

**UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION**

Before the Atomic Safety and Licensing Board

In the Matter of)
)
CAROLINA POWER AND LIGHT) Docket No. 50-400-LA
COMPANY)
(Shearon Harris Nuclear Power Plant)) ASLBP No. 99-762-02-LA

AFFIDAVIT OF WILLIAM T. GILBERT

CITY OF NEW HILL)
) ss:
STATE OF NORTH CAROLINA)

I, William T. Gilbert, being sworn, do on oath depose and say:

1. I am a resident of the State of North Carolina. I am employed by Carolina Power & Light Company ("CP&L") and work at CP&L's Harris Nuclear Power Plant in the Operations and Environmental Support Department. My business address is 5413 Shearon Harris Road, New Hill, North Carolina, 27562.
2. I have been employed at the Harris Nuclear Plant for the past 20 years. I started working at the Harris Nuclear Plant in Corporate Quality Assurance in 1979. My job responsibilities in this organization from 1979 to 1990 ranged from performing mechanical inspections/tests of installed components; writing Quality Assurance ("QA") procedures governing, inspection, and testing of installed components;

performing quality surveillances of mechanical work activities; and performing plant modification reviews ensuring QA Program requirements were being satisfied. From 1991 to 1998, I worked as an auditor in the Nuclear Assessment Section. My responsibility included oversight activities and participation in or leading assessments/audits for the areas of training and qualification, emergency preparedness, and contractors working at CP&L Nuclear Power Plants under their own approved 10CFR50 Appendix B Program. Since 1998, I have been working in the Procurement, Dedication & Vendor/Equipment Services Unit as a Lead Auditor. My responsibilities include conducting vendor audits and maintaining qualifications for a number of vendors on CP&L's Approved Suppliers List.

3. The purpose of this affidavit is first to describe CP&L's QA Program and the implementation of the American Society of Mechanical Engineers ("ASME") N-Stamp program during Harris Plant construction, particularly as it applied to the installation of ASME Section III, Class 3 stainless steel piping. I also confirm from personal knowledge the acceptability of certain field welds on the Spent Fuel Pool Cooling and Cleanup System ("SFPCCS") piping constructed for spent fuel pools C and D.
4. The basis for the overall QA Program used by CP&L for the design and construction of the Harris Plant is described in the Harris Preliminary Safety Analysis Report ("PSAR"). PSAR Section 1.8 states that "The Carolina Power & Light Company Quality Assurance Program for the engineering and construction of the Shearon Harris Nuclear Power Plant, which includes the quality assurance programs for both Ebasco

and Westinghouse by reference, is structured with regard to safety-related equipment in accordance with the eighteen criteria of Appendix B to 10CFR50. In addition, the subject Program is structured in accordance with ANSI N45.2 and thereby AEC Regulatory Guide 1.28." The PSAR further states that the "Shearon Harris Nuclear Power Plant Quality Assurance Plan" was replaced by the "CP&L Corporate Quality Assurance Program" on April 1, 1974, and provides a cross reference on how the subject plan met the criteria of 10CFR50 Appendix B.

5. The process and procedure measures for assuring the quality of the installation of ASME Section III, Class 3 piping, such as the SFPCCS stainless steel piping, are summarized in the Affidavit of David L. Shockley (Exhibit 6). I have read and agree with the full description of the QA program and the QA inspector's responsibilities as described by my colleague David Shockley.

Hydrotesting

6. Construction procedure WP-115, "Pressure Testing of Pressure Piping (Nuclear Safety Related)" (Attachment A to this affidavit), governed the hydrostatic testing ("hydrotest") of the embedded SFPCCS piping connected to Harris spent fuel pools C and D. The hydrotest was generally the final milestone for completion of a piping segment. Prior to hydrotest, Quality Assurance personnel independently verified all required tests, inspections and documentation pertaining to the construction of the piping being hydrotested were completed properly.

7. As the QA inspector during a hydrotest, I had the following responsibilities:

- Identify piping spools and welds to be included within the hydrotest boundary.
- Verify that the Weld Data Reports (“WDRs”) were properly completed, required QA and Authorized Nuclear Inspector (“ANI”) inspections were performed at hold points, non-destructive examinations (“NDE”) were performed satisfactorily, and document such verification with initials and signature on the hydrotest record.
- Verify that the hydrotest was performed pursuant to procedure, the proper pressure was applied, instruments were calibrated, and the pressure held for the required length of the test, and document such verification with initials and signature on the hydrotest record.
- After witnessing the hydrotest, carefully walk down the entire piping segment undergoing the hydrotest while at pressure and inspect each vendor weld and field weld visually for the full circumference of the weld, and document such verification (and note any indications) with initials and signature on the hydrotest record.

