



UNITED STATES
NUCLEAR REGULATORY COMMISSION
OFFICE OF INVESTIGATIONS FIELD OFFICE, REGION IV
611 RYAN PLAZA DRIVE, SUITE 1000
ARLINGTON, TEXAS 76011

Appendix B

REPORT OF INVESTIGATION

REGION IV

INVESTIGATION NO. 50-382/82-09
DOCKET NO. 50-382
LICENSEE: Louisiana Power and light Company
FACILITY: Waterford Unit 3
INVESTIGATION LOCATION: Taft, and New Orleans, Louisiana
INVESTIGATION CONDUCTED: March 29 - April 7, April 22-24,
May 11-14, May 16, 1982

Investigator:

D. D. Driskill
D. D. Driskill, Investigator
Office of Investigation,
Region I.

3-9-83
Date

Approved by:

E. H. Johnson
E. H. Johnson, Director
Investigation and Enforcement Staff
Region IV

3/10/83
Date

SUMMARY

Investigation on March 29-April 7, April 22-24, May 11-14, May 16, 1982 (Report No. 50-382/82-09).

Area Investigated

Allegations were presented to NPC indicating the Mercury Company of Norwood Inc. (Mercury), a subcontract firm at Waterford 3, had designated an individual as a level II QC inspector without adequate training. It was also alleged that a Mercury weld rod oven was found to exceed the temperatures designated by procedure; however, the NCR written did not adequately address evaluation of the overheated weld rods which were in the oven. Allegations were also made concerning the discovery of LP&L Metrology Laboratory test equipment which was found to have been assigned duplicate numbers, and no NCR was written nor was adequate evaluation done. It was further alleged that an improperly qualified individual worked in the Metrology Lab calibrating equipment and he had regularly forged the signature of a qualified technician on the calibration records.

DETAILS1. Persons ContactedLicensee Employees

- *C. L. Skinner, QC Supervisor, LP&L
- *J. Cooper, I&C Supervisor, LP&L
- *T. Payne, I&C Supervisor, LP&L
- *John Guillot, QA Representative, LP&L
- *J. McGaha, Technical Support Superintendent, LP&L

Other Persons Contacted

Individuals A through L

*Denotes those attending exit interview

2. Individual Investigation of AllegationsAllegation No. 1

Individual A stated Mercury Company of Norwood, inc., utilized inadequate procedures for certification of level II QC inspectors inasmuch as he (Individual A) was certified in only several weeks.

Investigative Findings

On March 29, 1982, Individual A was interviewed. Individual A stated that prior to being employed by Mercury, he had been a Hilti bolt and weld QC inspector at another nuclear construction site. Individual A stated his first several weeks' employment with Mercury were spent reading Mercury QC procedures, subsequent to which he took a very simple examination and was certified as a level II inspector in numerous areas. Individual A stated that when he terminated his employment with Mercury, he reviewed his QC Certification Record and found he had been certified in a number of areas which he knew very little about.

Review of Individual A's Certification Records

On March 30, 1982, the Mercury Qualification of Inspection and Test Personnel Certification Record for Individual A was reviewed. It disclosed that Individual A was certified as a level II QC inspector for receiving inspections, dimensional inspections, structural inspections, pressure test inspections, pressure test performance, welding inspections, pipe and tubing inspections, and instrumentation and equipment inspections. It was also noted that these certifications were dated seven days after Individual A was hired. The certification record also included the statement, "(Individual A) has completed 40 hours of on-the-job training and the orientation to Mercury's QA program."

(INVESTIGATOR'S NOTE: Inasmuch as Mercury records indicate Individual A was employed only one week (40 hours) to the certification being approved and documented, the credibility of the certification indicating completion of 40 hours OJT and a QA program orientation must be considered somewhat questionable.)

