

UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555  
01 FIELD OFFICE, REGION I

OFFICE OF INVESTIGATIONS

DATE December 21, 1982

REPORT OF INVESTIGATION

TITLE: NINE MILE POINT UNIT II (CONSTRUCTION); IMPROPER USE OF QUALITY  
CONTROL INSPECTOR TRAINEES BY STONE AND WEBSTER ENGINEERING CORP.

SUPPLEMENTAL: DN 50-410

CASE NUMBER: 1-82-078

CONTROL OFFICE: OI:RI

STATUS: CLOSED

PERIOD OF INVESTIGATION: Nov. 1 - Nov. 4, 1982

REPORTING INVESTIGATOR: *R. A. Matakas*

R. A. Matakas, Investigator, OI:RI

PARTICIPATING PERSONNEL: R. K. Christopher, Investigator, OI:RI

REVIEWED BY: *R. K. Christopher*

R. K. Christopher, Director, OI:RI

APPROVED BY: *James A. Fitzgerald*

James A. Fitzgerald, Acting Director, OI:HQ

## SUMMARY

This investigation was initiated to determine the circumstances surrounding the alleged improper use of Stone and Webster Engineering Corp. Quality Control (QC) Inspector Trainees at the Nine Mile Point, Unit 2, Nuclear Station, currently under construction for the Niagara Mohawk Power Corp. (licensee) and to further determine the extent of Stone and Webster management awareness relating to the allegation. Stone and Webster is under contract to Nine Mile Point, Unit 2 licensee, Niagara Mohawk Power Corporation.

The standard delineating the qualifications of personnel who perform inspections, examinations, and testing activities that assure the quality of components of a nuclear power plant during the construction phase is set forth in the American National Standard Institute (ANSI) N45.2.6-1973. (The licensee committed to the applicable ANSI standard(s) in its license application). It states that, "Each person who verifies conformance of work activities to quality requirements shall be certified by his employer as being qualified to perform his assigned work. This certification shall be supported by appropriate measures such as education or training, testing evaluation, and periodic review to assure the initial and continued proficiency of each person. The effective period of certification shall be established . . .". The standard requires that personnel who are assigned the responsibility and authority to perform project functions shall have, as a minimum, Level I capability. This standard is supplemented by the Stone and Webster Engineering Corporation Quality Assurance (QAD) 2.5, Revision F, which states, "Trainee Personnel shall work under the direct supervision of higher level personnel and be capable of performing assigned tasks.". QAD-2.5 allows for trainees having associate degrees to be certified as Level I Inspectors after a three-month trainee period.

All six of the Stone and Webster Electrical Inspector Trainees who were certified as Level I inspectors on or about October 12, 1982, were interviewed and acknowledge that they had performed selected inspections as trainees without the direct supervision of certified inspectors. In addition, two of the six interviewees indicated a lack of training inasmuch as they were not aware of the fact that they were not supposed to be performing independent inspections while they were employed in a trainee status. Four of the six interviewees opined that either the Electrical Quality Control Engineer Supervisor and/or the Senior Quality Control Engineer were aware that they (the trainees) were performing independent inspection functions.

All four of the current Stone and Webster Level II Electrical Inspectors were interviewed and acknowledged that the Level II inspectors had sent trainees into the field to perform independent quality control inspections prior to the trainees Level I certification. They indicated that the trainees were allowed to perform selective inspections after they (the Level IIs) were satisfied that the trainees were qualified (even though they were not certified) to perform them. The Level II inspectors indicated that the trainees were used to perform independent inspections because of the workload and the lack of certified inspector manpower. None of the Level II inspectors stated that they were directed by management to use the trainees in this manner; however, they all related circumstances and events indicating that both the Electrical Quality Control Supervisor and the Senior Quality Control Engineer were aware of, and allowed, the trainees to perform independent quality control inspections.

The Electrical Quality Control Discipline Supervisor was interviewed and acknowledged that he was aware that the trainees were performing independent inspections without the direct supervision of certified inspectors. He further stated that the Senior Quality Control Engineer (his immediate supervisor) was also aware that the trainees were being used in this manner.

