

February 22, 2006

MEMORANDUM TO: Joseph G. Giitter, Chief
Special Projects Branch
Division of Fuel Cycle Safety
and Safeguards

THRU: Brian W. Smith, Chief **/RA/**
Gas Centrifuge Facility Licensing Section
Special Projects Branch, FCSS

FROM: Timothy C. Johnson, Project Manager **/RA/**
Gas Centrifuge Facility Licensing Section
Special Projects Branch, FCSS

SUBJECT: FEBRUARY 10, 2006, IN-OFFICE-REVIEW SUMMARY:
LOUISIANA ENERGY SERVICES NUCLEAR CRITICALITY
SAFETY VALIDATION AND VERIFICATION REPORT

On February 10, 2006, the U.S. Nuclear Regulatory Commission (NRC) staff performed an in-office-review with staff from Louisiana Energy Services (LES) to discuss the status of updates to Revision 1 of the nuclear criticality safety validation and verification report. I am attaching the in-office-review summary for your use. No proprietary or classified information was discussed.

Docket: 70-3103

Enclosure: Louisiana Energy Services
In-Office-Review Summary

cc:	Rod Krich/LES	James Curtiss/W&S	James Ferland/LES
	William Szymanski/DOE	Claydean Claiborne/Jal	Peter Miner/USEC
	Monty Newman/Hobbs	Troy Harris/Lovington	Betty Richman/Tatum
	Glen Hackler/Andrews	Lue Ethridge/Lea Cty	John Parker/NMED
	James Brown/Eunice	Richard Ratliff/Texas	M. Marriotte/NIRS
	Jerry Clift/Hartsville	Carol O'Claire/Ohio	Lee Cheney/CNIC
	Derrith Watchman-Moore/NMED	Joseph Malherek/PC	Ron Curry/NMED
	Tannis Fox/NMED	Patricia Madrid/NMAG	Glenn Smith/NMAG
	Lindsay Lovejoy/NIRS	Roger Mulder/Texas	

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OFC	GCFLS		TSG		GCFLS		OGC		GCFLS	
NAME	TJohnson		HFelsher		LWilliamson		LClark		BSmith	
DATE	02/14/06		02/14/06		02/14/06		02/17/06		02/22/06	

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In-Office Review Summary

Discussion of Update to Revision 1 to Nuclear Criticality Safety Validation & Verification Report

Date and Time: February 10, 2006; 9:00 AM

Place: Louisiana Energy Services offices
Washington, DC

Attendees:

B. Smith/NRC	H. Felsher/NRC	M. Galloway/NRC
C. Tripp/NRC	D. Green/LES	B. Hubbard/LES
R. Kirch/LES	G. Seeberger/LES	D. Pepe/LES
M. O'Neil/LES		

On February 10, 2006, U.S. Nuclear Regulatory Commission (NRC) performed an in-office review at the Louisiana Energy Services' (LES') Washington, DC, offices to discuss the status of updates to Revision 1 of the nuclear criticality safety (NCS) validation and verification (V&V) report related to LES' application for a uranium enrichment facility proposed to be located in Lea County, New Mexico.

Discussion:

LES staff provided an overview of the progress made thus far on the draft Revision 2 of the LES V&V report (see attachment). Then, the LES staff discussed specific information in the draft Revision 2 of the V&V report. Two low enrichment benchmark experiment sets were added and the high enrichment benchmark experiment sets were removed from the report. One additional low enrichment benchmark experiment set and one additional intermediate enrichment benchmark set were being considered for inclusion into the report. The current evaluation demonstrated normally-distributed data and upper safety limit values of 0.9414 for the Contingency Dump System (due to penalty for area of applicability) and 0.9426 for the balance of the plant.

The NRC staff provided the following feedback:

- With respect to the area of applicability of the hydrogen to uranium ratio for the balance of plant, additional data are needed in the upper range. LES staff indicated that the additional intermediate enrichment benchmark experiment set that is being considered should provide the needed data;
- With respect to the area of applicability of the enrichment for the Contingency Dump System, additional data are needed in the low range. LES staff indicated that the additional low enrichment benchmark set that is being considered should provide the needed data;
- The neutron energy spectra of the benchmark experiments used should be described in the report. LES staff indicated that this description would be added; and
- Additional description regarding the purpose of Table 7-3 in the report should be added. LES staff indicated that this would be added.

LES staff stated that they would provide to NRC on Monday, February 13, 2006, the results of additional calculations being performed using the two additional benchmark experiment sets as well as the status of the page changes to the revised V&V report and Safety Analysis Report (SAR).

LES staff then provided an overview of the draft qualitative argument for justifying going from those upper safety limit equations in the V&V report to the k_{eff} limit equation in the current SAR.

The NRC staff provided the following feedback:

- An additional argument regarding mass accumulation should be considered;
- If the discussion on the conservatism of the calculations remains, then the conservatism will need to be quantified;
- Although the discussion regarding the conservatism of the calculations appears to be reasonable, it should be reserved for future use;
- The qualitative argument should be in the SAR; and
- NRC staff will provide feedback to LES on the last paragraph of the draft qualitative argument regarding future changes to the V&V report. A potential license condition is being considered to address this issue or it can be put into the SAR.

Action Items:

1. LES staff to provide on Monday, February 13, 2006, the results of additional calculations as well as the status of the page changes to the revised V&V report and SAR.
2. NRC staff to provide feedback on a potential license condition or license commitment in the SAR regarding future changes to the V&V report.

Attachment:

1. Draft Revision 2 of the MONK 8A Validation and Verification Report