



00-0002273

**Department of Energy**  
Richland Operations Office  
P.O. Box 550  
Richland, Washington 99352

**DEC 6 2000**

01-SFO-034

Mr. John T. Conway  
Chairman  
Defense Nuclear Facilities  
Safety Board  
625 Indiana Avenue, NW  
Suite 700  
Washington, D.C. 20024

RECEIVED  
00 DEC 11 PM 4:01  
DNF SAFETY BOARD

Dear Mr. Conway:

This letter is to confirm and document my plan and rationale for closing out the concerns discussed in our December 6, 2000, videoconference.

#### **Summary of RL's Position on the Start of Fuel Processing Operations**

As correctly observed by the Board, the Operational Readiness Reviews (ORRs) conducted by the Department of Energy, Richland Operations Office (RL), as well as those performed by the Contractor in preparation for authorizing the start up of fuel removal operations from the K West Basin, exposed weaknesses in the conduct of operations, operator knowledge and radiological work practices. The Board questioned whether these problems were so significant as to indicate it would be premature to begin operations at this point. My basis for confidence that the problems did not rise to that level derives in part from the fact that the only operations I am authorizing at this point are low risk (involving only "cold", high integrity fuel) for which there is considerably more tolerance for errors of the type identified in the ORR than for later fuel movements involving damaged fuel or fuel of questionable integrity.

Notwithstanding that, the contractor has implemented both short-term and longer-term corrective actions in response to those weaknesses. I believe those actions are appropriate and will be effective, but I also intend to further verify that before expanding the limited operational authority I have provided to date.

More specifically, the rationale for my belief that the contractor can safely begin fuel drying and storage operations and the start of fuel removal operations is as follows:

- Compensatory measures will be put in place over and above those that were used during the operational readiness reviews. Specifically, qualified and knowledgeable RL personnel will be present during all operations to supplement the contractor's Senior Supervisory Watch and mentors. This RL coverage will remain in effect until contractor management and RL jointly agree that such oversight is no longer needed.

- Loading of the first two Multi-Canister Overpacks (MCOs) is restricted to essentially undamaged spent fuel, which greatly reduces the risk associated with the process of retrieving, cleaning, repackaging and drying the fuel. The integrity of the fuel has been confirmed by visual inspection of each individual fuel element. Thus the consequences of any conduct of operations deficiencies that may occur during the initial operations are minimal.
- I believe experience in handling real MCOs with real spent fuel through the entire process from start to completion, will be more effective in further refining our procedures and developing operator proficiency than further operations under simulated or contrived conditions. This was borne out in the fuel retrieval and cleaning operations that were successfully accomplished during the Phased Startup Initiative testing that was recently completed; after some initial operator issues, more than 20 canisters of spent fuel were decapped, cleaned, inspected and placed into special baskets without incident.
- I have limited authority to operate to two MCOs in addition to other limits as described in the attached letter authorizing startup, which will form the basis for my further evaluating whether in fact the contractor is ready to move higher risk fuel. These first two movements will be heavily scrutinized to discern lessons learned, make any further improvements necessary and gauge the effectiveness of the corrective actions.

### **Summary Of Principal Contractor Corrective Actions**

There were 8 pre-start findings from the DOE ORR of the Cold Vacuum Drying Facility. Each of those findings has been addressed by a corrective action plan and an evidence file has been provided to document completion of the planned actions<sup>1</sup>. The principal contractor actions are:

- Identify those MCO and MCO support activities that will require Senior Supervisory Watch (SSW) and mentor coverage
- Assign qualified SSW and mentor coverage to critical MCO-related activities (those activities that require a Quality Assurance signature)
- Brief all involved personnel (at the Cold Vacuum Drying Facility (CVDF), Canister Storage Building and the K West Basin) on the details of the critical MCO-related activities and the specific deficiencies identified in the ORRs
- Provide refresher training for Field Work Supervisors on conducting pre-job briefings, critical MCO-related activities and the specific deficiencies identified in the ORRs
- Ensure that the SSW and the mentors are in the field during critical MCO-related activities and that mentors and crew supervisors are proactive with the operators prior to the execution of a critical activity
- Perform continuing training in the inactive bay of the CVDF during the slack time while Process Validation is in progress at the K West Basin during processing of the spent fuel for the second MCO

---

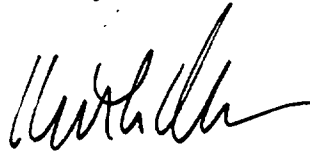
<sup>1</sup> These files are available for review by interested parties in 100K/MO-500.