8. Attached to this affidavit are hydrotest reports for segments of the SFPCCS embedded piping that included (a) one of the field welds (designated 2-SF-149-FW-408) (Attachment B), and (b) three of the field welds (designated 2-SF-144-FW-515, -516,

and -517) (Attachment C). (The welds are listed on the second page; on Attachment B, the first two welds in the list are the field welds (where only FW-408 is embedded) and the remaining four welds are vendor welds and, on Attachment C, the first three welds in the list are the field welds and the remaining twelve welds are vendor welds. My initials ("TG" for Tommy Gilbert) on the first page and confirmations by "yes" on the second page of Attachments B and C indicate that I identified the piping spools and welds included within the hydrotest boundary and verified the completeness of the QA documentation, including WDRs. On the second page of Attachments B and C (under the list of welds), my initials ("TG") and signature indicate that I verified the proper conduct of the hydrotest, walked down and visually inspected the piping and each weld, annotated the isometric drawing to indicate the components and welds subjected to the hydrotest, and verified the recalibration of the test pressure gauge. Thus, I can state that I reviewed and verified the information in the WDRs and witnessed the hydrotests for field welds 2-SF-149-FW-408, 2-SF-144-FW-515, -516, and -517.

9. In addition, Attachment D is a hydrotest report for a segment of the SFPCCS embedded piping that included three field welds (designated 2-SF-143-FW-512, -513, and -514). As indicated by my initials ("TG") on the first page of Attachment D and recognition of my handwriting in the first three columns of the table on the second page of Attachment D, I identified the piping spools and welds included within the hydrotest boundary and verified the completeness of the QA documentation, including

the WDRs. My colleague, David Shockley, witnessed the hydrotest as he notes in his affidavit and can be seen by his initials ("DLS"). I can verify that I reviewed and verified the completeness of the WDRs for field welds 2-SF-143-FW-512, -513, and -514 as well.

10. From my review of hydrotest records for which I was personally responsible in some manner, I can state with confidence that I personally reviewed and verified the completeness of seven of the fifteen WDRs for field welds in the SFPCCS embedded piping.

Concrete Placement

11. The SFPCCS piping in question is embedded in concrete. Since embedding a line in concrete represented a point at which piping was no longer accessible for inspections or rework, procedural controls were established to ensure that all required work activities had been completed and that documentation was in order prior to authorizing concrete placement. The process and procedure measures for assuring the proper completion of activities prior to embedding a piping system in concrete are summarized in the Affidavit of David L. Shockley (Exhibit 6).

12. Attachment E to this affidavit is a Concrete Placement Report (commonly referred to as a Concrete Pour Card) for an internal wall of the Fuel Handling Building at 281' elevation. A final check of quality documentation was made before the concrete was poured. QA Program requirements, as documented in the "pre-placement checkout"

section of the pour card, were designed to ensure the pipe welding and installation were completed as required by the QA program and the installation was recorded on QA records. I personally performed the QA function for two steps of the "pre-placement checkout" for this concrete pour card. This is indicated by my signature on the first page for step 5 (mechanical verification of the piping to be embedded) as the QA signoff and step 9 (verification of the ASME Code and seismic welding) as the Quality Control ("QC") signoff.

13. As part of the QA review prior to a concrete pour, the QA inspector confirmed that all required QA documentation for piping that would be embedded in concrete was in the QA package and was complete – including applicable drawings, WDRs for the field welds, RWDRs (as required), NDE records and hydrotest reports. I took this responsibility very seriously because once the concrete was poured there was no way to recreate missing QA documentation. I remember very clearly during construction of the Harris Plant personally holding up a concrete pour, with trucks and men impatiently waiting, while we searched for documents that were not in the QA package. (We found the documents and the concrete was poured.) I understand that all concrete pour cards have been retrieved for spent fuel pools C and D and those sections of the Fuel Handling Building that includes the embedded SFPCS piping. As my own signature on Attachment D indicates, and the signature of the QA inspectors on the other pour cards also indicate, QA documentation, including WDRs, was reviewed and verified for completeness prior to pouring concrete.

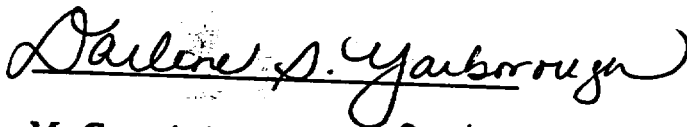
14. I have spent twenty years in quality related activities at the Harris Plant and CP&L's other nuclear plants. The Harris Plant had an excellent QA Program during construction. Based on my personal involvement with QA inspections during the construction of spent fuel pools C and D and the SFPCCS piping, I am confident that the WDRs for the field welds embedded in concrete in the SFPCCS piping were reviewed and verified complete prior to the hydrotests and prior to concrete pours. There were too many QA Program checks and double-checks to ensure that required documentation was prepared to conclude otherwise.

