LEVEL CAPABILITIES

INSPECTION ACTIVITY	LEVEL			CAPABILITIES	LEVEL			
	I	II	III		I	II	III	
Proc. 1				Recording Inspection Data				
Proc. 2								
Proc. 3					Implementing Inspection Procedures			
Proc. 4								
Proc. 5					Planning Inspections			
Proc. 6								
Proc. 7								
Proc. 8					Evaluating the Valid Acceptability of Inspection Results			
Proc. 9A								
Proc. 9B								
Proc. 9C					Reporting Inspection Results			
Proc. 9E								
Proc. 10					Supervising Equivalent or Lower Level Personnel			
Proc. 11								
Proc. 12					Qualifying Lower Level Personnel			
Proc. 12A								
Proc. 12B					Evaluating the Adequacy of Specific Programs Used to Train and Test Inspection Personnel			
Proc. 13AA								
Proc. 13AB								
Proc. 13AC								
Proc. 13AD				Qualifying Same Level Personnel				
Proc. 13AE								
Proc. 13C				Areas of Certification				
Proc. 14								
Proc. 15								
Proc. 16								
Proc. 17								
Proc. 18								
Proc. 19								
Proc. 19A								
Proc. 20								
Proc. 21								
Proc. 22								
Proc. 23								
Proc. 24								
Proc. 25								
Proc. 26								
Proc. 27								
Proc. 28								
Proc. 29								
Proc. 30								
QA/QC Start Date:				Comments:				

TABLE I

## MINIMUM REQUIREMENT OF LEVEL I INSPECTORS \*

RTIFICATION ACTIVITY	DURATION	REQUIREMENTS	DOCUMENTATION
a) Read/Study	Variable; cover all procedures	Appropriate Contractor procedures must be done	Signature of completion Trainee & Level II
b) Formal Lecture	Min. 1 hr. & per outline	Outline Approved by L III	Signature of completion Trainee & Level II
c) Lecture Demonstration and Question/Answer	Min. 8 hr. & per outline	Outline approved by L III	Signature of completion Trainee & Level II
Inspector OJT and Demonstrated Capability	40 hrs. of mock inspections using current checklist	Trainee to achieve 100% Proper data taking skills - immediate corrections to be made by Level II. Level II to evaluate capability	Trainee to complete and retain inspection checklist used.  Level II to evaluate in writing Trainee capability
Testing-General (closed book)	40 Question	80% and discuss incorrect answer with Level II	Written exam as approved by Level III
Specific using checklist and inspection tools	All major types of different items to be inspected	80% of proper data taken and discussion of incorrect results	Written Inspection/ or specific test approved by Level III

\* See Paragraphs 5.4.2.2-5.4.2.4

MINIMUM REQUIREMENT OF LEVEL II INSPECTORS \*

CERTIFICATION ACTIVITY	DURATION	REQUIREMENTS	DOCUMENTATION
I. a) Read/Study	Variable; cover all procedures	Appropriate Contractor procedures must be done	Signature of Complet Trainee & Level II
b) Formal Lecture	Min. 1 hr. & per outline	Outline approved by L III	Signature of Complet Trainee & Level II
c) Lecture Demonstration and Question/Answer	Min. 8 hr & per outline	Outline approved by L III	Signature of Complet Trainee & Level II
I. Inspector OJT and Demonstrated Capability	40 hrs. of mock inspections using current checklist	Trainee to achieve 100% proper acceptance/reject skills - Immediate corrections to be made by Level II. Level II to evaluate capability	Trainee to complete and retain inspection checklist used.  Level II to evaluate in writing Trainee Capability
I. Testing-General (closed book)	40 Question	80% & discuss incorrect answer with Level II	Written exam as approved by Level III
Specific using checklist and inspection tools	All major types of different items to be inspected	80% of proper acceptance/reject and discussion of incorrect results	Written Inspection/ or specific test approved by Level III

\* See Paragraphs 5.4.2.2-5.4.2.4

ATTACHMENT 11



BYRON STATION

11 October, 1983

*MRZ*

At this time I, Marvin R. TALLENT, Jr., do hereby make the following voluntary statement to Mr. David M. GALANTI, who has identified himself to me as a Investigator with the U.S. Nuclear Regulatory Commission. I make this statement freely, and without any threats being made toward me or promises offered me. This statement concerns my knowledge of the circumstances surrounding John HUGHES, and his employment/termination with Hatfield Electric Company.

I am presently the site manager for Pittsburg Testing Laboratories (PTL) and have been so employed since June 1982. Prior to this assignment I was working at the Savannah River Project, Augusta, GA, from June 1981 until June 1982. I have been with PTL since September 1973 in a continuous position, and worked two additional years with PTL prior to the start of my continuous employment with that company. Part of PTL's responsibility at Byron Station is to provide a work force to various contractors who are unable to find qualified workers. HUGHES employment with PTL was in that area. Although HUGHES was hired by PTL he was assigned to work at Hatfield Electric Company under the direct work supervision of Hatfield management personnel. PTL maintained administrative responsibility over these workers such as HUGHES; however, the company the individuals were assigned to could release them back to PTL when it was appropriate to do so.

HUGHES first started his employment with PTL on the 4th of October 1982. I had known HUGHES previously when I was at Surry Virginia, and he contacted me for a job around the middle of April 1982. In any event HUGHES was hired by PTL and assigned to the Quality Control Section of Hatfield Electric. When HUGHES reported onboard I noticed that he did not have a High School diploma or a GED equivalency and therefore I made arrangements for him to obtain a GED certificate while he was undergoing his training at Hatfield. HUGHES took several of the test and around the end of October we received confirmation from the State of Illinois that HUGHES had successfully passed all of the areas he needed and that a GED certificate would be issued. Once I received a copy of the GED certificate I made a entry in HUGHES'S file and notified Hatfield Electric. I believe that it was a short time later that I had heard that HUGHES had become certified as a Level II inspector. I did not have a great deal to do with HUGHES from that point forward because things appeared to be running smoothly. However around the middle of November 1982 I began to hear complaints that HUGHES was involved in too many "bull sessions" and that it was hurting the work production. I talked with HUGHES and he made the general comment to me that he "did not like the Hatfield program", but he never really elaborated on any specifics. I do recall that on one occasion myself, HUGHES, another PTL employee named Irv SOUDERS and Jim BUCHANAN, the Hatfield Electric QA manager got together in BUCHANAN'S office and he told them both that they had better knock off the "bull session's" or else they would be sent back to PTL. I had talked to BUCHANAN previously about HUGHES and he told me that the work was not the problem with HUGHES; however, he would talk constantly with SOUDERS and cause a disruption in the working area. Apparently in early January HUGHES and SOUDERS continued to create a problem by talking and I received a letter from Hatfield stating that the services of HUGHES and SOUDERS were no longer required by ~~HATFIELD~~ Hatfield Electric so they both were layed off of work on 7 January 1983. I would have offered a job to HUGHES at that time however, I did not have one to offer. HUGHES was a good worker, and very knowledga in his job, however, he <sup>010</sup> talk and become a irritant very easily. I do not know anything about telephones <sup>010</sup> being monitored by Hatfield Electric to prevent their employees from contacting the NRC or CECO. I had heard from HUGHES immediate supervisor that on one of the tests HUGHES needed to pass for his certification as a level II inspector that HUGHES failed one of the test, was given the answers

*10:03 AM  
10/12/83  
Marvin R. Talient*



*ML*  
to the test, and then was given the same test a short time later. Scott WAGNER, HUGHES immediate supervisor told me about that matter and I am not sure if he meant HUGHES was actually given every answer to the test then retook the test, or the test was reviewed with him then he retook the test. This is the only instance of cheating on certification tests that I have heard about. I do not have any additional information that would be of value.

