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October 26, 1987

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Mr. James H. Wilson, Project Manager
Project Directorate - IV
Division of Reactor Projects - III,
IV, V and Special Projects
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Subject: Waterford 3 SES
Docket No. 50-382
License No. NPF-38
Quality of Spent Fuel Racks

Reference: NRC letter dated 8/27/87, J.H. Wilson to J.G. Dewease, LP&L,
subject: Quality of Spent Fuel Racks Fabricated by U.S. Tool
and Die and Its Predecessor.

Dear Mr. Wilson:

This is in response to the referenced letter wherein you requested
information concerning the fabrication of the Waterford 3 spent fuel racks.
The specific information requested is provided in the attachment.

If you have any question on the responses provided, please contact
G.E. Wuller, Operational Licensing Supervisor, at (504) 464-3499.

Yours very truly,

K.W. Cook
Nuclear Safety &
Regulatory Affairs Manager

KWC:GEW:ssf
Attachment

cc: NRC, Document Control Desk
R.D. Martin, NRC Region IV
J.A. Calvo, NRC-NRR
NRC Resident Inspectors Office
E.L. Blake
W. M. Stevenson

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LP&L RESPONSE
INSPECTION REPORT - U.S. TOOL & DIE

The following are submitted in response to request for the listed information:

- 1 - Describe the extent to which the U.S. Tool and Die QA/QC program was relied upon to assure rack quality.

Response: The U.S. Tool & Die QA/QC program was the basic in-line program assuring rack quality. Wachter Associates, Inc. performed audits on U.S. Tool to ensure program compliance. Ebasco Services performed programmatic audits on Wachter/U.S. Tool (November '77 and February 81). Additionally, during the fabrication process Ebasco performed "in-factory" examinations (see response 2 below). This multi-tiered approach was typical of the process used during the construction phase.

- 2 - Describe your in-factory and/or receipt inspection of the racks.

Response: The following list identifies the dates the Ebasco Vendor Quality Assurance Representative (VQAR) performed examinations at the vendor shop. (25 visits for 37 days in 15 months)

12/11/79	11/05/80
1/3-4/80	11/13-14/80
1/15/80	11/19/80
1/24-25/80	11/21/80
2/25-29/80	11/26/80
3/3-4/80	1/27-28/81
9/10-11/80	2/5-6/81
9/19/80	2/13-17/81
9/26/80	2/26/81
10/1/80	3/17-18/81
10/8-10/80	3/20/81
10/15/80	
10/22/80	
10/29/80	

The following list will identify the areas that were covered during the VQAR visits to the vendor shop:

- material
- drawings
- specification
- welds
- welder qualification
- welding procedure
- liquid penetrant test
- cleaning
- packaging

2 - (Cont'd)

- documentation reviewed:
 - NDE Test Reports
 - Inspection Reports
 - Physical and Chemical Test Reports
 - Welding Material Certifications
 - Welder Certifications
 - Nonconformance Reports
 - Certification of Compliance
 - Deviation Reports
 - Design Document Drawings
 - Boraflex Material Certification of Compliance
 - Welding

NOTE:

During the fabrication of the refueling racks 5 NCR's were generated by the VQAR during his shop visits. The following list identifies the scope of each NCR.

- 449 - Vendor wanted to test the fuel assemblies in the horizontal position instead of the vertical position (required by spec)

Disposition

This was acceptable on the grounds that all the racks were to be checked at the site, in the vertical position, prior to installation.

- 468 - Vendor wanted to use 304 stainless steel pipe and tubing.

Disposition

The use of SA 213/A213, SA 312/A312, SA 479/A479 & A269 was permitted on the grounds that their mechanical properties and chemical composition were comparable to Ebasco specification requirements.

2 - (Cont'd)

- 469 - Material Test Reports did not include a statement certifying that the material supplied is solution-annealed, unsensitized condition.

Disposition

A certifying statement on test report that the material met the requirements of A262, practice A or E was acceptable, it met Ebasco specification requirements. Materials for tools and parts which were not considered as a permanent structure need not be certified to A262 Practice A or E.

- 475 - Material was not certified to ASTM-A-262 and it was not water quenched.

Disposition

The mill test report for the pipe (heat #M2318) and the results of the independent laboratory testing performed in accordance with A262 Practice A or E was forwarded to Materials Applications for final review prior to acceptance of this nonconformance. Material Application verified the data and accepted it.

- 628 - Vendor did not perform the fuel drop impact analysis on the Containment Temporary Storage Rack (CTSR).

Disposition

The analysis was performed and the results were acceptable except for a small modification that had to be performed on the base plates. DCN-AS-758 required the base plates be modified in accordance with Applied Physics Recommendations.

2 - (Cont'd)

The following list identifies the LP&L Material Receiving Inspection Reports (MRIR) which were written on the material received from the Vendor. (Total of 27 MRIR)

<u>MRIR</u>	<u>MRIR</u>	<u>MRIR</u>
80-1407	80-3905	81-0527
80-1408	80-3906	81-0584
80-3324	80-3963	81-0736
80-3516	80-3964	81-0986
80-3517	80-4034	81-1487
80-3532	81-0304	81-1488
80-3627	81-0336	81-2947
80-3780	81-0337	83-3704
80-3781	81-0361	

3 - What findings were made during your receipt inspection of the racks?

Response: a) - One refueling rack was damaged during the unloading process.

b) - The manufacturing records did not arrive with the material, or the documentation required additional clarification.

4 - If your receipt inspections found deficiencies in the racks, what corrective actions were taken?

a) - NCR-W3-2252 was issued on the damaged refueling rack. The NCR addressed the method of repair to restore the refueling rack to an acceptable condition. (NOTE: NCR addresses on-site damage not the responsibility of U.S. Tool and Die.)

b) - The Ebasco Record Reviewers had the responsibility to resolve any deficiencies which related to manufacturing records with the vendor. The deficiencies that occurred were the materials arriving on-site without the manufacturing records or clarification to the records. Through communication with the vendor, the records were sent to the site and the deficiencies closed.

5 - Describe any additional actions or examinations you plan to undertake to assure that your racks meet the original design and regulatory requirements.

Response: No additional action is needed because of the inspection program imposed by Ebasco. The items discussed in 1 - 4 should adequately address the concerns identified in your letter.