

November 22, 2004

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: NOVEMBER 4, 2004, TELEPHONE SUMMARY: LOUISIANA
ENERGY SERVICES DISCUSSIONS ON NUCLEAR
CRITICALITY SAFETY AND INTEGRATED SAFETY ANALYSIS

On November 4, 2004, the U.S. Nuclear Regulatory Commission (NRC) staff held a telephone conference call with staff from Louisiana Energy Services (LES) to discuss nuclear criticality safety and integrated safety analysis issues related to the LES uranium enrichment plant proposed to be built in Eunice, New Mexico. I am attaching the telephone summary for your use. The summary contains no proprietary or classified information.

Docket: 70-3103

Attachment: Louisiana Energy Services
Telephone Summary

cc:	William Szymanski/DOE	Claydean Claiborne/Jal	Rod Krich/LES
	Monty Newman/Hobbs	James Curtiss/W&S	Troy Harris/Lovington
	Peter Miner/USEC	Betty Richman/Tatum	James Ferland/LES
	Glen Hackler/Andrews	Dennis Holmberg/Lea Cty	John Parker/NMED
	James Brown/Eunice	Richard Ratliff/Texas	M. Marriotte/NIRS
	Jerry Clift/Hartsville	CO'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		

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OFC	GCFLS		GCFLS		TSG		GCFLS	
NAME	TJohnson/os		LMarshall				BSmith	
DATE	11/16/04		11/16/04		11/22/04		11/22/04	

OFFICIAL RECORD COPY

Telephone Conference Call Summary

Nuclear Criticality Safety and Integrated Safety Analysis

Date and Time: 8:00 AM; November 4, 2004

Call Participants:	H. Felsher/NRC	W. Troskoski/NRC
	B. Smith/NRC	T.C. Johnson/NRC
	R. Krich/LES	B. Hubbard/Areva
	D. Green/Excel	D. Pepe/Areva
	A. Brown/Urenco	P. Hale/Urenco

On November 4, 2004, a conference call between U.S. Nuclear Regulatory Commission (NRC) and Louisiana Energy Services (LES) staffs was held to discuss criticality and Integrated Safety Analysis (ISA) issues related to LES' application for a uranium enrichment facility proposed to be located in Eunice, New Mexico.

Discussion:

During the call, NRC staff discussed issues related to criticality safety and the ISA Summary (see Attachment) resulting from the review of LES' Revision 3 application submitted on September 30, 2004, and additional information provided on October 4, 2004, on ISA accident sequences for criticality safe-by-design components and the ISA Summary. The issues in the Attachment were broken down into Priority 1 and 2 issues and the discussions on these issues were as follows:

Priority 1 issues:

1. Descriptions of IROFS in the ISA Summary

NRC staff indicated that the descriptions of the specific Items Relied on for Safety (IROFS) and the accident sequences were unclear. Also, it was unclear how IROFS in the ISA Summary related to accident sequences. As an example, LES staff described for one accident sequence how the actual IROFS, identified only generally in the ISA Summary, would be applied. Based on that information, NRC staff indicated that a future NRC onsite review may be needed to understand the IROFS and accident sequences. However, LES staff indicated that the detailed information was not yet available for an NRC on-site review. LES staff acknowledged that their criticality-related IROFS are generic at this time, but indicated that once their plant design is more complete, additional details will be added to the accident sequences and that the lists of IROFS will be expanded to added more specificity for the accident sequences.

2. Independence of IROFS in the ISA summary

LES indicated in the ISA Summary that IROFS that needed to be independent would be independent. NRC staff stated that a clear commitment to independence and a description of how independence would be achieved are needed. LES staff will provide that information from the IROFS boundary procedure in the ISA Summary.

3. Initiating event indices for accident sequences in the ISA Summary

NRC staff questioned how initiating event indices are applied to several external accident sequences (i.e., the uncontrolled and controlled indices were not the same). LES staff explained that for some controlled and uncontrolled accident sequences the nature of the accident changed and so would the initiating event indices for the same accident sequence. For example, the uncontrolled accident for excessive roof drainage involves a building designed to the Uniform Building Code. However, in the controlled accident, the building is redesigned to accommodate a larger rainfall event having a different initiating event index. NRC staff stated that it would review this item further.

4. Identical accident sequences in the ISA Summary

NRC staff indicated that there are several accident sequences that are identical in the ISA Summary. LES staff agreed to revise the ISA summary to provide clarification and differentiation between the accident sequences.

5. ISA process for criticality safe-by-design components and location of information

NRC staff indicated that it is unclear what LES meant by “safe-by-design” for criticality safety components and how LES implemented the safe-by-design ISA process. LES staff explained the rationale that the safe-by-design ISA process (i.e., definition, criteria) is applied to more than just the favorable geometry components. LES staff indicated it will provide additional clarifying information in a letter to NRC and will also revise the ISA Summary accordingly.

NRC staff requested that LES provide information about the regular and criticality safe-by-design ISA processes in the Safety Analysis Report (SAR). LES staff indicated that it interpreted the regulations and guidance to require this information in the ISA Summary only. NRC staff stated they would review the regulations and guidance associated with this issue and inform LES if any additional actions are necessary.

6. ANS-8.7 clarification in the SAR

NRC indicated that a reference to requirements in ANS-8.7 in Section 5.2.1.5 in the SAR is unclear as to what specifically the reference applies to. LES will revise the statement to provide clarification.

Priority 2 issues:

1. Enrichment levels needed

LES staff confirmed that the 5.0 weight percent U-235 enrichment requested would cover all normal and credible abnormal conditions and approval for higher assay levels would not be needed.

2. Editorial changes

LES agreed to make the editorial changes to the SAR and ISA Summary identified by NRC staff except for the criticality accident alarm system (Priority 2 Issue No. 6) because LES intends to meet 10 CFR 70.24 without an exemption.

Attachment

Nuclear criticality safety issues list