Interview of Mercury QC Supervisor

On March 30, 1982, Individual B, QC Supervisor, Mercury, was interviewed. Individual B stated that all QC personnel are certified in accordance with Mercury Procedure QCP-3050, Paragraph 5.0, entitled "Qualification Requirements." When queried concerning the limited training and OJT provided to Individual A prior to his certification, Individual B pointed out the general statement made in QCP-3050, Paragraph 5.0, which states, "The education and experience requirements specified for the various levels should not be considered as absolute when other factors provide reasonable assurance that a person can competently perform a particular task. Other factors may be demonstrated capability in a given job through previous performance or satisfactory completion of proficiency testing." Individual B also pointed out that the Mercury qualification requirements were taken from the American National Standards Institute (ANSI), Standard N45.2.6. Examination of the ANSI standard disclosed that it does contain exactly the same standard. Individual B stated that Individual C, the former Mercury QA supervisor who resigned in February 1982, had hired Individual A and was responsible for his certification as a level II QC inspector. Individual B stated Individual C had apparently considered Individual A's previous experience and certification testing results when approving the certifications.

Allegation No. 2

In December 1981, a Mercury weld rod oven was found to exceed the required temperature. An NCR was written regarding the oven temperature; however, the effect on overheated weld rods contained in the oven was not adequately addressed.

Investigative Findings

On March 29, 1982, Individual A was interviewed. Individual A stated that on December 22, 1981, Individual D, a calibration technician for LP&L, went to the Mercury fabrication shop to conduct the annual calibration of the Mercury weld rod oven. Individual A stated Individual D found the temperature dial on the weld rod oven set at 420°. Individual A stated that the Mercury procedure MCP-2100 states that the weld rods are to be stored in the oven at 250° ± 50°. Individual A stated there was controversy concerning the need to prepare an NCR regarding this matter; however, an NCR was finally prepared which addressed only the fact that the oven temperature exceeded that required by the Mercury procedure. Individual A stated that no evaluation was conducted to determine whether the weld rods contained in the oven were damaged by the excessive heat.

NCR Review

On March 30, 1982, Ebasco Services Inc., NCR No. 253, dated December 29, 1981, was reviewed. The NCR describes the nonconforming condition as "the thermometer was set at 400° which is a violation of Mercury's procedure MCP-2100, revision 6." The NCR corrective action indicates that all welds made with rods which were exposed to the excessive temperature were inspected and found to be acceptable. The NCR is accompanied by a letter from Individual C, the Mercury QA supervisor, which indicates that "temperature control was inadvertently turned up and when realized, was turned back to the required setting, at which time the temperature also responded." A second letter from Individual C accompanies the NCR which identifies all weld rods used which were exposed to the elevated temperature and which states the welds made with those rods were inspected and found to be acceptable.

Interviews of Mercury Personnel

On March 30, 1981, Individual E, QA Engineer, Mercury, was interviewed. Individual E stated he recalled Individual C having said he was in the weld rod room on the evening of December 21, 1981, conducting an inspection at which time he had apparently inadvertently bumped the temperature dial on the weld rod oven. Individual E stated the decision was made to write an NCR regarding the oven exceeding the required temperature. He stated it was also decided that a random sampling of weld rods used from that oven would be conducted to determine whether they had been damaged. He stated the inspection was conducted and no problems were identified with welds from these rods. Individual E also stated the disposition was evaluated by Individual F, an Ebasco QA engineer, who concurred with the corrective action taken.

On March 30, 1982, Individual G, Weld Rod Room Clerk, Mercury, was interviewed. Individual G stated that he is responsible for the issuance of weld rods to Mercury welding personnel. Individual G stated that in December 1981, he had no requirement to check the oven temperature dial to insure it was properly set. Individual G explained that he routinely removed weld rods from the oven several to many times each day and would immediately notice a large variance

from the required temperature. Individual G stated he was sure that the increased temperature setting identified on December 22, 1981, was of only a short duration and probably occurred late in the day on December 22nd because he would have detected the increased temperature when opening the oven. Individual G stated he believed the increased temperature was due to someone having inadvertently bumped the temperature dial on the oven. Individual G stated new procedures have been put in effect which requires the oven temperature be checked daily and a record maintained.

