

March 14, 2005

NEF#05-011

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

Louisiana Energy Services, L. P.
National Enrichment Facility
NRC Docket No. 70-3103

Subject: Clarifying Information Related to Position Descriptions, 10 CFR 20.1101(d)
Compliance, and Tornadoes

- References:
1. Letter NEF#03-003 dated December 12, 2003, from E. J. Ferland (Louisiana Energy Services, L. P.) to Directors, Office of Nuclear Material Safety and Safeguards and the Division of Facilities and Security (NRC) regarding "Applications for a Material License Under 10 CFR 70, Domestic licensing of special nuclear material, 10 CFR 40, Domestic licensing of source material, and 10 CFR 30, Rules of general applicability to domestic licensing of byproduct material, and for a Facility Clearance Under 10 CFR 95, Facility security clearance and safeguarding of national security information and restricted data"
 2. Letter NEF#04-002 dated February 27, 2004, from R. M. Krich (Louisiana Energy Services, L. P.) to Director, Office of Nuclear Material Safety and Safeguards (NRC) regarding "Revision 1 to Applications for a Material License Under 10 CFR 70, "Domestic licensing of special nuclear material," 10 CFR 40, "Domestic licensing of source material," and 10 CFR 30, "Rules of general applicability to domestic licensing of byproduct material"
 3. Letter NEF#04-029 dated July 30, 2004, from R. M. Krich (Louisiana Energy Services, L. P.) to Director, Office of Nuclear Material Safety and Safeguards (NRC) regarding "Revision to Applications for a Material License Under 10 CFR 70, "Domestic licensing of special nuclear material," 10 CFR 40, "Domestic licensing of source material," and 10 CFR 30, "Rules of general applicability to domestic licensing of byproduct material"

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4. Letter NEF#04-037 dated September 30, 2004, from R. M. Krich (Louisiana Energy Services, L. P.) to Director, Office of Nuclear Material Safety and Safeguards (NRC) regarding "Revision to Applications for a Material License Under 10 CFR 70, "Domestic licensing of special nuclear material," 10 CFR 40, "Domestic licensing of source material," and 10 CFR 30, "Rules of general applicability to domestic licensing of byproduct material"

By letter dated December 12, 2003 (Reference 1), E. J. Ferland of Louisiana Energy Services (LES), L. P., submitted to the NRC applications for the licenses necessary to authorize construction and operation of a gas centrifuge uranium enrichment facility. Revision 1 to these applications was submitted to the NRC by letter dated February 27, 2004 (Reference 2). Subsequent revisions (i.e., revision 2 and revision 3) to these applications were submitted to the NRC by letters dated July 30, 2004 (Reference 3) and September 30, 2004 (Reference 4), respectively.

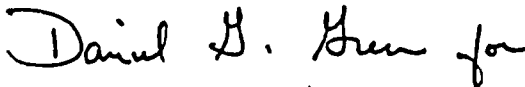
In conference calls between LES and NRC representatives, held on February 25, 2005, and March 2, 2005, the NRC requested that clarification be provided concerning the position descriptions for the National Enrichment Facility operating organization, compliance with 10 CFR 20.1101, "Radiation protection programs," paragraph (d), and tornadoes. This information is provided in the form of revised License Application and Integrated Safety Analysis (ISA) Summary pages. The updated ISA Summary page contains information that LES considers to be proprietary in accordance with 10 CFR 2.390, "Public inspections, exemptions, requests for withholding," paragraph (d)(1). Accordingly, we request that the updated page that contains proprietary information be withheld from public disclosure.

Enclosure 1 provides the proprietary version of the updated License Application and ISA Summary pages. The proprietary information is located on ISA Summary page 3.2-11. Enclosure 2 provides the non-proprietary version of the updated License Application and ISA Summary pages. In the proprietary version, i.e., Enclosure 1, the page that contains proprietary information includes the marking "Proprietary Information" consistent with 10 CFR 2.390 (d)(1). In the non-proprietary version, i.e., Enclosure 2, the page that contains proprietary information is withheld.

These updated pages will be formally incorporated into the applicable License Application and ISA Summary sections in a future revision.

If you have any questions or need additional information, please contact me at 630-657-2813.

Respectfully,



R. M. Krich

Vice President – Licensing, Safety, and Nuclear Engineering

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Enclosures:

1. Clarifying Information Related to Position Descriptions, 10 CFR 20.1101(d) Compliance, and Tornadoes (Proprietary Version)
2. Clarifying Information Related to Position Descriptions, 10 CFR 20.1101(d) Compliance, and Tornadoes (Non-Proprietary Version)

cc: T.C. Johnson, NRC Project Manager

ENCLOSURE 2

**Clarifying Information Related to
Position Descriptions, 10 CFR 20.1101(d) Compliance, and Tornadoes**

**(Non-Proprietary Version)
(Page Containing Proprietary Information Has Been Withheld)**

- Operations
- Uranium Management
- Technical Services
- Human Resources
- Quality Assurance.

The responsibilities, authorities and lines of communication of key management positions within the operating organization are discussed in Section 2.2, Key Management Positions.

