

GPU Nuclear Corporation

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April 18, 1984

Dr. Thomas E. Murley, Administrator
Region I
U.S. Nuclear Regulatory Commission
631 Park Avenue
King of Prussia, PA 19406

Dear Dr. Murley:

Subject: Oyster Creek Nuclear Generating Station
Docket No. 50-219
Response to IE Bulletin 83-07
Apparently Fraudulent Products Sold by Ray Miller Inc.

The purpose of this submittal is to provide you, as requested, with the results of our investigation conducted in response to IE Bulletin 83-07.

In responding to the subject bulletin, we have performed the following actions:

- 1) Reviewed our Procurement Quality Assurance logs which list all Important to Safety purchases dating back to 1974.
- 2) Reviewed purchase files from 1972 back through the beginning of plant operation in 1969.
- 3) Reviewed the Purchasing vendor files of all purchases back through 1972.
- 4) Reviewed Secondary Vendors (as noted in IE Bulletin 83-07) against the Purchasing vendor list and contacted all vendors which we had done business with as a result of this review.
- 5) Contacted frequently used important to safety material suppliers on our Supplier Quality Classification list which supply piping and piping materials to request information concerning potential Ray Miller material that we may have received from them.

In performing these reviews, totaling over five hundred (500) man hours of research, we have located a total of (6) six Purchase Orders involving Ray Miller materials.

Upon locating these purchase orders, we requested the materials be evaluated to determine their continued acceptability. This evaluation, conducted by the Mechanical Components and Radwaste Systems Engineering department concluded that none of the fraudulent practices by Ray Miller Inc. apply in the case of the six orders supplied to Oyster Creek.

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In addition, each application (purchase order) was reviewed by the following outline:

- 1) Description of material and application
- 2) System/safety classification where the material was applied
- 3) Potential fraudulent practice on material
- 4) Safety significance assuming most likely fraudulent practice, or assuming material failure
- 5) Determine disposition of installed material

The individual dispositions of the six noted purchase orders are as follows:

P.O. #18799

- 1) Aluminum pipe fittings employed in the "Control Rod Drive Water Quality Modification"

1 - 3" x 3" x 2" Sch. 40 Tee

1 - 1" 150 lb. RF Socket Weld Pipe Flange

Material certified to be 6061 - T6 Aluminum

This modification provided a cross-tie from the 8" condensate transfer line to the condensate storage tank, to the storage tank supply line to the control rod drive pumps, with the objective of bypassing the storage tank so as to provide higher quality water to the CRD hydraulic system.

- 2) The supplied material is installed in the Condensate Transfer System. This system is classified as "Important to Safety" and is listed as a system "Required to Mitigate the Consequences of Postulated Accidents".
- 3) No specific occurrences of fraudulent practices applicable to aluminum pipe fittings are cited in IE Information Notice No. 83-01. Postulated fraudulent practices might be substitution of other alloys, foreign supply, or inadequate pressure rating.
- 4) The safety function applicable to the Condensate Transfer System is the provision of a back-up water supply to the Core Spray Pump suction through a 12 inch line from the Condensate Storage Tank, connecting to the pump suction via normally locked closed valves. The consequences of a failure of the subject fittings could be leakage flow from the Condensate Transfer System with consequential reduction of back-up water supply available for the Core Spray System. The failure would not directly impact Core Spray unless the back-up supply was actually in use.
- 5) Disposition: Use as-is. The material is located in a portion of the system with a design pressure of 50 psig. The actual operating pressure is less than 50 psig. Thus, there is significant margin between operating pressure and design pressure of the material. Also, the system received an initial service leak test in accordance with ANSI B31.1.

P.O. #73171

- 1) Instrument tubing fittings employed in "Feedwater Flow Element Modification"

6 - 90° 1/2" ss elbows
3 - Tees 1/2" ss
3 - 45° ss elbows

This modification moved the low pressure tap (connection) on the main feedwater flow element from a location at the throat of the flow element (venturi) to a position just downstream of the flow element. The reason was to correct an inherent flow measurement error caused by a venturi bypass.

- 2) This material is installed in the Feedwater System. It is installed in the non-reactor coolant pressure boundary portion of the system and is thus "Not Important to Safety" from a piping standpoint. However, it is functionally part of the Feedwater Control System which is classified with systems "Required to Mitigate the Consequences of Postulated Accident", based on its relation to reactor water level control.
- 3) Applicable fraudulent practice could be inadequate pressure rating.
- 4) Applicable safety-related function potentially impacted by material failure would be control of reactor water level. A failure of the downstream pressure tap on the feedwater flow element would be falsely interpreted by the three element feedwater control system as a high flow signal. The initial action of the control system would be to throttle the feedwater control system except that the integral pump runout protection circuit over-rides the 3-element control to maintain flow at the high alarm set point. There is thus no reduction in reactor water level and no safety concern.
- 5) Disposition: Use as-is.

