

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 50-483/82-05

Docket No. 50-483

License No. CPPR-139

Licensee: The Union Electric Company  
Post Office Box 149  
St. Louis, MO 63166

Facility Name: Callaway Plant, Unit 1

Inspection At: Callaway Site, Callaway County, MO

Inspection Conducted: July 12-14, 1982

Inspector: K. D. Ward

Approved By: D. H. Danielson, Chief  
Materials and Processes Section

*C. C. Williams for:*

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7/29/82

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Inspection Summary

Inspection on July 12-14, 1982 (Report No. 50-483/32-05(DETP))

Areas Inspected: Daniel International Corporation site NDE activities; review shop and field radiographs; previous inspection findings and 10 CFR 50.55(e) items. The inspection involved a total of 22 inspector-hours onsite by one NRC inspector.

Results: No items of noncompliance or deviations were identified.

## DETAILS

### Persons Contacted

#### Union Electric Company (UE)

- \*R. Powers, Superintendent, Site QA
- \*W. Weber, Manager Nuclear Construction
- \*R. Veatch, Supervisor, Engineer, QA Construction
- \*H. Millwood, QA Engineer
- M. Doyne, General Superintendent Construction
- J. McGraw, Supervisor Engineer
- J. Laux, Supervisor Engineer QA
- R. Garcia, Construction Engineer

#### Daniel International Corporation (DIC)

- \*A. Arnold, Project Quality Manager
- \*J. Long, Project Welding Manager
- B. Diggs, Welding and NDE QC Supervisor
- L. Russell, Mechanical/Weld Quality Supervisor
- M. Smith, Audit Resp. Coordinator

#### Technical Services Laboratory (TSL a Division of DIC)

R. Barnes, NDE Supervisor

#### Hartford Steam Boiler Engineering and Insurance Company

\*H. Potter, Site Lead ANI

The inspector also contacted and interviewed other licensee and contractor employees.

\*Denotes those attending the exit interview.

#### Licensee Action on Previous Inspection Findings

(Closed) Unresolved Item 483/81-04-01, "Documentation vendor notification not available." The inspector reviewed the program from SNUPP to UE as outlined in letter SLU 81-013 giving examples of program and have no questions at this time.

(Closed) Unresolved Item 483/81-19-01, "Excessive wear on wheel of polar crane snubber assembly A" wheel pin. UE reported this item as a potentially Reportable Deficiency during a telephone conference call to Region III August 19, 1981 reference in interoffice memos of UE dated August 20, 1981 and October 26, 1981. This item is being evaluated and may be completed in the near future.

Licensee Action on 10 CFR 50.55(e) Items

Reference:

- . UE notification of potential 50.55(e) regarding spool pieces furnished by Dravo Corporation dated May 1, 1982.
- . Dravo letter to NRC dated January 26, 1981, "Part 21 Report."
- . Dravo letter to NRC dated March 5, 1981, "An update on report Part 21, dated January 26, 1981."
- . UE letter to NRC dated June 17, 1982 "Final response to potential 50.55(e)."

(Closed) Potential 10 CFR 50.55(e), 483/81-06-EE. "Inspection of welds on large piping spool pieces furnished by Dravo." The inspector reviewed NCRs, NDE procedures and reports, QC surveillance reports and have no questions at this time.

(Open) 10 CFR 50.55(e), 483/80-02-EE. "Undersized field welds on small piping." Final response may be submitted in the near future.

Functional or Program Areas Inspected

1. Review of Technical Service Laboratory (TSL) (a Division of Daniel International Corporation) NDE Activities.

- a. TSL was contracted to perform NDE in accordance with ASME Section III, 1974 Edition, Summer 1975 Addenda.
- b. The inspector made a tour of the TSL facilities escorted by the UE QA Engineer and the TSL NDE Supervisor. The following are the inspector's findings.

(1) Radiograph Examination (RT)

- . The NRC license expires August 31, 1984, #39-01261-02 and covers IR 192 up to 100 curies and CO 60 up to 100 curies.
- . The lab has five IR 192 sources and one Co 60 source on site.
- . A Pako automatic process is used to process film and a hand film processing tank may be used.
- . Survey meters are calibrated every three months.
- . Pocket dosimeters are read and recorded every day when performing RT.