On March 30, 1982, Individual F, Material Applications Engineer, Ebasco Services Inc., was interviewed. Individual F stated that subsequent to the discovery of the increased temperature in the Mercury weld rod oven, he had contacted the weld rod manufacturer and determined the weld rods contained in the oven would not be damaged as long as the temperature did not exceed 450°. Individual F stated that random inspection of welds performed with weld rods from the oven at that time was conducted and no problems were identified.

Allegation No. 3

In March 1982, it was discovered that two LP&L Metrology Lab DC resistance bridges had been assigned the same MTE control number. It is alleged that corrective action was inadequate in that no NCR/CIWA was written and that corrective action was incomplete.

Investigative Findings

On March 29, 1982, Individual A was interviewed. Individual A stated that in February 1982, the LP&L Metrology Lab leased three or four General Electric DC resistance bridges. Individual A stated that one of the bridges was issued to the start-up electricians group for long-term use and the other bridges were maintained in the Met Lab for daily use by the Instrumentation and Control (I&C) technicians. Individual A stated that on March 15, 1982, it was discovered that two of the resistance bridges had been assigned the same MTE control number which would result in some erroneous traceability records. Individual A stated Individual H, the LP&L Metrology Lab supervisor was advised that two bridges had duplicate numbers. Individual A stated that on March 17, 1982, Individual H instructed Individual I, a Met Lab clerk, to change the issue log book entries concerning the Met Lab resistance bridge to reflect a newly assigned number. Individual A stated that no NCR or CIWA was ever written regarding this problem. Individual A additionally stated that Individual I did not make the changes on all existing pages of the log book.

Interview of Met Lab Supervisor

On April 2, 1982, Individual H, LP&L Metrology Lab Supervisor, was interviewed. Individual H stated that in about mid March 1982, he was informed that two General Electric resistance bridges had been assigned the same measuring and test equipment (M&TE) control number (MR-ET23.03).

Individual H stated that he was under the impression that these two instruments had been received about the same time which resulted in their inadvertently being assigned the same number. He stated that one of the bridges had been assigned to the electrical department issue area and the other assigned to his Metrology Lab. He stated this would result in each respective instrument being issued to separate groups of people. He stated that since he decided to change the control number of the bridge assigned to the Metrology Lab, he instructed one of his clerks to correct the equipment issue log to reflect the new number (MR-ET 23.04) for all past issuances of that bridge. Individual H stated he also contacted the instrumentation and control (I&C) records clerk and instructed her to review her instrumentation record or use log, and to correct all entries regarding the Met Lab resistance bridge to reflect the number 23.04 rather than the number 23.03. Individual H stated he did not prepare an NCR nor a CINA regarding this matter.

Review of Met Lab Records

On April 1, 1982, the LP&L Metrology Lab records pertaining to the resistance bridge (now assigned MTE 23.04) were reviewed. Examination of the calibration log disclosed a new calibration sheet was prepared for the resistance bridge MTE 23.04 reflecting the new control number. Examination of the Measuring and Test Equipment Index disclosed it had not been updated to reflect the changing of the control number for the resistance bridge to MTE 23.04. The Met Lab copy of the General Electric Calibration Record reflects a pen-and-ink change of the control number to MTE 23.04 (the date of the change noted as 3/16/82).

Review of Additional Records

On April 1, 1982, the LP&L Metrology Lab records pertaining to the two General Electric DC resistance bridges that had originally been assigned control no. MTE 23.03, were reviewed. Documents disclosed that one resistance bridge (manufacturer's serial no. 432) was received by LP&L on February 19, 1982, and issued through the Met Lab to the LP&L Maintenance and Electrical Department on February 24, 1982. Records reflect this bridge, which was assigned the MTE control no. MR-ET 23.03, was sent back to the Met Lab in a damaged condition on March 5, 1982, for return to the manufacturer, which was done on March 19, 1982, via Federal Express. Records disclosed that another General Electric DC resistance bridge (manufacturer's serial no. 759) was received by LP&L on February 9, 1982, and was assigned the MTE control no. MR-ET 23.03. This bridge was maintained by the Met Lab Issue Room for use by the LP&L Instrumentation and Control Department and was the bridge which Individual H assigned the corrected MTE control no. MR-ET 23.04. A detailed review of the Met Lab equipment issue log disclosed numerous occasions, subsequent to March 5, 1982, and prior to March 17, 1982, on which Mechanical and Electrical Department personnel checked out the Met Lab bridge, which at that time was still assigned the control no. 23.03 and used it in their area. (Investigator's note: On each occasion that these instruments are used in a safety-related application, a data sheet is prepared identifying the specific location and

