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Your ref: Docket No. 71-6078  
Our ref: UAM-NRC-06-015

October 26, 2006

Dear Mr. E. William Brach:

**SUBJECT:** Docket 71-6078, Model Nos. 927A1 and 927C1 Packages, Approval for Shipment of Mishandled Fuel Assembly Contents

In accordance with Subpart D-Application for Package Approval, 10 CFR 71.31, Contents of application, Westinghouse Electric Company hereby submits an application for modification of the authorized contents as specified in existing Certificate of Compliance number 6078. This request is for authorization for a one-time shipment of a single fuel assembly that was mishandled during routine transfer to the fuel pool at Arizona Public Service, Palo Verde Unit 2. Details of the event are provided as enclosure 1.

A detailed inspection of the fuel assembly shows that damage to the fuel assembly is limited to deformation of the bottom nozzle. The structural integrity of the fuel assembly is not compromised. Enclosure 2 provides results of the inspection including photographs documenting the condition of the fuel assembly.

The mishandling event did not substantially alter the geometric form of the contents consistent with the tests specified in 10 CFR 71.71, Normal conditions of transport. The configuration of the mishandled fuel assembly does not alter the assumptions made in the application for package approval.

Special controls are proposed for the transport of the mishandled, unirradiated fuel assembly. These special controls are intended to add to the margin of safety ensured by the condition in the Certificate of Compliance (CoC). The authorized contents will be specified as a single fuel assembly instead of the two assemblies that are allowed in the CoC. The shipping papers and labels will assign a CSI=100 for this one-time shipment to administratively limit the shipment to a single package, exclusive use shipment.

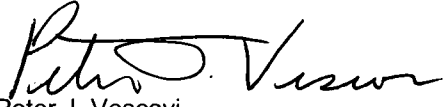
Westinghouse regrets the short lead time of this request. Definitive information on the condition of the fuel assembly is only now becoming available because Palo Verde resources have been dedicated to an outage at another reactor unit. Also, Westinghouse has a window of opportunity in its production schedule to recover the uranium from scrapped fuel assemblies. This recovery operation, scheduled to start November 6, 2006, will yield approximately 2.3 MTU with a value of \$3.4M. Approval to ship the fuel assembly from Palo Verde prior to commencing the recovery

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operation is desired due to special requirements, infrequent performance, and economic benefit of the recovery process.

Enclosure 2 will be provided in a supplement to this request pending completion of the fuel assembly inspection that is scheduled for October 31, 2006. Should you have any questions, or require additional information, please contact the undersigned either by telephone at (803) 647-3167, or by email at [vescovpj@westinghouse.com](mailto:vescovpj@westinghouse.com).

Sincerely,



Peter J. Vescovi

WESTINGHOUSE ELECTRIC COMPANY, LLC  
Uranium Asset Management, Regulatory and International Logistics  
Transport Licensing and Compliance

Enclosures:    1. Description of the Fuel Assembly Mishandling Event  
                  2. Fuel Assembly Inspection Report

cc w/ encls:    N. Kent, Manager, Transport Licensing and Compliance  
                  B. Bayley, Manager, Regulatory and International Logistics  
                  D. Sipes, Fuel Business Manager, U.S. Fuel Commercial Operations  
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By Federal Express

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## **Enclosure 1. Description of the Fuel Assembly Mishandling Event**

### Background

Fuel receipt for Unit 2 Cycle 14 was in progress with fuel being unloaded to the new fuel storage racks when on 7/27/06, the fuel receipt crew began moving fuel from the new fuel storage racks to the spent fuel pool. The first fuel assembly was moved to the new fuel elevator and ungrappled. When the elevator was commanded in the down direction, the elevator basket with the fuel assembly in it free fell to the bottom of the transfer canal. The elevator basket and the fuel assembly remained vertical at the canal floor with the cable separated and a portion of the cable lying on the floor next to the basket. Inspections identified that the elevator basket to be damaged with an apparent failed weld and material deformation at the lower end. The condition of the fuel assembly was unknown.

An engineered game plan was developed and implemented to retrieve the fuel assembly. Since inspections could not confirm the condition of the fuel assembly, the elevator basket and fuel assembly were secured together and removed as one piece. This activity was completed successfully on 8/11/2006 with the elevator basket with the fuel assembly inside lying horizontally on the 140' elevation of the Unit 2 fuel building. Inspections of the elevator basket and fuel assembly confirmed the damage to the lower portion of the basket and some deformation of the Lower End Fitting of the fuel assembly. The elevator and fuel assembly were subsequently moved together to the 120' elevation for storage during U2R13.

### Fuel Assembly Status

Fuel assembly P2S404 has been inspected while still housed within the elevator basket using a video probe. Results of the inspection, as identified in the background section above, indicate the lower end fitting (LEF) did sustain some amount of damage. The instrument nozzle appears to have been forced upward into the LEF and deformed the flow plate around the center guide tube. This is consistent with the observation that the top of the fuel pins surrounding the center guide tube at the top of the fuel assembly have raised a similar amount. The center guide tube is attached to the LEF but is not attached to the Upper End Fitting (UEF) and provides no structural support in the axial direction for the fuel assembly. The four outer guide tubes are attached to the UEF and LEF and provide the structural support for the fuel assembly as the load is transferred from the hold-down plate through the outer guide posts, to the outer guide tubes down to the attachment to the LEF. No damage or deformation to the guide tubes, the lower bolts (which attach the LEF to the guide tube) from inside or out, the locking discs for the lower bolts or the UEF was observed during the inspection. Although the structural integrity of the fuel assembly appears maintained, the fuel assembly will be further inspected prior to any vertical lift per the plan below.

### Remove fuel assembly P2S404 and prepare for shipment

The summarized plan for fuel assembly removal and preparation for shipment is to verify the assembly integrity and then handle using normal tooling and procedures and will be implemented per WO 2931587. This will require removing it from the elevator in the horizontal position and performing a detailed inspection of the guide tubes, UEF and LEF. Assuming acceptable results, the elevator and assembly will be up-righted and the assembly grappled using the new fuel handling tool. The assembly would then be moved and loaded into a shipping container using normal fuel handling procedures.

**Enclosure 2. Fuel Assembly Inspection Report**

(to be provided in a supplement to this request pending performance of a detailed inspection)