I have read this two page statement that was typed by Mr. GALANTI after we discussed its contents. I have had the opportunity to make any changes to this statement that I desired. This statement is true and correct to the best of my knowledge and recollection. *ML*

*Marvin R. Tallent* 10:03 AM  
MARVIN R. TALLENT 10/12/93

Subscribed and sworn to before me, the undersigned, this 12th day of October, 1983  
At Byron Station, IL.

*David M. Galanti*  
DAVID M. GALANTI  
Investigator, NRC

AUTH: Sec. 161c AEA 1954 as amended

*Marvin R. Tallent*

ATTACHMENT 12 (OMITTED)

ATTACHMENT 13

PITTSBURGH TESTING LABORATORY  
INTER-OFFICE CORRESPONDENCE

ORDER No.

   SUBJECT PTL Safety Program Review

PROSPECT No.

TO OFFICE FROM D.A. Dunn OFFICE DATE  
ATTENTION OF

This document acknowledges that the undersigned has completed a review of the PTL Safety Program, and understands the significance of this Program's implementation and the consequences which may result from violations of the various rules contained therein.

John Hughes  
Employee

Ghans Holman  
Manager or Safety Coordinator

10-4-82  
Date

10/4/82  
Date

ATTACHMENT 14 (OMITTED)

ATTACHMENT 15 (OMITTED)



ATTACHMENT 16

Date: May 18, 82

Name \_\_\_\_\_

Score \_\_\_\_\_

Date \_\_\_\_\_

HATFIELD ELECTRIC COMPANY

EXAMINATION

Procedures #1, #4, #7, and #29

*John W. Dwyer*  
*1-19-83*

CLOSED BOOK

Procedure #1, Method of Preparing Procedures

1. Acceptance criteria for inspection and surveillance checklist items will be referenced and will be found in either the standards; approved project specifications; the \_\_\_\_\_ and the installation drawings.
2. Forms that are part of and separately attached to the procedure will be listed under the \_\_\_\_\_ section of the procedure. (a) reference (b) documentation
3. The Project Manager will check the applicable Specifications, Standards, and drawings to determine the installation and Quality Assurance requirement of the procedure. T or F
4. \_\_\_\_\_ will be responsible for developing the site procedures and for submitting them to the Owner for approval.
5. Procedures which have been conditionally approved by the Owner (with comments) and which must be implemented for work in progress have the comments with the procedure when issued. T or F
6. Who will maintain the master set of HECO Procedures:
  - a. Hatfield Electric Company Engineering
  - b. Commonwealth Edison QA Department
  - c. Hatfield Electric Company Project Manger
  - d. Hatfield Electric Company QA Department
7. The effective date of implementation shall be \_\_\_\_\_
  - a. one month
  - b. stamped in red on cover sheet of each procedure
  - c. one day
  - d. each Monday

*First copy of procedure in my possession dated 1-19-83*  
*John W. Dwyer*

8. The purpose of this procedure #1 is to establish the guidelines and provide the authority for developing, obtaining approval of and distributing the project site procedures required for the implementation of Hatfield Electric Company's Quality Assurance Program. T or F
9. The QA Manager will distribute copies of procedures to any field personnel whose activities necessitate having a copy in their possession. T or F
10. A surveillance checklist will be used on a quarterly basis to verify the proper distribution of Procedure #1. T or F

Procedure #4, Drawing Control

1. All superseded office and field drawings and standards will be either marked Void in red through the title block or destroyed.

Upon delivery of installation drawings, standards and specifications to the field office, and prior to issuance to the field personnel, a drawing clerk will:

2. T or F Review them to check if design is correct
3. T or F Date stamp the transmittals only for standards and specifications
4. T or F Date stamp the transmittal and all copies of the installation drawings
5. Drawings that are for electrical installation and that are received from CECO suppliers will be handled in the same fashion as S & L drawings and standards. T or F
6. The drawing clerk will not maintain a record that will indicate which drawing revision have been issued to the field. T or F
7. The drawing clerk will issue the changes (FCR's, ECN's) via Form HP-48. The field personnel will then either attach the change document to the applicable drawing, standard, or specification or will reference it on the drawing, standard, or specification. T or F

8. Hatfield QC will perform \_\_\_\_\_ surveillance of Document Control:
- a. daily
  - ✓ b. weekly
  - c. monthly
  - d. none of the above
9. HECO Engineering will maintain a log of each approved change notice (ECN's , FCR's) received. (T or F)
10. Who will maintain a record of drawings(s) received, indicating for each revision the date received?
- a. QC Inspector
  - b. Lead Auditor
  - ✓ c. QA/QC Clerks
  - (d) drawing clerk
  - e. none of the above

Procedure #7, Electrical Design Change

1. The purpose of the procedure is to ensure that during the construction phase of the project approved design changes are incorporated into work activities, as they progress. T or F
2. This procedure applies to electrical installation activities performed by HECO prior to final turnover of equipment to the Owner. T or (F)
3. Special methods for handling design changes detailed on wiring diagrams are in the appendix of this procedure. T or F
4. This procedure applies to non-approved, safety related design changes specified as revision to the electrical installation drawing. T of (F)
5. QA Manager is responsible for providing assurance, through the inspection program, that the methods of this procedure are followed.
6. The \_\_\_\_\_ is responsible for the implementation of this procedure.
- a. Inspector
  - b. Project Manager
  - (c) QA Manager

7. ✓ NCR's mainly apply to Procedure#7. T or F
8. ✓ When a change to an existing installation is necessiated by a drawing revision and rework is required, the Owner's approval will be obtained prior to commencint the rework. T or F
9. ✓ QC personnel will, when performing inspections of installations, inspect the areas to the applicable drawing revision(s) in force. T or F
10. ✓ What does ECN stand for? *Engineering Change Notice*

Procedure #29, Field Initiated Requests for Design Changes

1. This procedure has been established to ensure that deviations from the design drawings or standards are properly documented, approved and implemented. (T or F)
2. ✓ What is an Field Change Request (FCR)?  
A form which is used for capturing and controlling design changes
3. ✓ Who initiates an FCR? \_\_\_\_\_
4. ✓ Production shall not proceed with FCR related work until they have an approved copy of the FCR. T or F
5. ✓ FCR's which have been rejected via being superseded shall have to have the FCR reference removed from the drawing and the superseding FCR reference added to the drawing. T or F
6. ✓ When an FCR is initiated and Part A completed, it will be submitted to \_\_\_\_\_ for approval.
7. ✓ Hatfield QA Department will verify that the inspection made for the related equipment was performed in accordance with the FCR and verify that the drawings were revised as shown on the FCR.  
The above statement is \_\_\_\_\_  
 a. True  
 b.  False  
 c. Partly true
8. ✓ FCR's can be \_\_\_\_\_. (best answer)  
 a. Major  
 b. Minor  
 c. Superseded  
 d. all of the above  
 e. none of the above

9. Nonconforming conditions are corrected with an \_\_\_\_\_.
10. Who approves and FCR?
- a. Project Manger at HECO
  - b. QA Manger at HECO
  - c. a & b
  - d. None of the above



Procedure # 2

- 1) procedure
- 2) (B)
- 3) F
- 4) HATFIELD CA
- 5) T
- 6) D
- 7) B
- 8) T
- 9) T
- 10) F