task performed and the equipment used. The data sheets are forwarded to the office responsible for the work and an entry made in an equipment record of use log. This log can then be used to identify all work done with a particular instrument in the event it is later found to be out of calibration. The problem created in this instance is that the Maintenance and Electrical Department had been assigned a resistance bridge (control no. 23.03) and all safety-related work done with that bridge was done documented on the work data sheets and in their record of use log. Subsequent to that bridge being damaged, the Electrical Department personnel began checking out the Met Lab resistance bridge having the same control number 23.03 which was then documented on Work Data Sheets and in their Record of Use Log. As there is no information available on the Work Data Sheet or in the Record of Use Log to differentiate between these bridges, the required traceability, differentiating the use of these two bridges, becomes potentially nonexistent.)

Reinterview of Individual H

On April 2, 1982, Individual H was reinterviewed concerning the use of the Met Lab resistance bridge by Electrical Department personnel. Individual H stated he was not aware that Electrical Department personnel had checked out and used the Met Lab bridge. He agreed their use of this instrument, during the period it was assigned the control no. 23.03, created a traceability problem. He stated that an NCR or CIWA should have been written concerning this matter and its use more fully investigated.

Allegation No. 4

An individual in the Met Lab, not properly qualified to do calibrations, was used to calibrate torque wrenches and pressure gauges. He was instructed to sign a qualified individual's name on documents relating to these calibrations.

Investigative Findings

On March 29, 1982, Individual A was interviewed. Individual A related having heard personnel at Waterford 3 discuss the fact that Individual J had frequently calibrated equipment in the Met Lab, which he was not properly qualified to do. Individual A stated that sources stated Individual J signed the name of Individual K, a Met Lab calibration technician, on the calibration reports he prepared. Individual A stated Individual H, the Met Lab supervisor, authorized this practice.

Interview of Met Lab Personnel

On April 2, 1982, Individual K, Instrumentation and Control Technician, LP&L Met Lab, was interviewed. Individual K stated that from April 1979 until about December 1981, Individual J worked in the Met Lab. Individual K stated that in about 1979, Individual J began doing some equipment calibrations under his (Individual K's) supervision. Individual K stated he would sign the calibration record as the party responsible for the calibration. Individual K stated that

Individual J had prior instrumentation experience and had also displayed competence in the work he did in the lab. He stated the situation evolved into one where Individual J began doing calibrations without his (Individual K's) supervision. Individual K stated that on several occasions he was involved in discussions regarding Individual J's obtaining a calibration certification; however, LP&L management would not authorize Individual J's certification. Individual K stated that in about late 1979, the situation evolved into one where Individual J began placing his (Individual K's) name on the calibration record rather than giving the record to him to sign. Individual K stated this practice took place for about one year. Individual K stated that Individual H was aware of this practice as were other personnel in the lab. Individual K stated that various LP&L management personnel were aware that Individual J was doing the calibrations, however, they may not have been aware he was signing his (Individual K's) name on the calibration records.

On April 2, 1982, Individual H was interviewed. Individual H stated that when he was hired as supervisor of the Met Lab, Individual J was working in the I&C shop providing craft interface with the craft union. He stated that during Individual J's spare time, he worked in the Met Lab. Individual H stated Individual J initially worked researching calibration procedures and obtaining source information for equipment maintained in the Met Lab. Individual H stated one thing led to another and Individual J began doing some of the calibrations of equipment. Individual H stated that Individual K was initially signing the certification records for Individual J since Individual J was not certified to do the work. Individual H stated that at some point he tried to get Individual J certified, but it was turned down by his supervisors. Individual H stated the situation developed into one where Individual J was conducting calibrations and signing Individual K's name on the calibration reports as the person responsible for the calibrations. Individual H stated that although he was personally aware of what was occurring, he did not believe his supervisors were aware of it.