The Senior Quality Control Engineer denied that he was aware that the trainees were performing independent quality control inspections; however, statements from individuals in the QC Electrical Discipline and conflicting statements made by the Senior Quality Control Engineer to the NRC investigators do not support his contention.

No information was surfaced during this investigation which would indicate that either the licensee or anyone in a Stone and Webster management position above that of the Senior Quality Control Engineer was aware that Stone and Webster trainees were conducting independent quality control inspections.

DETAILS

Purpose of Investigation

The purpose of this investigation was to determine the circumstances surrounding the alleged improper use of Stone and Webster Engineering Corp. Quality Control Inspector Trainees at the Nine Mile Point, Unit 2, Nuclear Station, and to further determine the extent of Stone and Webster management awareness relating to the allegation.

(Investigator's Note: During an enforcement conference at Region I on October 20, 1982, the licensee acknowledged that Stone and Webster had used trainees to perform inspections and accept work. As a result, a special quality review group is being established to identify, review, and correct related problems; accordingly, it will not be the purpose of this investigation to identify specific inspections that were allegedly performed by Stone and Webster trainees).

Background

On September 17, 1982, Harry B. KISTER, NRC Region I Chief of Reactor Projects, Section 1C, received a telephone call from an alleged (formerly employed by Stone and Webster Engineering Corp. at Nine Mile Point, Unit 2) who stated that the Stone and Webster Electrical Inspector Trainees were being used to sign off inspections of electrical rareway installations because Stone and Webster did not have enough Level I or Level II inspectors to do the work. KISTER stated that he requested the NRC Nine Mile Point, Unit 2, Resident Inspector, Robert SCHULTZ, to look into the allegation to determine its validity.

KISTER advised that based on a preliminary review of Stone and Webster Electrical Quality Control Inspection Documents and contacts with members of the Electrical Discipline by SCHULTZ on September 17 and 20, 1982, the allegation appears to have substance, and he requested Office of Investigation, Region I, investigative assistance.

Contact with the Nine Mile Point, Unit 2, Resident Inspector

Bob SCHULTZ, Nine Mile Point, Unit 2, Resident Inspector, was contacted by investigators, R. A. HATAKAS and R. K. CHRISTOPHER on November 2, 1982. He provided the investigators with the identities of those individuals in the Stone and Webster Electrical Discipline chain of supervision and the identities of individuals who work in the Electrical Discipline who may have pertinent information relating to this investigation. Attachment 1 depicts the Stone and Webster Nine Mile Point, Unit 2, Quality Control (Electrical) Discipline chain of supervision flow structure.

Review of Appropriate Standards for Reactor Plants and Their Maintenance

The standard delineating the qualifications of personnel who perform inspections, examinations, and testing activities that assure the quality of components of a nuclear power plant during the construction phase is set forth in the American National Standard Institute (ANSI) N45.2.6-1973 (The licensee committed to the applicable ANSI standards(s) in its license application). It states that, "Each person who verifies conformance of work activities to quality requirements shall be certified by his employer as being qualified to perform his assigned work. This certification shall be supported by appropriate measures such as education or training, testing evaluation, and periodic review to assure the initial and continued proficiency of each person. The effective period of certification shall be established . . .". The standard requires that personnel who are assigned the responsibility and authority to perform project functions shall have, as a minimum, Level I capability. This standard is supplemented by the Stone and Webster Engineering Corporation Quality Assurance Directive (QAD) 2.5, Revision F, which states, "Trainee personnel shall work under the direct supervision of higher level personnel and be capable of performing assigned tasks.". QAD-2.5 allows for trainees having associate degrees to be certified as Level I inspectors after a three-month trainee period.



Interviews with Stone and Webster Engineering Corp. Level 1 Electrical Inspectors

On November 2, 1982, six Stone and Webster Quality Control Electrical Inspectors were interviewed separately by NRC investigators R. A. MATAKAS or R. K. CHRISTOPHER. The six inspectors are currently Level 1 inspectors having received their Level 1 certification on or about October 12, 1982. Prior to October 12, 1982, the individuals were classified as "trainees" (Attachment 1 and the preceding paragraph pertain). Substantive information provided by these individuals is contained in their sworn statements, Attachments (2) through (7), and summarized in the following six paragraphs.