Procedure # 4

- 1) UIC
- 2) F
- 3) T
- 4) T
- 5) T
- 6) F
- 7) T
- 8) C
- 9) T
- 10) D

- 1 T II 7
- 2 T
- 3 T
- 4 F
- 5 HATFIELD DA
- 6 B
- 7 F
- 8 T
- 9 T
- 10 GNS change station

- II 24
- T
- 2 B control form used
- 3 engineering
- 4 T
- 5 T
- 6 owner
- 7
- 8 D
- 9 NCR
- 10 D

ATTACHMENT 17

HATFIELD ELECTRIC COMPANY

Byron Units 1 & 2

GENERAL EXAMINATION

Procedures 1, 4, 7, and 29

These examination questions are designed to test the basic knowledge of procedure which are common to most all QA/QC activities.  
(Ref: Form MP-173)

CLOSED BOOK

Minimum Score 80%

90%  
Score

Administered and evaluated by:

James K. Buchanan

James K. Buchanan  
QA/QC Manager

Date: 10-12-97

Date: May 18,

Name John Ruck

Score 90% Ink

Date 10-12-82

HATFIELD ELECTRIC COMPANY

EXAMINATION

Procedures #1, #4, #7, and #29

CLOSED BOOK

Procedure #1, Method of Preparing Procedures

- 1. Acceptance criteria for inspection and surveillance checklist items will be referenced and will be found in either the standards; approved project specifications; the specification and the installation drawings.
- 2. Forms that are part of and separately attached to the procedure will be listed under the \_\_\_\_\_ section of the procedure. (a) reference (b) documentation
- 3. The Project Manager will check the applicable Specifications, Standards, and drawings to determine the installation and Quality Assurance requirement of the procedure or 10-1152
- 4. QA Department will be responsible for developing the site procedures and for submitting them to the Owner for approval.
- 5. Procedures which have been conditionally approved by the Owner (with comments) and which must be implemented for work in progress have the comments with the procedure when issued.  
(T) or F
- 6. Who will maintain the master set of HECO Procedures:
  - a. Hatfield Electric Company Engineering
  - b. Commonwealth Edison QA Department
  - c. Hatfield Electric Company Project Manger
  - (d) Hatfield Electric Company QA Department
- + 7. The effective date of implementation shall be \_\_\_\_\_
  - (a) one month
  - (b) stamped in red on cover sheet of each procedure
  - c. one day
  - d. each Monday

8. The purpose of this procedure #1 is to establish the guidelines and provide the authority for developing, obtaining approval of and distributing the project site procedures required for the implementation of Hatfield Electric Company's Quality Assurance Program. (T) or F
9. The QA Manager will distribute copies of procedures to any field personnel whose activities necessitate having a copy in their possession. (T) or F
10. A surveillance checklist will be used on a quarterly basis to verify the proper distribution of Procedure #1. T or (F)

Procedure #4, Drawing Control

1. All superseded office and field drawings and standards will be either marked void in red through the title block or destroyed.

Upon delivery of installation drawings, standards and specifications to the field office, and prior to issuance to the field personnel, a drawing clerk will:

2. T or (F) Review them to check if design is correct

3. (T) or F Date stamp the transmittals only for standards and specifications

4. (T) or F Date stamp the transmittal and all copies of the installation drawings

5. Drawings that are for electrical installation and that are received from CECCO suppliers will be handled in the same fashion as S & L drawings and standards. (T) or F

6. The drawing clerk will not maintain a record that will indicate which drawing revision have been issued to the field. T or (F)

7. The drawing clerk will issue the changes (FCR's, ECN's) via Form HP-48. The field personnel will then either attach the change document to the applicable drawing, standard, or specification or will reference it on the drawing, standard, or specification. (T) or F

- 8. Hatfield QC will perform \_\_\_\_\_ surveillance of Document Control:
  - a. daily
  - ✓ b. weekly
  - ⓐ monthly
  - d. none of the above
- /9. HECO Engineering will maintain a log of each approved change notice (ECN's , FCR's) received. (T) or F
- 10. Who will maintain a record of drawings(s) received, indicating for each revision the date received?
  - a. QC Inspector
  - ✓ b. Lead Auditor
  - c. QA/QC Clerks
  - ⓐ drawing clerk
  - e. none of the above

Procedure #7, Electrical Design Change

- ( - /1. The purpose of the procedure is to ensure that during the construction phase of the project approved design changes are incorporated into work activities, as they progress. (T) or F
- 2. This procedure applies to electrical installation activities performed by HECO prior to final turnover of equipment to the Owner. (T) or F
- /3. Special methods for handling design changes detailed on wiring diagrams are in the appendix of this procedure. (T) or F
- 4. This procedure applies to non-approved, safety related design changes specified as revision to the electrical installation drawing. (T) of F
- 5. ✓ Q.A. MANAGER is responsible for providing assurance, through the inspection program, that the methods of this procedure are followed.
- /6. The \_\_\_\_\_ is responsible for the implementation of this procedure.
  - a. Inspector
  - ⓐ Project Manager
  - c. QA Manager
  - d. Superintendent



- 7. <sup>X</sup> NCR's mainly apply to Procedure #7. (T or F)
- 8. When a change to an existing installation is necessiated by a drawing revision and rework is required, the Owner's approval will be obtained prior to commencint the rework. (T) or F
- 9. QC personnel will, when performing inspections of installations, inspect the areas to the applicable drawing revision(s) in force. (T) or F
- 10. What does ECN stand for? *Engineering change notice*

Procedure #29, Field Initiated Requests for Design Changes

- 1. This procedure has been established to ensure that deviations from the design drawings or standards are properly documented, approved and implemented. (T) or F
- 2. What is an Field Change Request (FCR)?  
A form which is used for by the owner to initiate  
document control.
- 3. Who initiates an FCR? Engineering
- 4. Production shall not proceed with FCR related work until they have an approved copy of the FCR. (T) or F
- 5. FCR's which have been rejected via being superseded shall have to have the FCR reference removed from the drawing and the superseding FCR reference added to the drawing. (T) or F
- 6. When an FCR is initiated and Part A completed, it will be submitted to OWNER for approval.
- 7. Hatfield QA Department will verify that the inspection made for the related equipment was performed in accordance with the FCR and verify that the drawings were revised as shown on the FCR.  
The above statement is \_\_\_\_\_.
  - a. True
  - (b) False
  - c. Partly true
- 8. FCR's can be \_\_\_\_\_ . (best answer)
  - a. Major
  - b. Minor
  - (d) all of the above
  - e. none of the above

9. Nonconforming conditions are corrected with an NCR.
10. Who approves and FCR?
- a. Project Manger at HECO
  - b. QA Manger at HECO
  - c. a & b
  - (d. None of the above

TEST APPROVED By: John K...  
Entered 5-20-83 Level II

ATTACHMENT 18

RESULTS OF INTERVIEW WITH JAMES K. BUCHANAN AS RECORDED BY INVESTIGATOR  
DAVID M. GALANTI AT THE BYRON NUCLEAR GENERATING PLANT, BYRON IL.

On 27 July 1983, Mr. James K. BUCHANAN, Hatfield Electric Company, was interviewed by Investigators David M. GALANTI, Office of Investigation, RIII, Nuclear Regulatory Commission and Robert SEGAL, Office of Investigation, Headquarters Investigative Staff, Nuclear Regulatory Commission relevant to the relationship of Pittsburg Testing Laboratory (PTL); QA/QC certification testing and training program and John HUGHES, a former employee of Hatfield Electric Company. BUCHANAN provided biographical data stating he was employed by Hatfield Electric Company on 5 November 1979 as a Quality Assurance (QA) Engineer and remained in that position until his promotion to QA Manager on 20 April 1981. BUCHANAN stated he was Hatfield Electric Company's QA Manager until 4 April 1983 and a question of his previous work experience led to a determination that he was not qualified as a Level III, and therefore, was forced to relinquish the position of QA Manager against his personal desires. BUCHANAN said he is presently working in the Hatfield Engineering Department of Hatfield Electric. BUCHANAN stated prior to entering the Nuclear Industry in 1981 he had over twenty two years in various construction positions, with various construction companies.