Review of Met Lab Records

On April 2, 1982, a review of Met Lab Calibration Records was conducted with the assistance of Individual K, who agreed to identify all calibration records on which Individual J had signed his (Individual K's) signature. Records for torque wrenches, outside micrometers, dial indicators, depth gauge micrometers, plug gauges, pressure gauges (low pressure, digital and differential), amp certi crimpers, vacuum gauges, dial indicator testers, inside micrometers, and dial calipers were reviewed. Two hundred and ninety-seven documents were identified, certifying calibrations which contained the forged signature of Individual K.

Interview of Former I&C Supervisor

On April 5, 1982, Individual L was interviewed. Individual L stated that Individual J worked in the LP&L Metrology Lab for approximately two years. He stated that during the last year to 18 months of his employment there, he worked calibrating instruments in the Met Lab. Individual L stated that to his

knowledge, he was calibrating instruments under the supervision of a certified Metrology Lab technician. He stated all of Individual J's calibration records were to be signed after review by a certified technician. Individual L stated he has no knowledge concerning Individual J's signing Individual K's name on calibration records or that the required review of his calibration work was not taking place.

Interview of Individual J

On April 17, 1982, Individual J was interviewed. Individual J stated he is currently employed by the Plumbers and Steamfitters Union, Local 60, Metairie, Louisiana. Individual J stated he was employed at Waterford 3 from 1978 to December 1981 by Ebasco. Individual J stated he was assigned to work in the I&C department as a union representative. He stated when he initially began working in the Met Lab, he worked receiving equipment and setting up records systems. He stated he also researched literature regarding equipment received. Individual J stated that in about 1980 he wrote the calibration procedures for many of the dimensional gauges received in the lab. He stated he had worked under the supervision of Individual K who developed confidence in his work. He stated that for a period, Individual K had signed calibration sheets for calibrations he (Individual J) had done. Individual J stated that as Individual K developed more and more confidence in him, Individual K's review of his work became cursory. Individual J stated that at some point in 1980 he began signing Individual K's name on calibration sheets. Individual J was unable to explain why he had taken it upon himself to do this. Individual J stated that Individual K and Individual H were aware that he was signing Individual K's name on certification records and had not objected to it. Individual J stated he was not aware of anyone outside the Met Lab being aware of this practice.

DRISKILL, D D
REVIEWER
C. R. ... WA

INSPECTOR'S REPORT
Office of Inspection and Enforcement

INSPECTORS
D D. Driskill

LICENSEE/VENDOR	TRANSACTION TYPE	DOCKET NO. (8 digits) OR LICENSE NO. (BY PRODUCT) (13 digits)	REPORT		NEXT INSP. DATE	
			NO.	SEQ.	MO.	YR.
LOUISIANA POWER + LIGHT CO 142 DELACROIX STREET NEW ORLEANS, LA 70174	<input checked="" type="checkbox"/> I - INSERT	05000382	8209	A		
	<input type="checkbox"/> M - MODIFY			B		
	<input type="checkbox"/> D - DELETE			C		
	<input type="checkbox"/> R - REPLACE			D		

PERIOD OF INVESTIGATION/INSPECTION						INSPECTION PERFORMED BY		ORGANIZATION CODE OF REGION WHO CONDUCTING ACTIVITY (See IEMC US-9 Manpower Reporting Weekly Manpower Reporting for code.)		
FROM			TO							
MO.	DAY	YR.	MO.	DAY	YR.	OTHER		REGION	DIVISION	BRANCH
03	29	87	05	16	82			4		