I declare under penalty of perjury that the foregoing is true and correct.

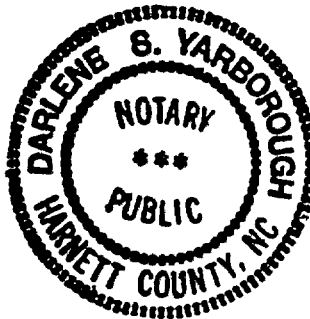
Executed on December 30, 1999.


William T. Gilbert

Subscribed and sworn to before me
this 30 day of December 1999.



My Commission expires: 2-6-2000



ALL-STATE LEGAL 800-222-8610 EDS11 RECYCLED



P. UZ
FAX NO. 1818302318U
HARRIS SGR
DEC-21-99 10E 06:32 PM

RECS INPUT SHEET

DOC TYPES: 1, 2, 3, 4, 5, 6, 7, 8, 12, 14, 15, 22, 23, 25, 27, 31, 32, 43

ENCODED: Kell
INPUT _____
VERIFIED _____

DIN NO.: _____ FILE NO.: 0611510 DOCUMENT DATE: 790919
UNIT: 0 CART. NO.: _____ FRAME NO.: _____
Q AND RET CODE: QP APPROVAL: Q - _____ PNSC - _____

SERIAL NO.: _____
NAME/TITLE: HYDROSTATIC TESTING OF BURIED OR EMBEDDED PRESSURE PIPING NUCLEAR SAFETY
RELATED

PROC. NO.: WP-115 REV. NO.: 0 RESPONSIBILITY: _____

VENDOR: _____ P. O. NO.: _____

CHG. NO.: _____ JOB ORDER NO.: _____

REFERENCE: _____

CONTENTS: _____

CONSTRUCTION PROCEDURES MANUAL	SHNPP	PROCEDURE NO. WP-115	DATE As Approved
WORK PROCEDURE	HYDROSTATIC TESTING OF BURIED OR	REVISION	0
DESCRIPTION	EMBEDDED PRESSURE PIPING (NUCLEAR SAFETY RELATED)	PAGE	1 OF 5

CAROLINA POWER & LIGHT COMPANY
SHEARON HARRIS NUCLEAR POWER PLANT

QA RECORDS
RECEIVED
MAR 16 1982

VOID
DO NOT USE FOR CONSTRUCTION.
DATE 2-19-80 BY LF

WORK PROCEDURE
WP-115

SHNPP CONSTR. QA UNIT
DOCUMENT CONTROL
RECEIVED
SEP 27 1979
SHEARON HARRIS N. P. P.

* REVIEWED AND APPROVED BY EBASCO SERVICES, INC., FOR CONFORMANCE TO THE REQUIREMENTS OF PARAGRAPH CA-3310 OF ARTICLE CA-3300 OF ASME/ACI 359, SECTION III, DIV. 2, EDITION 1975 ADDENDA.

0343432209

REV.	DESCRIPTION	APPROVALS	DATE
0	Issued for Use.	ORIGINATOR	<i>Donald P. Krappner</i> B-14
		CONSTRUCTOR	<i>W.D. Goodman</i> B-17
		E & C Q.A.	<i>A.L. Foxward</i> 9-15
		CP&L	<i>[Signature]</i> 9-1
		DES. ENG. *	<i>[Signature]</i>
		ORIGINATOR	
		CONSTRUCTOR	
		E & C Q.A.	
		CP&L	
		DES. ENG. *	
		ORIGINATOR	
		CONSTRUCTOR	
		E & C Q.A.	
		CP&L	
		DES. ENG. *	

6-1-3

CONSTRUCTION PROCEDURES MANUAL	SINPP	Procedure No. WP-115	Date As Approved
WORK PROCEDURE HYDROSTATIC TESTING OF BURIED OR EMBEDDED		Revision	0
DESCRIPTION PRESSURE PIPING (NUCLEAR SAFETY RELATED)		Page	2 of 5

1.0 SCOPE

1.1 This procedure describes the steps to be followed for the hydrostatic testing of nuclear safety related embedded or buried pressure pipe.