BUCHANAN explained that whenever Hatfield had a requirement for a specific manpower type of individual such as a electrical inspector or weld inspector that Hatfield would initiate paperwork and submit their request through Commonwealth Edison (CECO), who in turn would transmit the request to PTL who would attempt to find a body to fill their manpower needs. BUCHANAN said once a individual was identified, he would be hired by PTL and processed by PTL although his final work location and supervisory responsibility would be at Hatfield. BUCHANAN said Hatfield did not become involved in either the selection process or the initial processing process of the individual and had no direct contact with the individual until he was totally processed by Hatfield. Once the individual was on site at the Hatfield he then became the responsibility of Hatfield as far as his work was concerned however, administrative responsibility remained with PTL. BUCHANAN stated approximately fifteen individuals, John HUGHES and Irv SOUDERS among them, were working for Hatfield under this arrangement. PTL would also identify, through the individuals personnel records, what he was lacking in order to become certified as a Level I or level II inspector. Based on their advisement Hatfield would then establish a training program that would fulfill all of the requirements of ANSI N45.2.6, 1978, thus enabling them to certify the individual for the specific job with which he was hired to do.

BUCHANAN said that the overall training responsibility rested with him as the QA manager; however, he delegated that responsibility to Al KOCA who worked for him as a QA supervisor. BUCHANAN stated that the Hatfield Training regulation had recently been revised with regard to certification testing of personnel that came about as a result of allegations initiated by HUGHES claiming that the Hatfield certification testing program was being improperly managed by allowing the individual who fail one of the test be given a retest the same day, and that the QA supervisor gave them the answers to the test. BUCHANAN said that in the past it was the policy of Hatfield to review all of the missed questions of a particular test with that individual and then give him a make up test as soon as possible following the review. BUCHANAN said that some individuals had been given the same test in the same day that they had originally taken the first test, and stated the new training policy eliminates that practice. BUCHANAN said that he heard nothing about any cheating on the examination however said that it was possible. Another problem with

the testing program during that time frame was that none of the examination that were being failed were being maintained by KOCA. Now, the policy is to keep all of the examinations, regardless of pass or fail, in the individual certification records. BUCHANAN said the policy is now to keep all of the test plus if anyone fails one of the tests, he would continue to receive training on the questions that he missed, then wait a minimum of two days and be retested utilizing a different test altogether.

BUCHANAN acknowledged that HUGHES and SOUDERS were problems for Hatfield while they worked there; however, emphasized they were given the total benefit of doubt and warned numerous times about their "bull sessions". BUCHANAN said that SOUDERS was at first no problem at all and contributed his downfall to HUGHES whom BUCHANAN identified as a mouthy individual. BUCHANAN said that HUGHES was an immediate problem that began when it was learned that he did not meet all of the requirements needed for a Level II inspector because he was lacking a high school diploma and at the time did not have a GED equivalent. BUCHANAN said that HUGHES subsequently obtained his GED from the state of Illinois, and after meeting all of the requirements was subsequently certified as a Level II inspector on 1 November 1982. BUCHANAN said that Scott WAGNER was HUGHES immediate supervisor during the time that he worked at Hatfield. BUCHANAN said that HUGHES main problem was that he was a constant talker and lack of productivity coupled with a total disruption of the entire office by his and SOUDERS talking a joking around. BUCHANAN said that he told HUGHES and SOUDERS on several occasions that his talking was causing a problem and that he needed to do less talking and more work if he wanted to continue his employment with Hatfield. In December 1982, HUGHES and SOUDERS were given their final warning and in January 1983, as a result of their lack of productivity, they both were released back to PTL.

BUCHANAN said if an inspector had a problem with a particular inspection they would generally go to one of the QA/QC supervisors for resolution, and after a formal visit to the location where the problem exists, would make the determination as to acceptance or rejection and then sign off on the appropriate documentation. BUCHANAN said that prior to all approvals by QC personnel a physical inspection must be conducted and he could not recall any instance where any inspection criteria could be approved without physical inspection.

BUCHANAN did not have any additional relevant information and the interview was terminated by the undersigned.

RECORDED BY:

*David M. Galanti*  
DAVID M. GALANTI  
Investigator  
NRC

ATTACHMENT 19 OMITTED



ATTACHMENT 20 (OMITTED)

ATTACHMENT 21 (OMITTED)

ATTACHMENT 22

EXAMPLE OF A DR  
WITH CHANGED INFO (V.C.)  
AS MARKED BY [REDACTED]  
\*(ADDED)

DISCREPANCY REPORT

Report No. 11-11

I. TO: FO 70.0  
T.F. [REDACTED]  
[REDACTED]

Reference(s) DWG 1-306.1-H  
DWG 0-12-200  
[REDACTED]

IDENTIFIED DURING HO 59, 110-72

IDENTIFIED DURING  Receiving  Installation  Surv./Storage  
 QC Inspection  Testing

DISCREPANCY *Aluminum* Nos 110-72, 110-89 *have undetected cracks*  
*in DV-102 structural members. Require 7/16" welds per detail.*  
*HO-72 located 13'-0" W/L E @ 50' Side of 8 Line*  
*HO-89 located 12'-9" N/S E 14'-7 1/8" W/L. THESE may be*  
*then per drawings with this problem.*

→ (FACTORY WELDS)

Signed by: *[Signature]*  
 Prod.  Eng.  QA/QC

II. RESOLUTION:

Date: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Signed by: \_\_\_\_\_  
 Prod.  Eng.  QA/QC

III. DISCREPANCY RESOLVED BY \_\_\_\_\_ Date: \_\_\_\_\_

QA APPROVAL OF RESOLUTION by: \_\_\_\_\_ Date: \_\_\_\_\_

ATTACHMENT 23 (OMITTED)

ATTACHMENT 24



Agreed to source of information, NRC to retain signed copy of duplicate original)

I have information that I wish to provide in confidence to the U. S. Nuclear Regulatory Commission (NRC). I request an express pledge of confidentiality as a condition of providing this information to the NRC. I will not provide this information voluntarily to the NRC without such confidentiality being extended to me.

It is my understanding, consistent with its legal obligations, the NRC, by agreeing to this confidentiality, will adhere to the following conditions:

(1) The NRC will not identify me by name or personal identifier in any NRC initiated document, conversation, or communication released to the public which relates directly to the information provided by me. I understand the term "public release" to encompass any distribution outside of the NRC with the exception of other public agencies which may require this information in furtherance of their responsibilities under law or public trust.

(2) The NRC will disclose my identity within the NRC only to the extent required for the conduct of NRC related activities.


(3) During the course of the inquiry or investigation the NRC will also make every effort consistent with the investigative needs of the Commission to avoid actions which would clearly be expected to result in the disclosure of my identity to persons subsequently contacted by the NRC. At a later stage I understand that even though the NRC will make every reasonable effort to protect my identity, my identification could be compelled by orders of subpoenas issued by courts of law, hearing boards, or similar legal entities. In such cases, the basis for granting this promise of confidentiality and any other relevant facts will be communicated to the authority ordering the disclosure in an effort to maintain my confidentiality. If this effort proves unsuccessful, a representative of the NRC will attempt to inform me of any such action before disclosing my identity.

