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OCT 29 2009

NEF-09-00207-NRC

Attn: Document Control Desk
Director
Office of Nuclear Material Safety and Safeguards
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Louisiana Energy Services, LLC
NRC Docket No. 70-3103

Subject: IAEA's Upcoming Presentation of NEF-Related Safeguards Paper at
Japan-IAEA Workshop

Background

Louisiana Energy Services, LLC (LES) has recently learned that the International Atomic Energy Agency (IAEA) plans on presenting the paper entitled "*Conceptual Approach of applying Safeguards at the Louisiana Energy Services (LES) National Enrichment Facility, New Mexico, USA*" at the "2nd Japan-IAEA Workshop on Advanced Safeguards Technology for the Future Nuclear Fuel Cycle", during November 10-13, 2009, in Tokaimura, Ibaraki, Japan (see enclosed abstract of the paper which was downloaded from the IAEA's website).

For reasons discussed below, LES does not agree with the IAEA's proposed monitoring plan for the National Enrichment Facility (NEF), and respectfully requests that the NRC implement prompt steps to address the situation.

Considerations

Based on the IAEA's planned paper presentation, LES notes the following:

- During the June 15, 2009 safeguards meeting in Vienna (which included LES attendees), the IAEA management indicated it planned to: 1) issue (by the end of July 2009) its proposal for the application of safeguards at the NEF, and 2) hold a follow-up meeting to discuss the proposal in September 2009. As of the date of this letter, LES has not received the referenced IAEA proposal, and a follow-up IAEA meeting has not yet been scheduled.
- Article IV(3) of the Treaty of Washington states: "*The Three Governments and the United States Government consider that the Installation should be placed and remain under safeguards of the International Atomic Energy Agency equivalent to*

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- *those applied at the commercial gas centrifuge uranium enrichment facilities under the jurisdiction of the Three Governments. They shall use their best endeavors to that end.”* Accordingly, safeguards at the NEF should conform to safeguards that are accepted and practiced in Europe. However, it appears that the IAEA may be suggesting the reverse approach, as evidenced by the following statement of the abstract: *“The implementation and acceptance of these measures demonstrating the effectiveness of the techniques could promote the universal acceptance of such measures at other gas centrifuge facilities under safeguards.”*
- According to the FAQ on the NRC’s website: ***“What happens when a site is selected for an inspection by the IAEA? - Before IAEA inspections can commence at a facility the NRC will notify the facility that it has been selected by the IAEA to submit to IAEA safeguards. Following that, the facility operator, the NRC and the IAEA have series of meetings during which they negotiate the terms and implementation activities for the upcoming IAEA inspections. The negotiations are guided by the terms described in the NPT, the U.S.-IAEA Safeguards Agreement, and the Additional Protocol.***

Next, the facility operator fills in a design information questionnaire (DIQ) for the IAEA. The DIQ contains a detailed description of the facility of the facility and its material flow. The DIQ forms the basis for the practical implementation of IAEA safeguards at the facility and is confidential. When all negotiations are concluded the IAEA creates a “Facility Attachment” which describes the safeguards arrangements for that particular facility.”

However, to date, the above sequence of regulatory events has not been initiated by the IAEA; and, therefore, the NRC and LES have not agreed to any particular safeguards approach for the NEF. Accordingly, any public communication by either party on a conceptual approach for applying safeguards at the NEF prior to the time that a joint agreement is reached: 1) is premature and unwarranted, and 2) could adversely impact subsequent safeguards negotiations among the parties.

- LES’ review of the abstract of the IAEA’s paper reveals that the conceptual approach discussed therein differs in many respects from the revised safeguards approach recently agreed to by the IAEA, Euratom, and the UK/Dutch/German/French governments for centrifuge plants in Europe. For example, the conceptual approach of the IAEA entails the unprecedented use of various kinds of intrusive monitoring equipment.