1.2 This is an ASME Section III procedure.

2.0 REFERENCES

- 2.1 ASME Section III, Division I, 1974 Code, Winter 1976 Addenda
- 2.2 Piping Line List

3.0 GENERAL

- 3.1 PPCD is responsible for the hydrostatic testing of buried or embedded piping. E & C QA is responsible for witnessing the hydrostatic testing, verification of piping documentation, leakage detection and monitoring hydrostatic testing activities. The mechanical construction inspector will monitor the filling, pressurizing, venting and draining operation.
- 3.2 The pipe shall be free from debris.
- 3.3 All joints, including welded joints shall be visible for inspection. Where practical, all surface areas of the piping to be tested shall be visible for inspection.
- 3.4 The system or subassembly shall be held at the test pressure for a minimum of ten minutes prior to inspection for leaks.
- 3.5 Any defects found will be corrected and the section with the defect will be retested until a satisfactory test is completed.
- 3.6 The piping shall be tested at no less than 1.25 times the system design pressure.
- 3.7 For Code Class 2 and 3 piping, if the test pressure defined above is to be exceeded by more than 6%, the upper limit shall be established by the designer using an analysis which includes all loadings which may exist during the test. For Code Class I piping, the maximum pressure will be provided by the discipline engineer. The hydrostatic test pressure shall not exceed the maximum test pressure of any component in the system.
- 3.8 Following the application of the hydrostatic test pressure for

034343 2210

CONSTRUCTION PROCEDURES MANUAL _____ SUNPP _____		Procedure No. WII-115	Date As Approved
WORK PROCEDURE	HYDROSTATIC TESTING OF BURIED OR	Revision	n
DESCRIPTION	EMBEDDED PRESSURE PIPING (NUCLEAR SAFETY RELATED)	Page	3 of 5

a minimum of ten minutes, examination for leakage shall be made of all joints, connections, and of all regions of high stress such as regions around openings and thickness - transition sections. This examination shall be made at a pressure equal to the greater of the design pressure or three-fourths of the test pressure and it shall be witnessed by the ANI. Leakage of temporary gaskets and seals, installed for the purpose of conducting the hydrostatic test and which will be replaced later, may be permitted unless the leakage exceeds the capacity of the hydro pump to maintain system test pressure for the required amount of time. Other leaks, such as from permanent seals, seats, and gasketed joints in components, may be permitted when specifically allowed by the design specifications. Leakage from temporary seals or leakage permitted by the design specifications shall be directed away from the surface of the component to avoid masking leaks from other joints.

- 3.9 Pressure test gauges used in pressure testing shall be indicating pressure gauges and shall be connected directly to the component. If the indicating gauge is not readily visible to the operator controlling the pressure applied, an additional indicating gauge shall be provided where it will be visible to the operator throughout the duration of the test. The operator shall monitor the indicating gauge throughout the duration of the test.
- 3.10 Indicating pressure gauges used in testing shall preferably have dials graduated over a range of about double the intended maximum test pressure but in no case shall the range be less than 1 1/2 nor more than four times that pressure.
- 3.11 All test gauges shall be calibrated against a standard dead weight tester or calibrated master gauge. The test gauge shall be calibrated before and after each test or series of tests. A series of tests is that group of tests, using the same pressure test gauge or gauges, which are conducted within

0 3 4 3 4 3 2 2 1 1

CONSTRUCTION PROCEDURES MANUAL	SHNPP	Procedure No. WP-115	Date As APPROVED
WORK PROCEDURE HYDROSTATIC TESTING OF BURIED OR EMBEDDED		Revision	0
DESCRIPTION PRESSURE PIPING (NUCLEAR SAFETY RELATED)		Page 4	of 5

a period not exceeding two weeks. If the gauge is found out of calibration after the hydro test, the test will be performed again. If the gauge is out of calibration and reading lower than the actual pressure, the problem shall be referred to the Senior Resident Engineer to determine possible damage to the tested component.

3.12 Water temperatures will be a minimum of 50°F. Hydrostatic testing shall be done using either lake water or potable water. However, Westinghouse piping and equipment shall be tested with water meeting the requirements of Westinghouse Process Specification PS292722.

3.13 The hydro test shall be witnessed by the ANI, an Engineering and Construction QA Inspector, and a representative of the Generation Services Startup and Technical Unit, if they so desire. A witness shall sign the Hydro Test Form.

4.0 PROCEDURE

4.1 The boundaries of the system or subassembly to be tested will be defined by the mechanical discipline engineer on the Hydro Test Form prior to testing. An isometric or piping drawing may be marked to indicate the boundaries. In the description of the "Pipe to be Tested" the boundaries should be defined from one significant point, valve, column line, wall, etc., to another.

4.2 Prior to the hydro, the Mechanical QA Specialist will verify that:

1. All required piping documentation is complete.
2. All required weld documentation is complete.

4.3 Prior to the hydro, the mechanical discipline engineer will verify that:

1. All temporary and/or permanent pipe supports are properly installed.
2. All openings in the system, except the fill point and necessary vent points, are tightly plugged.

034343 2212

CONSTRUCTION PROCEDURES MANUAL	SIINPP	Procedure No. WT-115	Date As Approved
WORK PROCEDURE	HYDROSTATIC TESTING OF BURIED OR	Revision	0
DESCRIPTION	EMBEDDED PRESSURE PIPING (NUCLEAR SAFETY RELATED)	Page	5 of 5

3. The test equipment is tight and that all low pressure filling lines and other appurtenances that should not be subjected to the test pressures have been disconnected or isolated by valves or other suitable means.
4. The piping system and the water are approximately at the same temperature.
5. The Generation Services Startup Unit has been notified so that they may witness the test.