I also understand that the NRC will consider me to have waived my right to confidentiality if I take any action that may be reasonably expected to disclose my identity. I further understand that the NRC will consider me to have waived my rights to confidentiality if I provide (or have previously provided) information to any other party that contradicts the information that I provided to the NRC or if circumstances indicate that I am intentionally providing false information to the NRC.

Other Conditions: (if any)

I have read and fully understand the contents of this agreement. I agree with its provisions.

1-25-83  
Date

  
Signature of source of information  
Typed or Printed Name and Address

Agreed to on behalf of the US Nuclear Regulatory Commission  
James E. Foster  
1-1-83  
111541134 P. AT DTT

ATTACHMENT 25 OMITTED

ATTACHMENT 26

RESULTS OF INTERVIEW WITH JAMES K. BUCHANAN AS RECORDED BY INVESTIGATOR DAVID M. GALANTI, AT BYRON STATION, ON 21 OCTOBER 1983

Mr. James K. BUCHANAN was reinterviewed by David M. GALANTI in the Senior Resident Inspectors office, Byron Nuclear Generating Station, Byron, IL., commencing at 1:30 on 21 October 1983. BUCHANAN was previously interviewed by GALANTI and Investigator Robert SEGAL on 27 July 1983.

BUCHANAN confirmed the telephones at Hatfield were periodically monitored by Hatfield Management and supervisory personnel to reduce the number of personal telephone calls coming into and going out of the Hatfield Office. It was emphasized that this "monitoring" was initiated solely on the basis of lost time and productivity to Hatfield and not to prevent or eliminate any contact with either the Nuclear Regulatory Commission or Commonwealth Edison. BUCHANAN said that in November 1982, he held a joint meeting with all personnel who worked in the QA/QC section of Hatfield, and passed out a card to each employee that contained the telephone numbers of Hatfield Managers; Commonwealth Edison personnel and the Nuclear Regulatory Commission in the event anyone wanted to contact personnel from those agencies. BUCHANAN said all Hatfield employees were aware that no restrictions were placed on contact with either the NRC or CECO; however, it was suggested that if anyone had a complaint, please use the appropriate chain of responsibility first and give Hatfield the opportunity to attempt to resolve the matter. BUCHANAN said that he did recall one occasion when he talked to Scott WAGNER immediately after WAGNER had talked to Irv SOUDERS, but emphasized it was not to prevent WAGNER from talking to SOUDERS, but simply reminding WAGNER that receipt of non work related telephone calls is not appropriate during working hours. BUCHANAN said this Hatfield policy was applicable to everyone who worked at Hatfield including John HUGHES and Irv SOUDERS, and they, nor anyone else was ever told they could not contact the NRC or CECO.

BUCHANAN, when asked if he recalled a situation between himself, June OGSBURY and Bill LEVELL, concerning an argument over a specific weld LEVELL had refused to accept, acknowledged that he did remember that instance, but was unable to recall any specifics. BUCHANAN said that he thought that LEVELL was misinterpreting the issue and would not accept my judgement on the matter so I took the inspection report and signed off on the document thus making it my responsibility and not his. BUCHANAN said that if a inspector had a problem with regard to either acceptance or rejection of a particular inspection area one of the QA/QC inspectors would go into the field, physically inspect the problem and then make the appropriate decision with regard to either acceptance or rejection. Continuing, BUCHANAN said he was just unable to recall what the discussion between himself and LEVELL was about and stated that it might have been something that he already looked at and therefore felt comfortable with signing off on the document. BUCHANAN said all weld records are maintained in a security vault and he would attempt to locate this specific weld. He felt as though he would be able to locate the weld record due to the small number of "weld" approvals that he signed off since being the QA manager at Hatfield.

BUCHANAN was advised that through interview of Hatfield record clerks a allegation regarding sexual discrimination pertaining to Level I and Level II inspectors surfaced when several of the female clerks questioned the policy of preventing the females "doing the same job as Level I inspectors" did not get the title nor the pay for doing the job. BUCHANAN said that at one time he was in the process of certifying all of the female record clerks as either Level I or Level II inspectors; however, he received a directive from Jim BINDER, Commonwealth Edison to stop all certification programs involving the female records clerks. BUCHANAN said that

two of the record clerks, Melody and Peggy were actually certified as Level I and one of the girls, Jane was certified as a Level I and working on Level II when he was ordered to stop the program. BUCHANAN said that none of the girls, who were classified as Level I inspectors actually conducted a inspection in the field and although they answered directly to the QA manager, there was always a fine line question on who they actually worked for due to their relationship with the Hatfield Office Manager, who worked in the production area. BUCHANAN said that CECO apparently felt that all of the record clerks were hired as clerks, they were not doing the actual job of a Level I inspector, and therefore they would not be carried as Level I inspectors on Hatfield records. BUCHANAN said that he was opposed to the elimination of the program; however, after discussion with the Hatfield Project Manager, and CECO he had no alternative except to comply with the CECO order.

BUCHANAN denied any destruction of records they were required to maintain by either CECO or the NRC; however, AL KOCA, acting in his capacity as QC Supervisor was responsible to him for the maintenance of the records in the vault. The only records that KOCA was allowed to destroy were those records which Hatfield was not required to maintain.

BUCHANAN said that it was his opinion there was no control of the QA program by production, and the relationship between himself and the Hatfield Project Manager was one of professional respect. BUCHANAN said that at time he felt production was getting a little too involved in the QA area however, after discussions with production management the final decisions were left up to him as the QA Manager.

BUCHANAN said he did not know anything about inspectors not being able to write up NCR'S instead of DR'S. BUCHANAN said he never observed DR'S being altered or changed and had never heard of any problem in this area.

BUCHANAN had not additional relevant information and the interivew was terminated.

RECORDED BY:

*David M. Galanti*  
DAVID M. GALANTI  
Investigator  
NRC

ATTACHMENT 27



WELD TRAVELER CARD

15640

WELDER Chas W. Rumpfelt (HV) DATE 9-8-82  
 EXAMINER Wm W. Green DATE 9-9-82

Material ID	Drawing	Column Lines	Examination			Re-Exam	
			A	U	INT	A	U
9 HV 4	D-3096H01	1'4 1/2" W (P)	✓	✓	✓	✓	✓
DET. off RF		4'6" N (19)					✓
REV. M							9/14
<del>XXXXXXXXXX</del>							★
		Floor - 401'					
Complete - Report on table work - 411' 1/4							

J. Melnosky  
D. Raef

Commonwealth Edison Company  
Field Change Request

FCR NO. F 21000  
DATE: 8-22-82

PART A] REQUEST CLASS:  Initial Construction  Plant Modification  Major  Minor  
PROJECT: Byron Unit 1 & 2  
P.O. NO: 197131 Scope of P.O. Electrical Installation  
SYSTEM: CABLE PAN HANGER Component: 9HVA  
Doc/Dwg No: 0-3096H01 REV. M Doc/Dwg. Title: Cable Pan

Description of Change Request: INSTALL 9HVA'S INTERNAL DIAGONAL BRACE PER ATTACHED SHEETS 2002

Reason for Change Request: 2L3x2 1/2x3/16 BRACE CANNOT BE INSTALLED BECAUSE OF "H" BAR SPLICES (RISE SPLICE) AND GAP BETWEEN RISERS (BACK TO BACK)

Does This FCR Result From A NCR  Yes  No  
If Yes Give NCR No. \_\_\_\_\_

Date: \_\_\_\_\_

Request Originated By:  Construction  Other  
If Other Give Name of Organization: Hatfield Electric Company / SARGENT & LUNDY

Prepared By: S.R. Butler Date: 8-22-82

Engineering Disposition:  SNED  PROJ.  A-E  OTHER  
Request Approved By: [Signature] ENGR'G. Date: 9/3/82

Logged By: [Signature] Date: 9-7-82  
SITE CONSTR. SUPT., MAINT. ASSIST. SUPT. OR DESIGNER  
CONSTRUCTION DEPT. OR MAINT. DEPT.