- . Film badges are processed and recorded every thirty days.
- . Acceptable color rope and signs were available for securing areas when RT is being performed.
- . Decay curves of the IR 192 source are posted for the NDE personnel to use.
- . The lab uses Kodak and Dupont industrial radiographic film, Types I and II.
- . No outdated film was observed with the fresh film.
- . Film cassettes were in acceptable condition.
- . Lead screens are checked and replaced when needed.
- . Fluorescent screens are not used nor are there any onsite.
- . The films are stored in an air condition dark room prior to exposure.
- . TSL uses lead numbers for the number belt and a flasher for the identification on the film.
- . The lab uses a Macbeth and three Techops densitometers.
- . TSL uses film density step wedges traceable to the Bureau of Standards for calibration of the densitometers.
- . ASME Section V penetrameters are used onsite.
- . TSL has various thickness of shims to be used under the penetrameters.
- . The lab uses a S&S X-ray Products, Incorporated viewer for interpreting radiographs.
- . The lab hauls the sources around on the job site in a vehicle that is not identified as hauling radioactive sources. This is not a requirement but was presented at exit interview.
- . Radiographic calculators are used on site by Level I and Level II RT personnel.
- . The lab does not have dark room trucks.

<u>System</u>	<u>Weld</u>	<u>Diameter</u>	<u>Thickness</u>	<u>Date RT</u>
2-EM-01-S012/121	136C	4"	0.387"	2/17/77
2-EM-01-S013/123	137B	4"	0.387"	2/14/77
2-EM-01-S013/123	137C	4"	0.387"	2/14/77
2-EM-01-S013/123	137D	4"	0.387"	3/12/77
2-EM-01-S016/111	140B	4"	0.437"	3/11/77
2-E4-01-S016/111	140C	4"	0.387"	3/25/77
2-EM-01-S019/123	143B	4"	0.447"	3/26/77
2-EJ-02-S029/121	66B	10"	0.465"	4/19/77
2-EJ-02-S029/121	66D	10"	0.465"	4/19/77
2-EJ-02-S031/123	68C	10"	0.427"	4/25/77
2-EJ-02-S031/123	68D	10"	0.427"	4/25/77
2-EJ-02-S032/123	69B	10"	0.415"	4/18/77
2-EJ-02-S032/123	69D	10"	0.415"	4/18/77
2-AB-01-S042/261	499B	28"	0.934"/1.034"	7/15/78
2-AB-01-S042/261	499E	28"	0.934"/1.034"	7/15/78
2-EJ-02-S034/133	71C	10"	0.465"	7/21/77
2-EJ-02-S034/133	71D	10"	0.427"	6/29/77
2-AB-01-S044/241	501E	28"	0.934"/1.034"	7/25/78
2-EM-01-S016/111	140B	4"	0.437"	2/11/77

The inspector reviewed radiographs and reports of the following field welds in accordance with ASME Section III, 1974, Edition, Summer 1975, Addenda. The welds were RT by TSL.

<u>System</u>	<u>Weld</u>	<u>Diameter</u>	<u>Thickness</u>	<u>Date RT</u>
FS-M-DM-03-BB04	2BB-04-F023	4"	0.531"	4/29/81
FS-M-DM-0S-HB24	2HB-24-FW066	2"	Sch. 160	2/15/80
FS-M-DM-03-BG02	2BG-02-FW14	4"	0.531"	2/23/80
FS-M-DM-03-EN01	2EN-01-F026	3"	0.216"	3/29/78
FS-M-OM-03-EM03	2EM-03-F012	6"	0.719"	2/29/80
FS-M-DM-0S-BG11	2BG-11-FW005	1"	0.133"	12/29/78
FS-M-DM-03-BG01	2BG-01-F022A	3"	0.438"	4/20/79
FS-M-DM-0S-BG09	2BG-09-FW296	1"	0.250"	4/3/79
FS-M-DM-03-BG22	2BG-22-F023	3"	0.300"	4/17/80
FS-M-DM-03-AB01	2AB-01-F052	28"	1.5"	7/6/80
FS-M-DM-03-BG02	2BG-02-FW8	8"	0.322"	3/9/79
FS-M-DM-03-BG01	2BG-01-FW167	4"	0.237"	4/14/80
FS-M-DM-0S-ED04	2EP-04-FW019	1"	0.178"	8/28/81
FS-M-DM-03-AE05	2AE-05-F002A	14"	1.094"	3/30/81
FS-M-MO-03-EJ02	2EJ-02-FW110	3"	0.438"	2/15/82
FS-M-MO-SBG09	2BG-09-FW521	2"	0.344"	5/27/81
FS-M-DM-03-AE05	2AE-05-F002A	14"	1.094"	3/30/81
FS-M-DM-03-E502	2EJ-02-F042B	10"	0.365"	3/3/80
FS-M-DM-03-EJ02	2EJ-02-F055	14"	0.375"	10/11/78

The inspector reviewed radiographs and reports of the following shop welds in accordance with ASME Section III, 1974 Edition, Summer 1975, Addenda. The welds were RT by Pullman Power Products.