4.4 The mechanical discipline engineer will verify that the system is filled to the required test point, making sure air pockets are vented. He shall also indicate the design pressure, the required test pressures (pressure to be held for 10 minutes and pressure to be used during inspection), and maximum permissible test pressure (for Code Class 2 and 3, 6% greater than pressure to be held for 10 minutes) on the Hydro Test Form.

4.5 The Engineering and Construction QA Inspector shall check for leaks in accordance with Paragraph 3.8.

- 4.6 Upon satisfactory completion of the hydro test the mechanical discipline engineer will verify that:
1. The system is drained and vented.
 2. All temporary plugs are removed.

5.0 EXHIBITS AND APPENDICES

None

034343 213

CAROLINA POWER & LIGHT COMPANY
SHEARON HARRIS NUCLEAR POWER PLANT

Procedure Deviation Notice

Procedure No: WF-115 Revision No. 0 Deviation No. 1
Procedure Title Hydrostatic Testing of Buried or Embedded
Pressure Piping (Nuclear Safety Related)

Affected Paragraphs	Description of Deviation
3.12	Paragraph 3.12 should read: Water temperatures will be a minimum of 50°F. Hydrostatic testing shall be done using either lake water or potable water. However Westinghouse piping and equipment shall be tested with water meeting the requirements of Westinghouse Process Specification PS 2.92.722. Service Water pipe may be hydrostatically tested with water at a minimum of 40°F.

DOCUMENT CONTROL
RECEIVED
DEC 20 1979
REGISTERED
SHEARON HARRIS N. P. P.

The approval of this Procedure Deviation Notice authorizes deviation from the named procedure to the extent described above. Penned changes may be made to the text of the procedure to reflect the above deviation.

The holder of the affected procedure shall retain this notice with the procedure until the next procedure revision is in effect.

Donall P. Krapp Submitted By AM L... Approved By 12-20-79 Date

024343214



CAROLINA POWER & LIGHT COMPANY
CORPORATE QUALITY ASSURANCE DEPARTMENT
HYDROSTATIC TEST RECORD
(Procedure CQC-22) REV 2
WP-111 REV. 3

Unit No. 2FS System SPENT FUEL Turnover No. 1-7110.004

Drawing No. 2165-G-44NA Rev. 7 Code Class 3

Isometric(s) 2-SF-149-REV.1 LINE # 3SF12-1765B-213

Test Boundaries FROM FLANGE 2-SF-149-FW-408 TO BUTT JOINT

INCLUDING INSTRUMENTATION FLANGE; ALL WELDS BETWEEN TO BE TESTED

Design Press. 25 psi Maximum Press. (of lowest component) 180 psi

Test Press. 32* psi Minimum Time at Test Press. 10 min.

Hold Press. 25 psi TEST MEDIUM WATER

Prepared By: *SEE FCR-P-254 Verified By:

St. J. B. 3/3/82
Mech. Discipline Engineer Date

Henry Dorn 3/25/82
Mech. QA/QC Specialist Date

COMPONENTS

Ident. No.	Mfg./Fabrication Records Accepted	Open DDR's/NCR's	Verified By: (Initials & date)
<u>2-SF-149-2</u>	<u>YES</u>	<u>N/O</u>	<u>TD</u> <u>3-10-82</u>
<u>2-SF-149-3</u>	<u>YES</u>	<u>N/O</u>	<u>TD</u> <u>3-16-82</u>
<u>2-SF-149-4</u>	<u>YES</u>	<u>N/O</u>	<u>TD</u> <u>3-25-82</u>

QA RECORDS
AUG 04 1983
CONSTR. QA UNIT

PRE-TEST CHECK-OFF

- Openings, except fill & vent points, plugged Sat. Set Unset. _____
- System filled; high points vented Sat. Set Unset. _____
- Items not to be tested disconnected/isolated Sat. Set Unset. _____
- Surfaces to be inspected clear & unobstructed Sat. Set Unset. _____
- Test medium temp. 56 °F (minimum 50 °F) 08/208
- Thermometer/Pyrometer No. CPL 49903 Date Calibrated 3-22-82
- Press. Gauge No.'s 46593 Date Calib. 3-26-82 Range 0 to 60
- Press. Gauge No.'s 46593 Date Calib. 4/12 Range 4/12 to N/A

2-7110.M.1
2-7110.M.1

Ident. No.	Weld Data Records Complete	Shown On Isometric	Visual Leakage Inspection		
			Int'l's	Date	Remarks
✓ 2SF-149 FW 40P	YES	YES	TD	3-26-82	NO LEAKAGE
✓ 2SF-149 FW 40T	YES	YES	TD	3-26-82	NO LEAKAGE
2SF-149-2-SW-1	YES	YES	TD	3-26-82	NO LEAKAGE
SW-2-SF-149-2A	YES	YES	TD	3-26-82	NO LEAKAGE
SW-2-SF-149-2B	YES	YES			DID NOT TEST TD 3-26-82
SW-2-SF-149-3A	YES	YES	TD	3-26-82	NO LEAKAGE
SW-2-SF-149-3B	YES	YES	TD	3-26-82	NO LEAKAGE

Maximum press. applied 43 psi - Actual time at test press. 11 min.