ADVANCED VERBAL CONCURRENCE - ~~TELEPHONE VERIFICATION~~:  
By: S.R. Butler & \_\_\_\_\_

Resolution or Approvals: Discussed with [Signature] Date: 8-27-82

Recorded By: [Signature] Date: 11/3/82

PART B] ENGR'G. DISPOSITION:  Approved  Approved With Comment  Rejected  
Engr'g. Comment/Instruction: \_\_\_\_\_

Engr'g. Approval: [Signature] Date: NOV 10 1982

PART C] A-E DISPOSITION:  Approved  Approved With Comment  Rejected  
A-E Comment/Instruction: \_\_\_\_\_

A-E Approval: \_\_\_\_\_ Date: \_\_\_\_\_

Part D] AFFECTED DESIGN DOCUMENTS REVISED AS LISTED:

- LIST HERE OR ATTACH LIST OF REVISED DOCUMENTS -

DESIGN DOCUMENTS ISSUED BY: \_\_\_\_\_ Date: \_\_\_\_\_

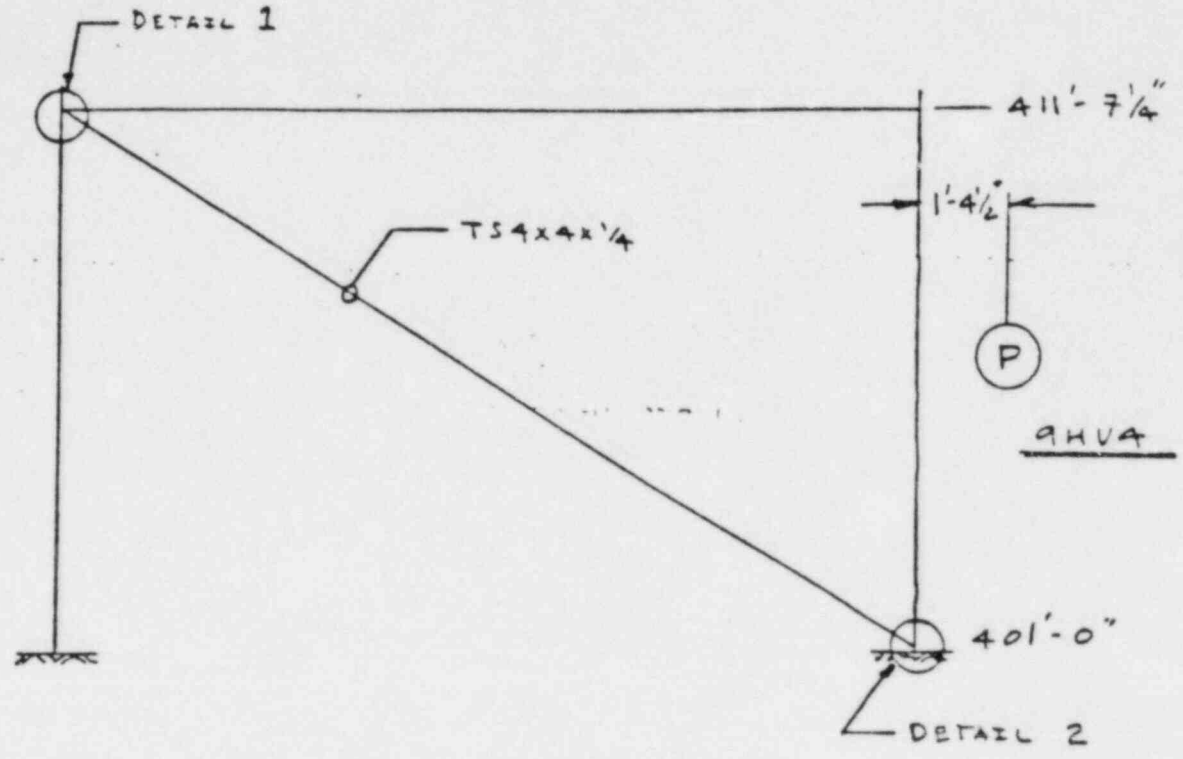
PART E] FINAL DISPOSITION:  
REVIEWED BY REQUESTOR: \_\_\_\_\_ Date: \_\_\_\_\_

APPROVED BY: \_\_\_\_\_ CONSTRUCTION OR MAINTENANCE Date: \_\_\_\_\_

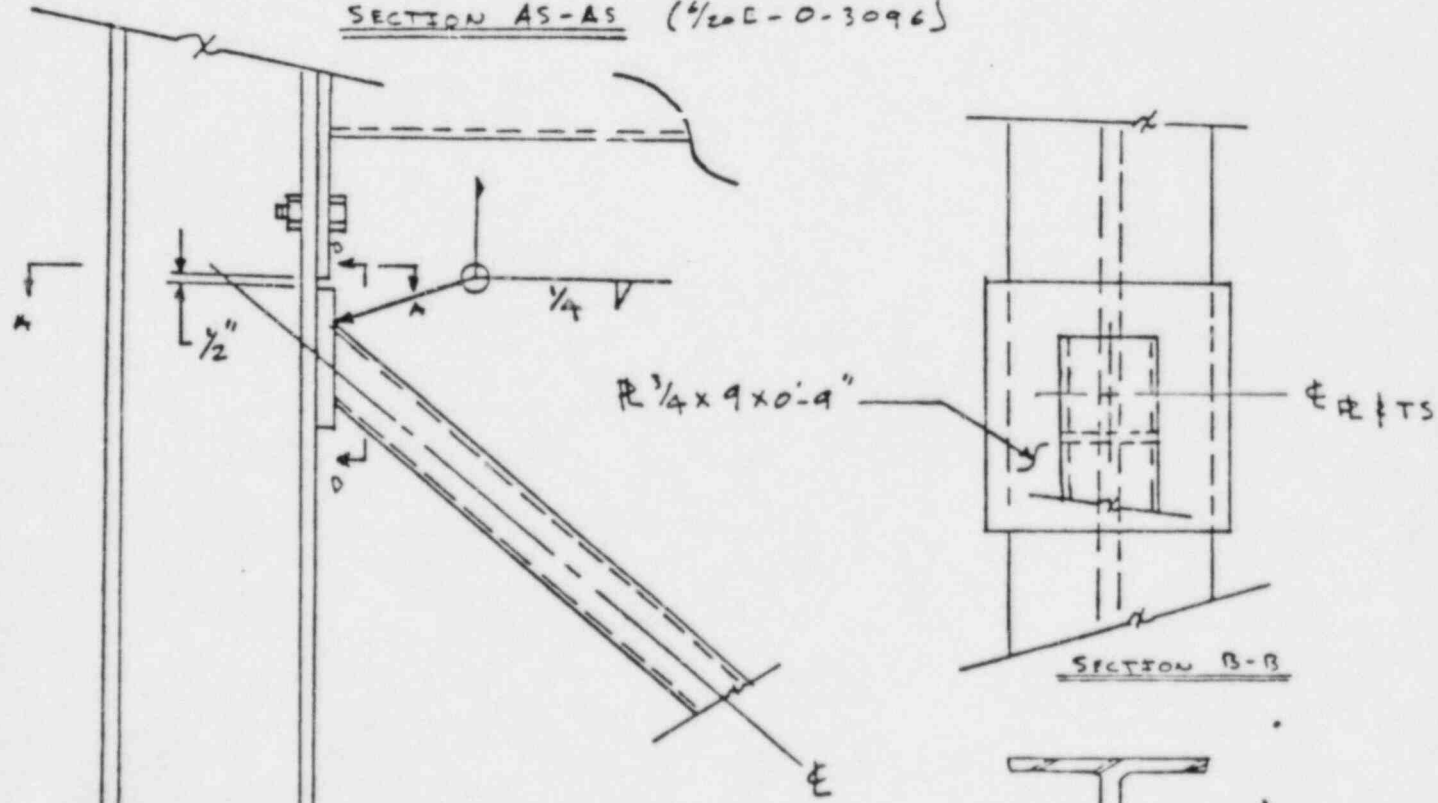
COMPLETION VERIFIED BY: \_\_\_\_\_ SITE CONSTR. SUPT. OR MAINT. ASSIST. SUPT., OR DESIGNER Date: \_\_\_\_\_