During the Operations Phase the QA Manager reports to the Plant Manager. However, the QA Manager has the authority and responsibility to contact directly the LES President, through the QA Director, with any Quality Assurance concerns during operation.

Position descriptions for key management personnel in the operating organization will be accessible to all affected personnel and to the NRC.

2.1.4 Transition From Design and Construction to Operations

LES is responsible for the design, quality assurance, construction, testing, initial startup, operation, and decommissioning of the facility.

Towards the end of construction, the focus of the organization will shift from design and construction to initial start-up and operation of the facility. As the facility nears completion, LES will staff the LES NEF Operating Organization to ensure smooth transition from construction activities to operation activities. During this transition, the Health, Safety, & Environment (HS&E) Manager position reports directly to the LES President (as shown in Figure 2.1-1) for HS&E matters related to design and construction and reports directly to the Plant Manager (as shown in Figure 2.1-2) for HS&E matters related to operations. This position is intentionally duplicated to provide significant continued focus on the health, safety, and environment goals during design and construction when the operating organization is not yet fully developed and implemented. Urenco, which has been operating gas centrifuge enrichment facilities in Europe for over 30 years, will have personnel integrated into the LES organization to provide technical support during startup of the facility and transition into the operations phase.

As the construction of systems is completed, the systems will undergo acceptance testing as required by procedure, followed by turnover from the construction organization to the operations organization by means of a detailed transition plan. The turnover will include the physical systems and corresponding design information and records. Following turnover, the operating organization will be responsible for system maintenance and configuration management. The design basis for the facility is maintained during the transition from construction to operations through the configuration management system described in Chapter 11, Management Measures.

Additional information regarding the transition from design and construction to operations, for the LES QA Organization, is provided in Section 1 of the LES Quality Assurance Program Description (i.e., Appendix A of the NEF Safety Analysis Report).

4.1 COMMITMENT TO RADIATION PROTECTION PROGRAM IMPLEMENTATION

The radiation program meets the requirements of 10 CFR 20 (CFR, 2003b), Subpart B, Radiation Protection Programs, and is consistent with the guidance provided in Regulatory Guide 8.2, Guide for Administrative Practice in Radiation Monitoring (NRC, 1973a). The facility develops, documents and implements its Radiation Protection Program commensurate with the risks posed by a uranium enrichment operation. The facility uses, to the extent practicable, procedures and engineering controls based upon sound radiation protection principles to achieve occupational doses and doses to members of the public that are as low as reasonably achievable (ALARA). The radiation program content and implementation are reviewed at least annually as required by 10 CFR 20.1101(c) (CFR, 2003d). In addition, in accordance with 10 CFR 20.1101(d) (CFR, 2003d) constraints on atmospheric releases are established for the NEF such that no member of the public would be expected to receive a total effective dose equivalent in excess of 0.1 mSv/yr (10 mrem/yr) from these releases. Additional information regarding compliance with 10 CFR 20.1101(d) is provided in Section 9.2.

The facility's philosophy for radiation protection is reflected in the establishment of a Radiation Protection Program that has the specific purpose of maintaining occupational radiation exposures ALARA. This program includes written procedures, periodic assessments of work practices and internal/external doses received, work plans and the personnel and equipment required to help implement the ALARA goal.

The facility's administrative personnel exposure limits have been set below the limits specified in 10 CFR 20 (CFR, 2003b). This provides assurance that legal radiation exposure limits are not exceeded and that the ALARA principle is emphasized. The facility administrative exposure limits are given in Table 4.1-1, Administrative Radiation Exposure Limits. Estimates of the facility area radiation dose rates and individual personnel exposures, during normal operations, are shown in Table 4.1-2, Estimated Dose Rates and Table 4.1-3, Estimated Individual Exposures. These estimates are based upon the operating experience of similar Urenco facilities in Europe.

The annual dose equivalent accrued by a typical radiation worker at a uranium enrichment plant is usually low. At the Urenco Capenhurst plant, the maximum annual worker dose equivalent was 3.1 mSv (310 mrem), 2.2 mSv (220 mrem), 2.8 mSv (280 mrem), 2.7 mSv (270 mrem) and 2.3 mSv (230 mrem) during the years 1998 through 2002, respectively. For each of these same years, the average annual worker dose equivalent was approximately 0.2 mSv (20 mrem) (Urenco, 2000; Urenco, 2001; Urenco, 2002).

Protection of plant personnel requires (a) surveillance of and control over the radiation exposure of personnel; and (b) maintaining the exposure of all personnel not only within permissible limits, but "as low as is reasonably achievable," in compliance with applicable regulations and license conditions. The objectives of Radiation Protection are to prevent acute radiation injuries (nonstochastic or deterministic effects) and to limit the potential risks of probabilistic (stochastic) effects (which may result from chronic occupational exposure) to an acceptable level.