Post test press. gauge recalibration verified: TD 3-28-82
Initials & Date

Welds signed off on isometric drawing: TD 3-29-82
Initials & Date

Test Inspected By:

Tommy Gilbert 3-28-82
QA/QC INSPECTOR Date

Test Witnessed By:

J.B. Rhodes AWT 6/3/82
Authorized Nuclear Inspector Date

Reviewed & Accepted:

G. N. Driscoll 4/4/82
Mech. QA/QC Specialist Date

*Witnessed By:

aka dxs 4/4/82
Harris Startup Group Date

*Optional at the discretion of the Harris Startup Group

U 3 / 5 3 I J 6 7

ALL-STATE LEGAL 800-222-0010 ED011 RECYCLED



21-26
2/4/82
Rev. 2

CAROLINA POWER & LIGHT COMPANY
CORPORATE QUALITY ASSURANCE DEPARTMENT
HYDROSTATIC TEST RECORD
(Procedure CQC-22) *W/P 115 K/3 CC 9-8-82*

Page 1 of 2
Corrected *CC*
Initial *7.K.* Date *9/8/82*

Unit No. 219 System SPENT FUEL Turnover No. 1-7110.M.1
Drawing No. 2166-G-413 Rev. 6 Code Class 3

Isometric(s) 2-SF-144 RELO LINE # 3SF12-17658-213
AND INCLUDING SUB 3-10-82 AND INCLUDING SUB 3-10-82
Test Boundaries FROM 2-SF-144-FW-515 TO SPENT FUEL

LINER RING WELD AND ALL WELDS BETWEEN
Design Press. 25 psi Maximum Press. (of lowest component) 188 psi
Test Press. 32^R psi Minimum Time at Test Press. 10 min.
Hold Press. 25 psi TEST MEDIUM WATER
Prepared By: **SEE FER-P-254* Verified By: *[Signature]*

[Signature] 3/3/82 Mech. Discipline Engineer Date
[Signature] 3/25/82 Mech. QA/QC Specialist Date

COMPONENTS

Ident. No.	Mfg./Fabrication Records Accepted	Open DDR's/NCR's	Verified By: (Initials & date)
<u>2-SF-144-1</u>	<u>YES</u>	<u>NO</u>	<u>TD 3-10-82</u>
<u>2-SF-144-2</u>	<u>YES</u>	<u>NO</u>	<u>TD 3-10-82</u>
<u>2-SF-144-3</u>	<u>YES</u>	<u>NO</u>	<u>TD 3-10-82</u>

INCORPORATED ON
N-5
INITIALS DLG DATE 6/7/82 PRE-TEST CHECK-OFF

- Openings, except fill & vent points, plugged Sat. *[Signature]* Unsat. _____
- System filled; high points vented Sat. *[Signature]* Unsat. _____
- Items not to be tested disconnected/isolated Sat. *[Signature]* Unsat. _____
- Surfaces to be inspected clear & unobstructed Sat. *[Signature]* Unsat. _____
- Test medium temp. 56 °F (minimum 50 °F) *[Signature]*
- Thermometer/Pyrometer No. C.P.L. 4990B Date Calibrated 3-22-82
- Press. Gauge No's. 4689B Date Calib. 3-26-82 Range 0 to 60
CPL N/A Date N/A Range N/A

2-SF-144 1-7110.M.1

037539 1032

REV. 2

Ident. No.	Weld Data Records Complete	Shown On Isometric	Visual Leakage Inspection	
			Int'l's (Date)	Remarks
✓ 2SF-144-FW-515	YES	YES	TD 3-26-82	
✓ 2SF-144-FW-516	YES	YES	TD 3-26-82	
✓ 2SF-144-FW-517	YES	YES	TD 3-26-82	APC STRIKE FOUND ON WELD SEC DOC '81
SW-2SF-144-1A	YES	YES	TD 3-26-82	Closed 6-3-82
SW-2SF-144-1B	YES	YES	TD 3-26-82	
SW-2SF-144-2A	YES	YES	TD 3-26-82	
SW-2SF-144-2B	YES	YES	TD 3-26-82	
SW-2SF-144-2C	YES	YES	TD 3-26-82	
SW-2SF-144-3A	YES	YES	TD 3-26-82	
SW-2SF-144-3B	YES	YES	TD 3-26-82	
SW-2SF-144-3C	YES	YES	TD 3-26-82	
SW-2SF-144-3D	YES	YES	TD 3-26-82	
SW-2SF-144-3E	YES	YES	TD 3-26-82	
SW-2SF-144-3F	YES	YES	TD 3-26-82	
SW-2SF-144-3G	YES	YES	TD 3-26-82	

Maximum press. applied 43 psi - Actual time at test press. 11 min.