6-27-84	PREPARED	WORK NO 1-0-1-00
S. R. Butters	FIELD REVIEW	SHEET 1 of 2
C. J. Stevens	PRELIMINARY APPROVAL	
S. R. Butters		SARGENT & LUNDY ENGINEERS

FLOOR SKETCH -- REF DWG 6/20 E-0-3096 H01



SECTION A5-A5 (6/20 E-0-3096)

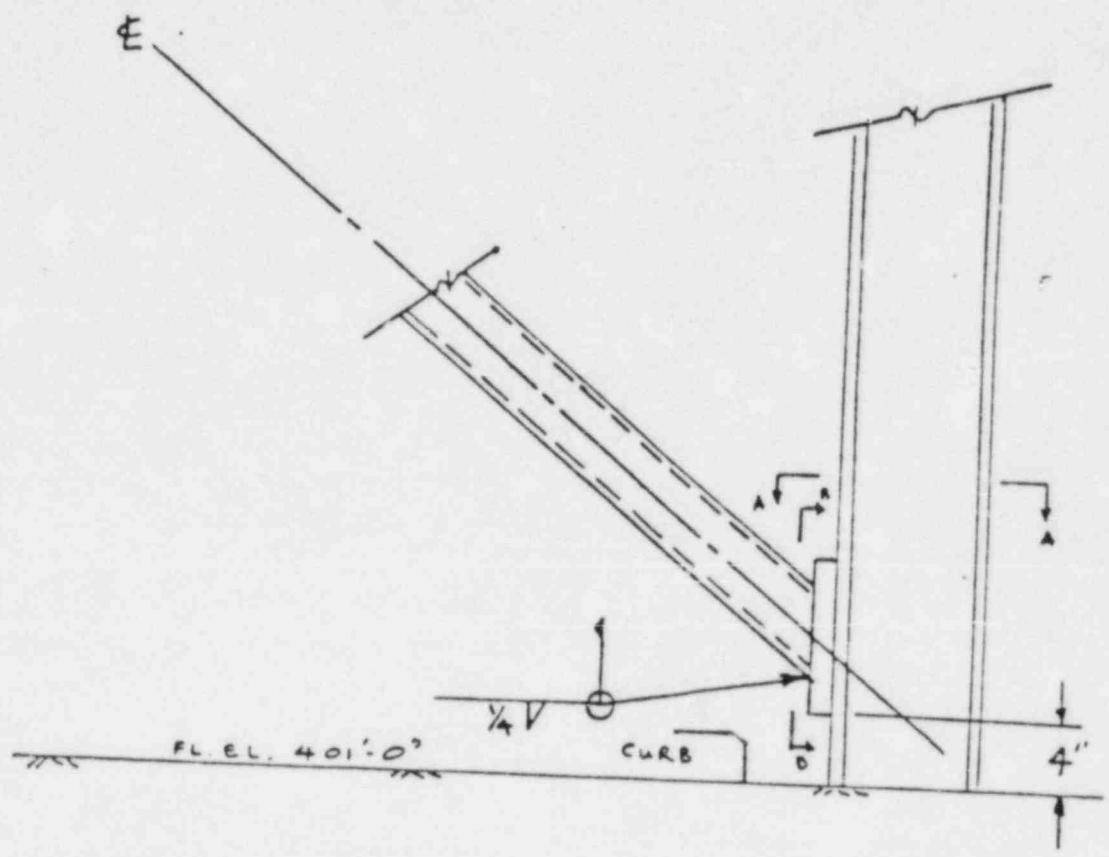


DETAIL 1

2	7	E-22.82	DATE	REV	FCLR NO	F-2164
		J. L. Burton	PREPARED		SHEET	2 of 2
		Cyril Stevens	FIELD REVIEW			
		H. P. Burton	PRELIMINARY APPROVAL			

FCLR SKETCH - REF. DWG 6/20 E-0-3096401

**SARGENT & LUNDY**  
ENGINEERS



DETAIL 2 (SECTIONS 'A-A' & 'B-B' ARE OPPOSITE HAND 'A-A' & 'B-B' OF DETAIL 1)

ATTACHMENT 28

PLACE: Building 4, 799 Roosevelt Blvd, Glen E

DATE: 27 December 1983

I, ALLEN W. KOCA, hereby make the following voluntary statement to DAVID M. GALANTI, who has identified himself/~~themselves~~ to me as an Investigator(s) with the U. S. Nuclear Regulatory Commission. I make this statement freely with no threats or promises of reward having been made to me.

I have just reviewed weld traveler card #15640, dated 9-8-82 and 9-9-82. I recognize the signature in the examiner block to be mine that I made on the ~~XXX~~ 9th of Sept 1982. I do not recall all of the circumstances surrounding the weld however. I know that I must have physically inspected the weld or otherwise I would have never signed the weld traveler card. I know that I discussed this particular weld with BUCHANAN because of his initials that were placed in the re-exam acceptable area. His initials simply mean to me that the matter was discussed and that BUCHANAN agreed with me in that the weld was acceptable.

*not used*

*OK*

I have read the foregoing statement consisting of 1 typewritten/handwritten pages. I have made any necessary corrections and have initialed them. I have signed my name in the margin of each page. This statement is the truth to the best of my knowledge and belief. I declare under penalty of perjury that the foregoing is true and correct.

Executed on 27 December 1983 at 1205  
(Date) (Time)

Subscribed and sworn to before me at 1205, this 27th Day December, 1983, at Glen Ellyn, IL

WITNESS: \_\_\_\_\_

Allen W. Koca  
SIGNATURE  
David M. Galanti  
NRC Investigator



ATTACHMENT 29 (OMITTED)

ATTACHMENT 30

CONFIDENTIALITY AGREEMENT

(Original to source of information, NRC to retain signed copy of duplicate original)

I have information that I wish to provide in confidence to the U. S. Nuclear Regulatory Commission (NRC). I request an express pledge of confidentiality as a condition of providing this information to the NRC. I will not provide this information voluntarily to the NRC without such confidentiality being extended to me.

It is my understanding, consistent with its legal obligations, the NRC, by agreeing to this confidentiality, will adhere to the following conditions:

(1) The NRC will not identify me by name or personal identifier in any NRC initiated document, conversation, or communication released to the public which relates directly to the information provided by me. I understand the term "public release" to encompass any distribution outside of the NRC with the exception of other public agencies which may require this information in furtherance of their responsibilities under law or public trust.

(2) The NRC will disclose my identity within the NRC only to the extent required for the conduct of NRC related activities.