REGIONAL ACTION (Check one box only)		TYPE OF ACTIVITY CONDUCTED (Check one box only)													
<input checked="" type="checkbox"/> 1 - NRC FORM 591	<input type="checkbox"/> 2 - REGIONAL OFFICE LETTER	<input type="checkbox"/> 02 - SAFETY	<input type="checkbox"/> 03 - INCIDENT	<input type="checkbox"/> 04 - ENFORCEMENT	<input type="checkbox"/> 05 - MGMT. AUDIT	<input type="checkbox"/> 06 - MGMT. VISIT	<input type="checkbox"/> 07 - SPECIAL	<input type="checkbox"/> 08 - VENDOR	<input type="checkbox"/> 09 - MAT. ACCT.	<input type="checkbox"/> 10 - PLANT SEC.	<input type="checkbox"/> 11 - INVENT. VER.	<input type="checkbox"/> 12 - SHIPMENT/EXPORT	<input type="checkbox"/> 13 - IMPORT	<input checked="" type="checkbox"/> 14 - INQUIRY	<input type="checkbox"/> 15 - INVESTIGATION

INSPECTION/INVESTIGATION FINDINGS (Check one box only)				OFFICIAL NUMBER OF VIOLATIONS AND DEVIATIONS				ENFORCEMENT CONFERENCE HELD				REPORT CONTAIN 2,790 INFORMATION				LETTER OR REPORT TRANSMITTAL DATE			
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<input checked="" type="checkbox"/> 1 - CLEAR	<input type="checkbox"/> 2 - VIOLATION	<input type="checkbox"/> 3 - DEVIATION	<input type="checkbox"/> 4 - VIOLATION & DEVIATION	01				1 - YES				1 - YES				MAY 4 1983			

MODULE INFORMATION												MODULE INFORMATION																						
REC. ORD.	MODULE NUMBER INSP.					PRIORITY	DIRECT INSP. TIME OR STAFF HOURS EXPENDED THIS INSPECTION	PERCENTAGE COMPLETED TO DATE	STATUS	MODULE REQ. FOLLOWUP					REC. ORD.	MODULE NUMBER INSP.					PRIORITY	DIRECT INSP. TIME OR STAFF HOURS EXPENDED THIS INSPECTION	PERCENTAGE COMPLETED TO DATE	STATUS	MODULE REQ. FOLLOWUP									
TYPE	NUMBER	PHASE	MANUAL CHAPTER	PROCEDURE NUMBER	LEVEL					PHASE	MANUAL CHAPTER	PROCEDURE NUMBER	LEVEL	TYPE	NUMBER	PHASE	MANUAL CHAPTER	PROCEDURE NUMBER	LEVEL	PHASE					MANUAL CHAPTER	PROCEDURE NUMBER	LEVEL							
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* CIRCLE SEQUENCE IF VIOLATION OR DEVIATION

INSPECTOR'S REPORT
(Continuation)
Office of Inspection and Enforcement

DOCKET NO. (8 digits) OR LICENSE NO. (BY PRODUCT) (13 digits)		REPORT		MODULE NUMBER					SITE RELATED			
		NO.	SEQ.	VIOLATION SEVERITY OR DEVIATION								
05000382		2	9	A	1	2	3	4	5	6	<input checked="" type="checkbox"/>	A
				B								C
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VIOLATION OR DEVIATION (Enter up to 2400 characters for each item. If the text exceeds this number, it will be necessary to paraphrase. Limit lines to 50 characters each.)

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Based on the results of an NRC investigation conducted during the period of March 29, through May 16, 1982, and in accordance with the NRC Enforcement Policy (10 CFR Part 2, Appendix C), 47 FR 9987, dated March 9, 1982, the following violation was identified:

10 CFR Part 50, Appendix B, Criterion V, states, in part: Activities affecting quality shall be prescribed by documented instructions, procedures, or drawings, of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures, or drawings.

Administrative Procedure MI-1-007, Revision C, paragraph 5.4, Metrology Lab Qualification, requires specific qualification activities to be completed, including a final signature on a qualification card by the Metrology Supervisor-Nuclear, in order for an individual to be qualified to perform calibration activities in the Metrology Lab.

Contrary to the above, an individual in the Louisiana Power & Light Company Metrology Lab performed equipment calibration without being qualified over a period of about 18 months from approximately October 1980 through April 1982.

This is a Severity Level IV Violation. (Supplement (II) (382/8209-01))