Summary and Conclusions

- LES and URENCO do not agree with the IAEA’s conceptual safeguards approach for the NEF and the IAEA’s planned presentation thereof at the workshop
- The National Enrichment Facility (NEF) is no different than the Almelo, Capenhurst or Gronau facilities from a Safeguards perspective, and should be treated the same way by the IAEA for consistency with the Treaty of Washington

- The IAEA's plan to publicize its conceptual approach for the NEF: 1) deviates from regulatory protocol whereby the safeguards approach for the NEF would first be determined via a negotiated agreement among the IAEA, the NRC and LES; and 2) will likely have an adverse impact on the agreement negotiations
- The IAEA's proposed safeguards approach is onerous, and would add extra cost to the LES project without any additional benefit for URENCO or the public


Recommendations

LES recommends that the NRC:

- 1) Communicate immediately with the IAEA (via State Department) using fax, email and/or telephone) to:
 - a. Inform the IAEA of LES' and URENCO's disagreement with the planned paper presentation
 - b. Request a conference call with key IAEA personnel as soon as possible before the paper is presented, to discuss the following alternatives:
 - i. Modification of the paper presentation to delete specific reference/linkage to the NEF
 - ii. Cancellation of the paper presentation
- 2) Communicate with the IAEA by letter to request:
 - a. Their proposed plans for applying safeguards at the NEF (i.e., a copy of the paper and any additional details)
 - b. The revised schedule for their follow-up meeting (to discuss the above proposed plans)
 - c. The revised schedule for their visit to the NEF

Should there be any questions concerning the contents of this letter, please contact Mr. Stephen Cowne, LES Director, Quality and Regulatory Affairs, at 575.394.5253.

Respectfully,



Gregory OD Smith
Chief Operating Officer and Chief Nuclear Officer

Enclosure: Conceptual Approach for applying Safeguards at the Louisiana Energy Services (LES) National Enrichment Facility, New Mexico, USA

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cc:

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ENCLOSURE

**Conceptual Approach for applying Safeguards at the Louisiana Energy Services
(LES) National Enrichment Facility, New Mexico, USA**

Conceptual Approach for applying Safeguards at the Louisiana Energy Services (LES) National Enrichment Facility, New Mexico, USA

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ABSTRACT

In 2006 the IAEA Department of Safeguards issued a new model safeguards approach for application at gas centrifuge uranium enrichment plants. A new safeguards approach was needed to take into account progress in enrichment technology and the significant increase in separative work capacity of commercial gas centrifuge plants. The model approach incorporates alternative safeguards measures, including interim announced or short notice random inspections (SNRIs); mailbox declarations by the operator; remote monitoring; authentication and monitoring of operator load cells; and additional destructive and non-destructive enrichment measurements. Elements of the proposed new model have been successfully carried out including a field trial of the mailbox concept at an Urenco enrichment plant and the monitoring of operator's load cells during the HEU down blending exercise at the Portsmouth Gaseous Diffusion Plant.

The safeguards concept being developed for the LES plant will make maximum use of the new techniques presented in the model safeguards approach. Through the use of a mailbox system and the monitoring of (authenticated) operator and Agency instrumentation, the Agency will be in a position to strike nuclear material mass balances across the process in near real time, therefore significantly enhancing the detection of any misuse of the facility to produce LEU (or HEU) from undeclared feed and of the diversion of declared nuclear material. It is proposed that a comprehensive computer expert system would be developed that automatically acquires, stores and analyses all these data and provides near real time information about the nuclear material inventories, flows and balances across the plant. The mailbox concept coupled with video surveillance of accountability scales, declaration and verification of UF₆ cylinder accountability data cross referenced with UF₆ cylinder operational data and the implementation of unannounced inspections and SNRIs will be relevant for the detection of undeclared LEU production and confirmation of the material balance for each module. In addition, a cylinder tagging system using electronic identification tags (e.g. radio-frequency transmitters) will monitor the movement of cylinders between the UF₆ store, the accountability scale(s), the feed, product and tails stations and the blending area; the monitoring of enrichment of the process gas in the module header pipes is also envisaged. The cylinder tags would be used not only for tracking the movements of cylinders but also to reduce the time required to perform annual physical inventory verifications. To complement these activities, the verification of UF₆ cylinders and UF₆ sampling of cylinders and assay unit header pipes will also be performed. The implementation of

limited frequency unannounced access (LFUA) inspections, the taking of environmental samples and nuclear material samples for destructive analysis, and NDA measurements will be maintained to ensure a safeguards "in depth" approach. Reliance on installed instrumentation, access to operational information, mailbox information combined with remote monitoring and Agency software modelling to determine the nuclear material balance across the plant will allow for random and less frequent access to the facility. The implementation and acceptance of these measures demonstrating the effectiveness of the techniques could promote the universal acceptance of such measures at other gas centrifuge facilities under safeguards.