<u>System</u>	<u>Weld</u>	<u>Diameter</u>	<u>Thickness</u>	<u>Date RT</u>
2BG-02-S011/111	A	6 5/8"	0.280"	11/22/76
2BG-02-S011/111	B	6 5/8"	0.280"	11/22/76
2BG-02-S011/111	C	6 5/8"	0.280"	11/22/76
2BG-02-S011/111	D	6 5/8"	0.280"	11/22/76
2BG-02-S040/111	D	4 1/2"	0.531"	11/8/77
2BG-02-S040/111	A	4 1/2"	0.531"	11/8/77
2BG-02-S040/111	B	4 1/2"	0.531"	11/8/77
2BG-02-S040/111	C	4 1/2"	0.531"	11/8/77
2BG-02-S040/111	E	4 1/2"	0.531"	11/8/77
2AL-03-S002/135	A	4 1/2"	0.337"	10/31/77
2AL-03-S002/135	B	4 1/2"	0.337"	10/31/77
2AL-03-S002/135	C	4 1/2"	0.337"	10/31/77
2AL-03-S002/135	D	4 1/2"	0.337"	10/31/77
2AL-03-S002/135	E	4 1/2"	0.337"	10/31/77
2AL-03-S002/135	F	4 1/2"	0.337"	10/31/77
2AL-03-S002/135	G	4 1/2"	0.337"	10/31/77
2AL-03-S002/135	H	4 1/2"	0.337"	10/31/77

2. Liquid Penetrant Examination (PT)

. The lab uses Tracer Tech materials and receive certifications.

3. Magnetic Particle Examination (MT)

. The lab has three field prod units and three yokes.  
. White and black Magnaflux magnetic particles are used.

4. Ultrasonic Examinations (UT)

. The lab has six ultrasonic instrument and various calibration blocks.  
. The couplant on site has certifications.  
. There are transducers and various sizes and MHZ.  
. Thickness testing was observed on FSMDMO3BB14 weld #S004A.

The inspector reviewed Surveillance Reports: No. UTD-QA-1289, dated June 30, 1982; No. UTD-QA-1273, dated June 16, 1982; and No. UTD-QA-1290, dated June 30, 1982, several NDE personnel certifications and the following procedures:

. Daniel, Certification of NDE Personnel, NDE 7.1Q, Revision 5,  
. Daniel, Certification of Visual Examination Personnel, 7.1-1, Revision 1,  
. Daniel, Liquid Penetrant Examination, NDE 7.3C, Revision 5,  
. Daneil, Magnetic Particle Examination, NDE 7.4A, Revision 5,  
. Daniel, Radiographic Examination of Weldments, NDE 7.5C3, Revision 3, NDE 7.5N2, Revision 2, NDE 7.5W, Revision 2,  
. Daniel, Radiography Requirements for X-Ray and Gamma Ray Examination of Weldments, NDE 7.5G, Revision 5,  
. Daniel, Special Procedure for Radiography NDE 7.5S, Revision 2,

- . Daniel, Ultrasonic Examination ASME, NDE 7.6, Revision 2,
- . Daniel, Ultrasonic Examination of Longitudinal Welds in Pipe, NDE 7.6LW, Revision 1,
- . Daniel, Ultrasonic Thickness Examination (Nortec 123 Thickness Gauge) NDE 7.6N, Revision 0,
- . Daniel, Ultrasonic Examination of Plate for Special Application, NDE 7.6 TM, Revision 1,
- . Daniel, Ultrasonic Examination of Weldments, NDE 7.6W, Revision 1,
- . Daniel, Leak Detection (Gas & Bubble Formation Testing) NDE 7.7, Revision 2.

No items of noncompliance or deviations were identified.

#### Exit Interview

The inspector met with site representatives (denoted in Persons Contacted paragraph) at the conclusion of the inspection. The inspector summarized the scope and findings of the inspection noted in this report.