In addition to the above noted parts, two (2) purchase orders in the category of "Limited Purchase Orders" were placed. These involved aluminum backing rings for the Condensate Transfer Line (L.P.O. #76534) and a second order of pipe fittings and caps for temperature sensor probes (L.P.O. #00601). These orders are known as Low Value purchase orders with values less than \$150.00.

Individual disposition of the noted purchase orders are as follows:

P.O. #LOP 76534

- 1) Aluminum backing rings employed in the Condensate Transfer line:

12 - 6" Backing Rings Sch. 40 6061 Al.
6 - 4" Backing Rings Sch. 40 6061 Al.

- 2) The material is installed in the Condensate Transfer System. This system is "Important to Safety". However, the exact location of installation could not be determined, nor any details of installation or post-installation testing.
- 3) No applicable fraudulent practices were cited in IN 83-01 for aluminum backing rings. Postulated fraudulent practice might be alloy substitution or foreign supply.
- 4) Applicable safety function for Condensate Transfer System is back-up water supply for Core Spray System. The impact of deficient material (backing rings) could be deficient pipe welds where the backing rings are used. Failure of welds could impact back-up water supply integrity for core spray system.
- 5) Disposition: Use as-is. Aluminum backing rings were not generically identified as fraudulent material. Initial service leak test would have provided test of pressure integrity of welds.

P.O. #LPO 00601

- 1) Pipe fittings employed in a modification to add temperature sensing probes to the Circulating Water System (Dilution Plant).
7 - 1" to 1/2" ss reducers
14 - 1" ss pipe caps
- 2) The Circulating Water System is "Not Important to Safety".
- 3) Possible inadequate pressure rating.
- 4) Material failure could result in small leakage of water from the Circulating Water System, with no safety related impact.
- 5) Disposition: Use as-is.

Finally, we have identified two (2) other purchase orders of the "J-19" series which are purchase orders released by Burns & Roe for the fabrication of the AOG and the New Radwaste Building. These orders are the most costly and most extensive orders for the site. One order (P.O. #J19-1001) involved two 4" DeZurik Permaseal Valves and the other (P.O. #J19-100201) was for \$8,500 worth of various size pipe and pipe fittings.

Since the location, if any, of Ray Miller, Inc. components in NRW or AOG cannot currently be identified, it must be assumed that they could be any place within the two buildings and must be evaluated accordingly.

The systems in NRW are, for the most part, relatively low in operating temperature and pressure. The highest "operating" temperature is 210°F, listed for the Chem Waste Concentrator bottoms and this temperature is less than the 220°F

normally used. The three process pumps with the highest possible shutoff heads are the High Purity Waste Pumps, the Chem Waste Floor Drain Pumps, and the Radwaste Filter Sludge Pumps with shutoff heads of 175 psig, 175 psig, and 108 psig, respectively. From there the other pumps are less than 85 psig. Thus, material of lower quality than purchased is not expected to have a catastrophic effect on NRW which has been in operation since 1978 without component failure of the type feared by this IE Bulletin.

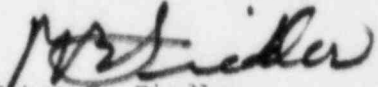
In addition, it has been determined that the failure of systems and structures (other than the seismic bathtub) in NRW would not cause undue risk to the health and safety of the public.

Furthermore, the pressures and temperatures in the AOG are lower than those found in NRW. Except for the hydrogen recombiner subsystem, the maximum gas temperature and pressure are 180°F and 14.7 psig, respectively. The recombiner subsystem was purchased as a complete unit from CTI (which is not referenced in the subject bulletin) and therefore does not contain any Ray Miller components which may have been purchased for Oyster Creek. Cooling water temperature and pressure maximums in AOG are 150°F and 75 psig, respectively.


As an extension of the above logic, the potential for failure of Ray Miller equipment in AOG, if any exists there, is even less than that in NRW. In addition, the AOG is not considered a safety system.

Should you have any further questions, please contact Mr. Michael Laggart, BWR Licensing Manager at (201) 299-2341.

Very truly yours,


Peter B. Fiedler
Vice President and Director
Oyster Creek

Sworn to and Subscribed
before me this 18th day
of April 1984


A Notary of New Jersey

JANICE L. BONDEMORE
NOTARY PUBLIC OF NEW JERSEY
My Commission Expires July 31, 1985

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cc: NRC Resident Inspector
Oyster Creek Nuclear Generating Station
Forked River, NJ 08731