Interview with Steven D. BROWN

Steven D. BROWN was interviewed by investigator R. A. MATAKAS at the Nine Mile Point, Unit 2, Nuclear Station on November 2, 1981. Brown acknowledged that he had performed quality control inspections as a trainee without the direct supervision of a certified inspector. He identified Level II inspectors Ken IRWIN and George GIGON as the individuals who assigned him his independent inspection assignments. He opined that both Dallas LANHAM, Senior Quality Control Engineer, and Bob HARDISON, Electrical Discipline Supervisor, were aware of the fact that the trainees were performing independent QC inspections without the direct supervision of certified inspectors. BROWN'S sworn statement setting forth additional details is Attachment (2) to this report.

Interview with Daniel F. FOLEY

Daniel F. FOLEY was interviewed by investigator R. A. MATAKAS at the Nine Mile Point, Unit 2, Nuclear Station on November 2, 1982. FOLEY acknowledged that he had performed quality control inspections as a trainee without the direct supervision of a certified inspector. He identified former Level II inspector Paul WILKE, who left Stone and Webster in about September 1982, as the individual who assigned him his independent inspection assignments. FOLEY said that he was not aware of the fact that he was not supposed to perform independent QC inspections as a trainee until sometime in September 1982, when he was informed during conversation with some of his contemporaries. He opined that his supervisor, Bob HARDISON, was aware that the trainees were performing independent QC inspections without the direct supervision of certified inspectors. FOLEY'S sworn statements setting forth additional details is Attachment (3) to this report.

Interview with Kevin P. HERBERT

Kevin P. HERBERT was interviewed by investigator R. A. MATAKAS at the Nine Mile Point, Unit 2, Nuclear Station on November 2, 1982. HERBERT acknowledged that he had performed quality control inspections as a trainee without the direct supervision of a certified inspector. He identified Level II inspector Gary WILKINS as the individual who assigned him his independent QC inspection assignments. HERBERT said he was not aware of the fact that he was not supposed to perform independent QC inspections as a trainee until sometime in September 1982 during a conversation with NRC Resident Inspector Robert SCHULTZ. He opined that both Dallas LANHAM and Bob HARDISON (both Stone and Webster supervisory personnel) were aware of the fact that the trainees were performing independent QC inspections without the direct supervision of certified inspectors. HERBERT'S sworn statement setting forth additional details is Attachment (4) to this report.

Interview with Steven D. WEST

Steven D. WEST was interviewed by investigator R. K. CHRISTOPHER at the Nine Mile Point, Unit 2, Nuclear Station on November 2, 1982. WEST acknowledged that he had performed quality control inspections as a trainee without the direct supervision of a certified inspector. He identified Level II inspector Gary WILKINS as the individual who assigned him his independent QC inspection assignments. WEST said he was accompanied by Level I inspector Jeff BEACH during "99.5%" of his assignments that were given to him by WILKINS. WEST displayed a lack of knowledge regarding the QC program by stating that he was "aware that as a trainee he was not permitted to perform inspections without a Level II present" (the QC program allows trainees to be accompanied by either a Level I, II, or III inspector). WEST opined that his supervisor, Bob HARDISON, was aware that trainees were performing independent QC inspections without the direct supervision of certified inspectors. WEST'S sworn statement setting forth additional details is Attachment (5) to this report.

Interview with Michael E. LAPOINT

Michael E. LAPOINT was interviewed by investigator R. K. CHRISTOPHER at the Nine Mile Point, Unit 2, Nuclear Station on November 2, 1982. LAPOINT acknowledged that he had performed quality control inspections as a trainee without the direct supervision of a certified inspector. He identified Level II inspector Ken IRWIN and former Level II inspector Paul WILDE as the individuals who assigned him his independent QC inspection assignments. He said that his supervisor, Bob HARDISON, was aware of the fact that the trainees were performing independent QC inspections without the direct supervision of certified inspectors. He said that sometime near the beginning of his employment (June 1, 1982) he attended an electrical discipline group meeting wherein Ed MAGILLY, the Assistant Superintendent of Field Quality Control, stated that the trainees were not permitted to perform welding inspections without supervision. LAPOINT'S sworn statement setting forth additional details is Attachment (6) to this report.