- Conduct briefings of the CVDF operators and radiological control technicians on the specific deficiencies identified during the ORRs
- Change four key procedures to ensure that quality inspection requirements are properly called out, authorization basis requirements are clearly and properly incorporated, and support procedures are properly interfaced with other related activities
- Establish specific expectations for maintenance of qualifications and procedures for removal of authorization to stand watches if qualifications are not maintained.

In addition, RL has assigned knowledgeable and qualified facility representatives to continuous coverage of operations at all facilities. RL has also established that this oversight, as well as the requirement for contractor mentors and the senior supervisory watch, will remain in effect until the contractor self-certifies that it is no longer needed, and an independent assessment conducted by RL and approved by the Hanford Site Manager confirms that the contractor is able to operate safely and proficiently without such support.

If you have any question, please contact me, or you may contact Phil Loscoe of my staff on (509) 376-7465.

Sincerely,



Keith A. Klein  
Manager

Attachment



## Department of Energy

Washington, DC 20585

December 6, 2000

00 - 2272

Mr. John T. Conway  
Chairman  
Defense Nuclear Facilities  
Safety Board  
625 Indiana Avenue, NW  
Suite 700  
Washington, D.C. 20004

Dear Chairman:

The Hanford Site Manager, Keith Klein, and I have been in frequent contact throughout the series of Operational Readiness Reviews (ORRs) prior to our authorizing the start of fuel removal operations from the K Basins. We are aware that deficiencies in the conduct of operations and radiological controls practices have been noted during these reviews and agree that these deficiencies must be addressed before commencing operations.

RL has been working closely with the contractor to assure that the resolution of these issues is timely and effective. As Mr. Klein, his team, and I discussed with you during the December 6 videoconference, RL believes that the contractor's corrective action plan and actions in response to the findings of the DOE ORR team in these areas are appropriate and that the corrective actions are consistent with the recommendations of your letter of December 5, 2000. Specifically, the contractor will (among other actions):

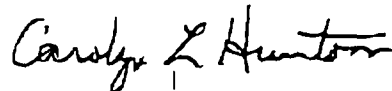
- Establish a Senior Supervisory Watch for all critical Multi-Canister Overpack (MCO) activities which are defined as those MCO and MCO support activities that require a QA signature. This watch will be maintained until contractor management and RL jointly agree it is no longer needed;
- Brief all operations crews on the specifics of the conduct of operations issues prior to assuming shift duties;
- Enhance pre-shift briefings to emphasize execution of key procedural steps; and
- Revise procedures to clarify requirements and enhance compliance with technical safety requirements in the assembly of the MCO shield plugs.



2

Mr. Klein has assured me that oversight by qualified RL facility representatives will be provided during MCO handling and processing to ensure safe operation of the systems and facilities. This oversight will remain in effect until Fluor self-certifies it is no longer needed, and an independent assessment conducted by RL and approved by Mr. Klein confirms that Fluor is able to operate safely and proficiently without such support. In addition, the initial operations will be with very low risk spent nuclear fuel and will be limited to two MCOs. The conclusion of that operation will be used as a checkpoint prior to removing additional fuel. Mr. Klein will separately be sending you the close-out plan you requested.

Sincerely,



Carolyn L. Huntoon  
Assistant Secretary for  
Environmental Management

cc: Keith Klein, RL  
Mark Whitaker, S-3.1  
Dr. David Michaels, EH-1

Subject: The Hanford Spent Nuclear Fuel Project (SNFP) is critical to resolving the spent nuclear fuel vulnerabilities identified in the Defense Nuclear Facilities Safety Board's (Board) Recommendation 94-1, improved schedule for remediation

Distribution List:

1bcc: EM-40, Reader  
1bcc: EM-40/CLOV.  
1bcc: EM-43, Kaltreider  
1bcc: EMCC

EM-43  
KALTREIDER  
12/5/00 *attach*

EM-40  
FRET  
12/6/00 *FRET*

EM-40: DNFSB 12-5-00 response

EM-3  
OLDHAM  
12/6/00 *g*

EMCTS#: EM2000-04177

S-3.1 *WMSM*  
WHITAKER  
12/6/00

EM-2  
OWENDOFF  
12/ /00

Correspondence Reviewer(s)  
Bill Levitan \_\_\_\_\_  
Melissa Nielson \_\_\_\_\_

EM-1  
HUNTOON  
12/ /00