The radiation exposure policy and control measures for personnel are set up in accordance with requirements of 10 CFR 20 (CFR, 2003b) and the guidance of applicable Regulatory Guides. Recommendations from the International Commission on Radiological Protection (ICRP) and

9.2 ENVIRONMENTAL PROTECTION MEASURES

LES is committed to protecting the public, plant workers, and the environment from the harmful effects of ionizing radiation due to plant operation. Accordingly, LES is firmly committed to the "As Low As Reasonably Achievable," (ALARA) philosophy for all operations involving source, byproduct, and special nuclear material. This commitment is reflected in written procedures and instructions for operations involving potential exposures of personnel to radiation (both internal and external hazards) and the facility design. Written procedures for effluent monitoring address the need for periodic (monthly) dose assessment projections to members of the public to ensure that potential radiation exposures are kept ALARA (i.e., not in excess of 0.1 mSv/yr (10 mrem/yr)) in accordance with 10 CFR 20.1101(d).

Part of LES's environmental protective measures are described in the ER. In particular, Chapter 4 discusses the anticipated results of the radiation protection program with regard to ALARA goals and waste minimization. Chapter 6 discusses the environmental controls and monitoring program.

A detailed description of LES' radiation protection program is included separately in this License Application as Safety Analysis Report (SAR) Chapter 4. Similarly, LES's provisions for a qualified and trained staff, which also is part of the environmental protection measures required, are described separately in the SAR as part of Chapter 11.

9.2.1 Radiation Safety

The four acceptance criteria that describe the facility radiation safety program are divided between two License Application documents. SAR Chapter 4 describes:

- Radiological (ALARA) Goals for Effluent Control
- ALARA Reviews and Reports to Management.

ER Chapter 4, Environmental Impacts, addresses:

- Effluents controls to maintain public doses ALARA, and
- Waste Minimization.

In particular, ER Section 4.12 describes public and occupational health effects from both non-radiological and radiological sources. This section specifically addresses calculated total effective dose equivalent to an average member of critical groups or calculated average annual concentration of radioactive material in gaseous and liquid effluent to maintain compliance with 10 CFR 20 (CFR, 2003a).

ER Section 4.13 contains a discussion on facility waste minimization that identifies process features and systems to reduce or eliminate waste. It also describes methods to minimize the volume of waste.

9.2.2 Effluent and Environmental Controls and Monitoring

LES has designed an environmental monitoring program to provide comprehensive data to monitor the facility's impact on the environment. The preoperational program will focus on collecting data to establish baseline information useful in evaluating changes in potential environmental conditions caused by facility operation. The preoperational program will be initiated at least two years prior to facility operation.

The operational program will monitor to ensure facility emissions are maintained ALARA. Monitoring will be of appropriate pathways up to a 2-mile radius beyond the site boundary.

ER Chapter 6 describes environmental measurement and monitoring programs as they apply to preoperation (baseline), operation, and decommissioning conditions for both the proposed action and each alternative.

9.2.2.1 Effluent Monitoring

ER Section 6.1 presents information relating to the facility radiological monitoring program. This section describes the location and characteristics of radiation sources and radioactive effluent (liquid and gaseous). It also describes the various elements of the monitoring program, including:

- Number and location of sample collection points
- Measuring devices used
- Pathway sampled or measured
- Sample size, collection frequency and duration
- Method and frequency of analysis, including lower limits of detection.

Based on recorded plant effluent data, dose projections to members of the public will be performed monthly to ensure that the annual dose to members of the public does not exceed the ALARA constraint of 0.1 mSv/yr (10 mrem/yr). If the monthly dose impact assessment indicates a trend in effluent releases that, if not corrected, could cause the ALARA constraint to be exceeded, appropriate corrective action will be initiated to reduce the discharges to assure that subsequent releases will be in compliance with the annual dose constraint. In addition, an evaluation of the need for increased sampling will be performed. Corrective actions may include, for example, change out of Separation Building or Technical Services Building Gaseous Effluent Vent System filters, replacement of spent cleanup resins for liquid waste or reprocessing collected waste prior to release to the Treated Effluent Evaporative Basin.

Lastly, this section justifies the choice of sample locations, analyses, frequencies, durations, sizes, and lower limits of detection.

9.2.2.2 Environmental Monitoring

ER Section 6.1 also includes information relating to the facility environmental monitoring program. The information presented is the same as that included in the effluent monitoring program, i.e., number and location of sample collection points, etc.

9.2.3 Integrated Safety Analysis

LES has prepared an integrated safety analysis (ISA) in accordance with 10 CFR 70.60 (CFR, 2003h). The ISA

- Provides a complete list of the accident sequences that if uncontrolled could result in radiological and non-radiological releases to the environment with intermediate or high consequences
- Provides reasonable estimates for the likelihood and consequences of each accident identified
- Applies acceptable methods to estimate environmental effects that may result from accidental releases.

The ISA also

- Identifies adequate engineering and/or administrative controls for each accident sequence of environmental significance
- Assures adequate levels are afforded so those items relied on for safety (IROFS) will satisfactorily perform their safety functions.

The ISA demonstrates that the facility and its operations have adequate engineering and/or administrative controls in place to prevent or mitigate high and intermediate consequences from the accident sequences identified and analyzed.

The following page, in its entirety, contains proprietary information in accordance with 10 CFR 2.390, "Public inspections, exemptions, requests for withholding," paragraph (d)(1) and has been withheld.

NEF ISA Summary – Revision 4

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Section 3.2

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