(3) During the course of the inquiry or investigation the NRC will also make every effort consistent with the investigative needs of the Commission to avoid actions which would clearly be expected to result in the disclosure of my identity to persons subsequently contacted by the NRC. At a later stage I understand that even though the NRC will make every reasonable effort to protect my identity, my identification could be compelled by orders or subpoenas issued by courts of law, hearing boards, or similar legal entities. In such cases, the basis for granting this promise of confidentiality and any other relevant facts will be communicated to the authority ordering the disclosure in an effort to maintain my confidentiality. If this effort proves unsuccessful, a representative of the NRC will attempt to inform me of any such action before disclosing my identity.

I also understand that the NRC will consider me to have waived my right to confidentiality if I take any action that may be reasonably expected to disclose my identity. I further understand that the NRC will consider me to have waived my rights to confidentiality if I provide (or have previously provided) information to any other party that contradicts the information that I provided to the NRC or if circumstances indicate that I am intentionally providing false information to the NRC.

Other Conditions: (if any)

I have read and fully understand the contents of this agreement. I agree with its provisions.

10-12-83  
Date

[Redacted Signature]

Signature of source of information  
Typed or Printed Name and Address

Agreed to on behalf of the US Nuclear Regulatory Commission.

12 Oct 1983  
Date

David M. [Signature], OI, RUI, NRC  
Signature

ATTACHMENT 31 OMITTED

ATTACHMENT 32 (OMITTED)

ATTACHMENT 33



PROPERTY OF  
BA Q & TS

AMERICAN NATIONAL STANDARD  
REACTOR PLANTS AND THEIR MAINTENANCE

Qualifications of Inspection,  
Examination, and Testing  
Personnel for the Construction  
Phase of Nuclear Power Plants

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ANSI N45.2.6 - 1973

Not  
working  
to.

SECRETARIAT  
THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS

PUBLISHED BY  
THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS  
United Engineering Center 345 East 47th Street New York, N. Y. 10017

# QUALIFICATIONS OF INSPECTION, EXAMINATION, AND TESTING PERSONNEL FOR THE CONSTRUCTION PHASE OF NUCLEAR POWER PLANTS

## INTRODUCTION

### 1 Scope

This standard delineates the qualifications of personnel who perform inspection, examination, and testing activities that assure the quality of important parts of a nuclear power plant during the construction phase. These parts include those structures, systems, and components whose satisfactory performance is required for the plant to operate reliably, to prevent accidents that could cause undue risk to the health and safety of the public, or to mitigate the consequences of such accidents if they were to occur. The requirements may also be extended to other appropriate parts of nuclear power plants when specified in contract documents.

The requirements of this standard apply to personnel who perform inspections, tests, or non-destructive examinations; or who participate in the approval of procedures, the handling of data or test results, or the control of reports and records. The requirements of this standard do not apply to personnel who perform inspections for government or municipal authorities, or who perform as authorized inspectors in accordance with the ASME Boiler and Pressure Vessel Code.

This standard is intended to be used in conjunction with ANSI N45.2 Quality Assurance Program Requirements for Nuclear Power Plants.

### 1.2 Applicability

The requirements apply to the personnel of any organization that participates in the construction phase activities of a nuclear power plant including personnel of the owner, architect-engineers, nuclear power system designers and suppliers, plant designers and constructors, equipment suppliers, outside testing agencies and consultants. The extent to which the individual requirements of this standard apply will depend upon the nature and scope of the work to be performed and the importance of the item or service

involved. Other standards or codes may contain qualification requirements for personnel such as non-destructive examination personnel required by the ASME Boiler and Pressure Vessel Code, but who are also involved in nuclear power plant construction. When this is the case, the requirements of this standard are not to be interpreted to require a duplication of effort.

The requirements are to be applied in both the selection and the utilization of those personnel who perform inspection, examination, and testing activities that are intended to achieve and assure quality construction or to verify conformance to quality requirements.

### 1.3 Responsibility

It is the responsibility of each organization participating in the project to assure that only those personnel within their respective organizations who meet the requirements of this standard are permitted to perform inspection, examination, and testing activities that result in or assure the attainment of quality.

The organization or organizations responsible for establishing the applicable requirements for individuals performing activities covered by this standard shall be documented. The work of establishing selection and training practices and certification procedures and providing the resources necessary to implement the requirements of this standard may be delegated to other organizations and such delegations shall also be documented. It is the responsibility of each organization using personnel covered by this standard to comply with the procedures and instruction issued for the project and to conform to the requirements of this standard applicable to his work.

It is the responsibility of the organization performing these activities to specify the detailed methods and procedures unless they are specified in the contract documents.

ATTACHMENT 34

AMERICAN NATIONAL STANDARD

QUALIFICATIONS OF INSPECTION, EXAMINATION AND TESTING PERSONNEL FOR NUCLEAR POWER PLANTS

1. INTRODUCTION

1.1 Scope

This Standard delineates the requirements for the qualification of personnel who perform inspection, examination, and testing to verify conformance with specified requirements of nuclear power plant (structures, systems, and components of nuclear power plants) whose satisfactory performance is required to prevent postulated accidents which could cause undue risk to the health and safety of the public; or to mitigate the consequences of such accidents if they were to occur. The requirements may also be extended to other items of nuclear power plants when specified in contract documents.

inspection items

1.2 Applicability

The requirements of this Standard apply to personnel who perform inspection, examination, and testing during fabrication, prior to and during receipt of items at the construction site, during construction, during preoperational and startup testing, and during operation phases of nuclear power plant. The requirements of this Standard do not apply to personnel who perform inspections for government or municipal authorities, or who perform as authorized inspectors in accordance with the ASME Boiler and Pressure Vessel Code.

The requirements of this Standard are not intended to apply to personnel who only perform inspection, examination, or testing in accordance with ASNT "Recommended Practice No. SNT-TC-1A", since these personnel are certified in accordance with the requirements of SNT-TC-1A and its applicable supplements. The requirements of this Standard are optional, at the discretion of the employer, for application to personnel who perform calibration or to craftsmen who perform installation checkouts as part of their basic installation responsibility to ready the installation for preoperational testing.

This Standard is to be used in conjunction with ANSI N45.2.

The requirements apply to owners, architect-engineers, nuclear power plant system designers and system suppliers, plant designers and equipment suppliers, outside testing agencies, and consultants. The ASME Boiler and Pressure Vessel Code, as well as other ANSI Standards, have been considered in the development of the Standard, and this Standard is intended to be compatible with their requirements.

1.3 Responsibility

It is the responsibility of each organization participating in the project to assure that only those personnel within their respective organizations who meet the requirements of this Standard are permitted to perform the activities covered by this Standard. The organization shall document the requirements of this Standard.

The organization or organizations responsible for establishing the applicable requirements for activities covered by this Standard shall document the scope of their responsibility shall be documented.

The work of establishing selection and training practices and qualification procedures and of providing the resources in terms of personnel, equipment, and services necessary to implement the requirements of this Standard, may be delegated to other qualified organizations and such delegations shall also be documented. It is the responsibility of each organization using personnel covered by this Standard to conform to the requirements of this Standard applicable to the organization's work.

It is the responsibility of the organization performing these activities to specify the detailed methods and procedures for meeting the requirements of this Standard.

AN AMERICAN NATIONAL STANDARD

Qualifications of Inspection,  
Examination, and Testing  
Personnel for  
Nuclear Power Plants

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ANSI/ASME N45.2.6 - 1978

(REVISION OF ANSI N45.2.6-1973)



*WORKING TO AT Hayfield.*

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United Engineering Center 345 East 47th Street New York, N. Y. 10017