Interview with Peter TOWLE

Peter TOWLE was interviewed by investigator R. K. CHRISTOPHER at the Nine Mile Point, Unit 2, Nuclear Power Station on November 2, 1982. TOWLE acknowledged that he had performed quality control inspections as a trainee without the direct supervision of a certified inspector. He identified Level II inspector Gary WILKINS as the individual who assigned him his independent QC inspection assignment. He stated that he assumed that his supervisor, Bob HARDISON, was generally aware that the trainees were performing independent QC inspections based on the small size of the electrical QC discipline. TOWLE'S sworn statement setting forth additional details is Attachment (7) to this report.

Interviews With Stone and Webster Engineering Corp. Level II Electrical Inspectors

On November 3, 1982, four Stone and Webster quality control electrical inspectors (Level II) were interviewed separately by NRC investigators R. A. MATAKAS or R. K. CHRISTOPHER. Substantive information provided by these individuals is contained in their sworn statements, Attachments (8) through (11) and summarized in the following four paragraphs.



Interview with George M. SMITH

George M. SMITH, Level II inspector, was interviewed by investigator R. A. MATAKAS at Nine Mile Point, Unit 2, Nuclear Station on November 3, 1982. SMITH acknowledged that because of the Electrical Discipline's workload, Level II inspectors permitted trainees to perform QC inspections without certified inspector supervision. He further related circumstances and events indicating that both Bob HARDISON and Dallas LANHAM permitted the use of trainees to perform independent quality control inspections. SMITH'S sworn statement setting forth additional details is Attachment (8) to this report.

Interview with Gary C. WILKINS

Gary C. WILKINS, Level II inspector, was interviewed by investigator R. A. MATAKAS at the Nine Mile Point, Unit 2, Nuclear Station on November 3, 1982. WILKINS acknowledged that Level II inspectors permitted trainees to perform QC inspections without certified inspector supervision. He further related circumstances and events indicating that both Bob HARDISON and Dallas LANHAM permitted the use of trainees to perform independent quality control inspections. His sworn statement setting forth additional details is Attachment (9) to this report.

Interview with Kenneth F. IRWIN

Kenneth F. IRWIN, Level II inspector, was interviewed by investigator R. K. CHRISTOPHER at the Nine Mile Point, Unit 2, Nuclear Station on November 3, 1982. IRWIN acknowledged that because of the Electrical Discipline's workload, Level II inspectors permitted trainees to perform QC inspections without certified inspector supervision. He further related circumstances and events indicating that both Bob HARDISON and Dallas LANHAM permitted the use of trainees to perform independent quality control inspections. His sworn statement setting forth additional details is Attachment (10) to this report.

Interview with George F. GIGON

George F. GIGON, Level II Inspector, was interviewed by investigator R. K. CHRISTOPHER at Nine Mile Point, Unit 2, Nuclear Station on November 3, 1982. GIGON acknowledged that Level II inspectors permitted trainees to perform QC inspections without certified inspector supervision. He further related circumstances and events indicating that both Bob HARDISON and Dallas LANHAM permitted the use of trainees to perform independent quality control inspections. His sworn statement setting forth additional details is Attachment (11) to this report.

Interview with the Quality Control Electrical Engineer Discipline Supervisor

Robert M. HARDISON, Electrical Engineer Discipline Supervisor, was interviewed by investigator R. A. MATAKAS at the Nine Mile Point, Unit 2, Nuclear Station on November 3, 1982. HARDISON acknowledged that he was aware that the Level II inspectors were using trainees to perform independent quality control inspections without the direct supervision of certified inspectors. He indicated that the reason that this practice was permitted was because of the lack of certified inspector manpower. He emphasized that even though the trainees were not certified; he felt that the Level II inspectors were not using the trainees until they (the Level II inspectors) felt the trainees were qualified to perform the inspections. He further stated that his supervisor, Dallas LANHAM, was aware of the practice and had never directed him (HARDISON) to stop it. HARDISON'S sworn statement setting forth additional details is Attachment (12) to this report.