Post test press. gauge recalibration verified: TD 3-29-82
Initials & Date

Welds signed off on isometric drawing: TD 3-29-82
Initials & Date

Test Inspected By:

Tommy Sillit 3-29-82
QA/QC INSPECTOR Date

Test Witnessed By:

J B Rhoads 6/4/82
Authorized Nuclear Inspector Date

Reviewed & Accepted:

[Signature] 6/4/82
Mech. QA/QC Specialist Date

*Witnessed By:

N/A 6/4/82
Harris Startup Group Date

*Optional at the discretion of the Harris Startup Group

QA-26
2/4/82
Rev. 2

CAROLINA POWER & LIGHT COMPANY
CORPORATE QUALITY ASSURANCE DEPARTMENT
HYDROSTATIC TEST RECORD
(Procedure CQC-22)

Page 1 of 2
Corrected Drawing
9-8-83
Initial 9/8/83
Date

Unit No. 2 System SPENT FUEL Turnover No. 1-710.003
Drawing No. N/A Rev. N/A Code Class 3
Isometric(s) 2-SF-143 Rev 1

Test Boundaries: ALL WELDS ON ISO. BETWEEN BUT EXCLUDING LINGR

RING WELD TO AND INCLUDING FIELD WELD 2-SF-143-FW-512.

Design Press. 25 psi Maximum Press. (of lowest component) 188 psi
Test Press. 92 psi Minimum Time at Test Press. 10 min.
Hold Press. 25 psi TEST MEDIUM WATER
TEST TEMPERATURE NO MINIMUM

Prepared By: SEC FCR-7-254 Verified By: [Signature]
Mech. Discipline Pressure Date 5/27/82 Dept. QA Date 6/3/82

COMPONENTS

Ident. No.	Fig./Part Number Records Accepted	Open Description	Verified by: (Initials & date)
2-SF-143-1	yes	DRR 897	7A 6-3-82
2-SF-143-2	yes	PARTIALLY	7A 6-3-82
2-SF-143-3	yes	CLOSED	7A 6-3-82

INCORPORATED ON
N-5
INITIALS SLS DATE 6/2/82

- Operator: [Signature] Date: 5/20/82
- Inspector: [Signature] Date: 5/20/82
- Witness: [Signature] Date: 5/20/82
- Supervisor: [Signature] Date: 5/20/82
- Test medium temp. 99
- Transmitter/Receiver No. 4431B Date: 5/20/82
- Power, Gauge No's. 6-2 Date: 6/3/82 Range 0 to 100
Date: 6/3/82 Range 0 to 100

7110-M-1
2-SF-143

1 1 0 5

Weld Data	Records Complete	Shown Ca Isometric	Visual Leakage Inspection	Idmt. No.
yes	yes	yes	yes	2-SF-143-FW-512
yes	yes	yes	yes	2-SF-143-FW-513
yes	yes	yes	yes	2-SF-143-FW-514
yes	yes	yes	yes	2-SF-143-FW-515
yes	yes	yes	yes	2-SF-143-FW-516
yes	yes	yes	yes	2-SF-143-FW-517
yes	yes	yes	yes	2-SF-143-FW-518
yes	yes	yes	yes	2-SF-143-FW-519
yes	yes	yes	yes	2-SF-143-FW-520
yes	yes	yes	yes	2-SF-143-FW-521
yes	yes	yes	yes	2-SF-143-FW-522
yes	yes	yes	yes	2-SF-143-FW-523
yes	yes	yes	yes	2-SF-143-FW-524
yes	yes	yes	yes	2-SF-143-FW-525
yes	yes	yes	yes	2-SF-143-FW-526
yes	yes	yes	yes	2-SF-143-FW-527
yes	yes	yes	yes	2-SF-143-FW-528
yes	yes	yes	yes	2-SF-143-FW-529
yes	yes	yes	yes	2-SF-143-FW-530

Maximum pressure applied: 53 psi - Actual time at test pressure: 75 min.

Post test pressure. Gauge recalibration verified: yes Initial: 6/3/82

Welds signed off on isometric drawings: DLS Initials: DLS Date: 6/3/82

Post Inspected By: [Signature] Date: 6/3/82

Test Witnessed By: [Signature] Date: 6/3/82

Reviewed & Accepted: [Signature] Date: 6/3/82

Witnessed By: [Signature] Date: 6/3/82

Welding Group: DLS Date: 6/3/82

Department of the City of New York

ALL-STATE® LEGAL 800-222-0610 ED11-AC RECYCLED



PLACEMENT REPORT

PLACEMENT NUMBER

11A11W281018

LOCATION (INCLUDE ELEV. IF IN BLDG.)

FUEL UNLOADING BLDG EL 201

SCHEDULED DATE:

3-2-83

TYPE PLACEMENT

INT WALL

ESTIMATED QUANTITY

29 cu yds

TEMP LIMIT

50-51

SLUMP LIMIT

4" 8"

SEISMIC CLASS I

YES NO

PROPOSED PLACEMENT METHODS: (CHECK APPLICABLE SPACES)

CURING

TRANSPORTING

PLACING

VIBRATION

FINISHING

FORMED SURF.

UNFORMED SURF. WATER

BUGGY

CHUTE

INTERNAL

STEEL TROWEL

FORMS ALONE

WET BURLAP

BUCKET

TREMIE

FORM

WOOD FLOAT

TARPS

POLYETHYLENE

CONVEYOR

DROP

HAIR BRUSH OR

INSULATION

CURING COMPOUND:

PUMP

BROOM FINISH

FORMS & WATER

KUREZ

TRUCK

RUBBER FLOAT

NUTEC 10

QUAD CURE

BALLS REQUIRED 3/16

SERVICE COND. LIMITED

PROTECTION MIN

5 3/29/83

CURE (DAYS) 7

COMMENT & CLARIFICATION TO PROPOSED METHODS

INT. WALL 6-M, 76 F

PRIMARY MASONRY DWG. NO.

CAR-21676-3222

RATE OF RISE

5' / HR

DES. STRENGTH

4000 PSI

DESIGN MIX CODE

MS16 MB1

NAME/TITLE, PERSON SUBMITTING ALL THE ABOVE

George Wachtler TITLE: RE

DATE: 2-23-83

PRE-PLACEMENT CHECKOUT

CONSTRUCTOR

CONST. INSPECTION

QUALITY ASSURANCE

NO	DESCRIPTION	REF. PROC.	CRAFT SUPT	FIELD ENG	DATE	INSPECTOR	SIGNOFF	
							H	G.C. SIGNOFF DATE
1	CONTACT SURFACES	WP-5	White	M.O.C.	3/24/83	STOTT		3/24/83 K. K...
2	FORMS	WP-22	White	M.O.C.	3/24/83	STOTT		3/24/83 K. K...
3	REINFORCING STEEL	WP-11	White	M.O.C.	3/24/83	STOTT		3/24/83 K. K...
4	EMBEDS	WP-11	White	M.O.C.	3/24/83	STOTT		3/24/83 K. K...
5	MECHANICAL EMBEDS PIPE	WP-102	White	M.O.C.	3/24/83	STOTT		3/24/83 T. D. ...
6	ELECTRICAL	WP-201	White	M.O.C.	3/24/83	STOTT		3/24/83 R. ...
7	CADWELDS	WP-01	White	M.O.C.	3/24/83	STOTT		3/24/83 R. ...
8	BOP WELDING	WP-01	White	M.O.C.	3/24/83	STOTT		3/24/83 R. ...
9	CODE/SEISMIC WELDING	WP-01	White	M.O.C.	3/24/83	STOTT		3/24/83 R. ...
10	CLEAN-UP	WP-5	White	M.O.C.	3/24/83	STOTT		3/24/83 K. K...
11								
12								

CONSTRUCTOR SIGNOFF (AREA SUPT)

TIME: 8:00

G.C. SIGNOFF

TIME: 10:00

DESIGN APPROVAL

DATE: 3-24-83

TIME OF START

DATE PLACED

George Wachtler

DATE: 3/24/83

10:00 A.M.

DATE PLACED

3/24/83

YDS. CONCRETE DELIVERED

130

YDS PLACED IN THIS PLACEMENT

21.5

YARDS WASTED

CONCRETE 8.5

YARDS GROUT DELIVERED

010

CONCRETE

021.5

YARDS PLACED ELSEWHERE

CONCRETE 01010

ACCEPTANCE OF PLACEMENT METHODS & COMPLETENESS OF ABOVE INFORMATION

NAME

Ronald Stiff

TITLE

Construction Supervisor

DATE 3/24/83

REMARKS (ATTACH RELEVANT REPORTS):

PRE-CHECKOUT DATA BY PLACING ORGANIZATION
PRE-PLACEMENT CHECKOUT

ALL-STATE LEGAL 800-251-0010 EDW11 RECYCLED