Interview with the Senior Quality Control Engineer

Dallas W. LANHAM, Senior Quality Control Engineer, was interviewed by investigator R. K. CHRISTOPHER at the Nine Mile Point, Unit 2, Nuclear Station on November 3, 1982. Investigator R. A. MATAKAS was also present during a portion of the interview. LANHAM denied being aware that the trainees were performing independent quality control inspections without certified inspector supervision; however, statements from individuals in the electrical inspection discipline do not support his contention (see paragraph 5 of Attachment 8; paragraph 5 of Attachment 9; paragraph 5 of Attachment 10; paragraph 7 of Attachment 11, and paragraph 4 of Attachment 12). In addition, LANHAM stated in his sworn statement that a trainee could go out alone and perform an inspection as long as a Level II inspector followed up behind the trainee to reinspect the area. Regarding this statement, the investigators reminded LANHAM that Level II inspector WILKINS had three trainees and one Level I inspector to supervise, and it was hard to believe that he could be expected to perform his own assigned work and reinspect all those items inspected by his assigned trainees. LANHAM acknowledged that he knew it would be "impossible" for WILKINS to do a "100%" follow-up on each trainee inspection item (referring to WILKINS), adding that it was still the Level II's responsibility to do a 100% follow-up of trainee inspection items. LANHAM'S sworn statement setting forth additional details is Attachment (13) to this report.

Interviews With Additional Stone and Webster Engineering Corp. Management Personnel

This investigation did not surface any information that would indicate anyone in a Stone and Webster management position above that of Dallas LANHAM (see Attachment 1) was aware that trainees were being used to perform independent inspection functions. To the contrary, two Level II inspectors referred to a question directed at the Assistant Superintendent of Field Quality Control, LANHAM'S supervisor, wherein the Assistant Superintendent of Field Quality Control stated that the trainees could not be used to perform independent quality control inspection functions (see paragraph 4 of Attachment 8 and paragraph 5 of Attachment 9). The following two paragraphs relate information provided by the Assistant Superintendent of Field Quality Control and the Superintendent of Field Quality Control, who has the overall responsibility for all of the various Stone and Webster Engineering Corp. Field Quality Control disciplines at the Nine Mile Point, Unit 2, Nuclear Station.

Interview with the Assistant Superintendent of Field Quality Control

Edward J. MAGILLEY, JR., Assistant Superintendent of Field Quality Control, was interviewed by investigator R. A. MATAKAS on November 4, 1982, at the Nine Mile Point, Unit 2, Nuclear Station. MAGILLEY did recall attending a meeting for the electrical discipline back in July 1982, but he said he did not specifically recall being asked if trainees could be used to perform independent quality control inspections (see preceding paragraph). He said he was not aware that the trainees were performing inspections for item acceptance. He did not provide any additional pertinent information.



Interview with the Superintendent of Field Quality Control

James C. THOMPSON, Superintendent of Quality Control, was interviewed by investigator R. K. CHRISTOPHER on November 4, 1982, at the Nine Mile Point, Unit 2, Nuclear Station. THOMPSON denied any knowledge of the fact that the electrical trainees were performing independent quality control inspections without appropriate supervision. He said the allegation was first brought to his attention in September 1982 by the NRC Nine Mile Point, Unit 2, Resident Inspector. He concluded by stating that if he would have been aware that such a practice was going on prior to September 1982, he would have put a stop to it.

III. STATUS OF INVESTIGATION

This investigation is CLOSED.

#### IV. ATTACHMENTS

- (1) Stone and Webster QC Electrical Discipline Chain of Command Flow Structure/Undated
- (2) Sworn Statement (BROWN)/11-2-82
- (3) Sworn Statement (FOLEY)/11-2-82
- (4) Sworn Statement (HERBERT)/11-2-82
- (5) Sworn Statement (WEST)/11-2-82
- (6) Sworn Statement (LAPOINT)/11-2-82
- (7) Sworn Statement (TOWLE)/11-2-82
- (8) Sworn Statement (SMITH)/11-3-82
- (9) Sworn Statement (WILKINS)/11-3-82
- (10) Sworn Statement (IRWIN)/11-3-82
- (11) Sworn Statement (GIGON)/11-3-82
- (12) Sworn Statement (HARDISON)/11-3-82
- (13) Sworn Statement (LANHAM)11-3-82