

May 7, 1990

Ms. Janet Urban, Esq.
Department of Justice
Judiciary Center
555 4th Street, N.W.
Washington, DC 20001

Re: Antitrust Review of Louisiana Energy Services' (LES) Application to
Construct a Uranium Enrichment Facility

Dear Janet:

Enclosed for your information and review is a recent submittal by LES pursuant
to their application for a permit to construct a uranium enrichment facility.

As indicated in the submittal, the requested antitrust information is scheduled
to be forwarded next month. I will provide you with a copy of same as soon as
they submit it.

Regards,

ORIGINAL SIGNED BY

William M. Lambe
Senior Antitrust Policy Analyst
Office of Nuclear Reactor Regulation

Enclosure:
As stated

DISTRIBUTION: [LTR. TO JANET URBAN, ESQ.]
~~Central File~~ WLambe
PTSB:R/F JRutberg
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4/30/90 09:30

704 373 8700

DUKE ENGINEERING

2001

LES Project

Packard Place - Suite 200
P.O. Box 36911
Mail Stop PP02B
Charlotte, N.C. 28236

Telecopy Request Form

FAX #: (704) 373-8700

Verification No. (704) 373-4834
Joey Jordan, Project Secretary

6-11-3

Date:

4/30/90
To: Peter Loysen, ONM55

Telephone Number: (301) 492-0685

Subject: LES/NRC Meeting Agenda

Fax #: (301) 492-0259 Verification #: _____

From: Peter LeRoy

Telephone Number: (704) 373-8466

This transmittal contains 10 pages excluding cover sheet.

AGENDA
NRC/LES MEETING
THURSDAY, MAY 3, 1990

Part 1 - Project Issues Review & Update, 9:30 AM - Noon

Expected participants:

Roger Poulter	Dick Balprez or Joe Brennan
Howard Arnold	Peter LeRoy
Jesse Swords	Erich Kraska
Bob Zimmerman	Bill Griffin
Joe Krotts	John McEvoy
Myron Kratzer	Marc Rowden (Afternoon only)

- Project Status. Update from Howard Arnold.

Signing of Partnership Agreement, Announcement in Homer on April 27, 1990,
Name of Facility, if chosen, etc.

- Details of Partnership Agreement affecting Foreign
Domination and Antitrust.

The Partnership Agreement (PA) was written to ensure compliance with
10CFR50.38. The PA was written to ensure the partnership is not dominated by a
foreign interest.

There are four general voting partners; they and their normal votes are listed
below. The financial contribution percentage of each partner is shown in
parenthesis:

	Voting %	Financial %
Urenco	- 47	(47)
Fluor Daniel	- 12	(13)
Duke Power	- 33	(29)
Northern States Power	- 8	(7)
Louisiana Power & Light (Limited Partner Only)		(4)
Total	100	100

Normally, for agreeing upon significant actions affecting the partnership, a
majority vote of at least 60% is required. The following activities also
require an affirmative vote from Urenco:

- Election of the President of the Partnership.
- Selection of the Operating Contractor for the facility.
- Decisions allowing new partners.
- Decision for proceeding with construction of the facility.
- Decisions concerning marketing.

There are restrictions on the voting rights of Urenco. These restrictions are outlined below:

- If the Chairperson or Vice-Chairperson of the Partnership Management Committee represents Urenco, that person can not exercise the duties of the position in any matter involving National Security Issues (NSI).
- On all NSI matters, Urenco has no more than 20 votes. Urenco's balance of votes is allocated among the other voting partners.

National Security Issues (NSI) are considered to be:

- Control of Restricted Data or National Security Information.
- Control of Special Nuclear Material.
- Control of Materials Accountability records or other Safeguards Information.
- Control of physical security plans or arrangements for the protection of facilities or of Restricted Data or National Security Information.

The antitrust information requested by the NRC on October 31, 1990 will be submitted in June, 1990. The general partners are:

Urenco
Fluor Daniel
Duke Power
Northern States Power

The limited partners are:

Louisiana Power & Light
British Nuclear Fuels
Gen (Genit)
UCW
Micogen (Fluor Daniel)
Duke Power
La Paz (Northern States)

3 Article 5.1(e), PA, p. 17.

4 Article 5.3(b) & (c), PA, p. 21.

- LES QA Program

LES now plans to use two safety classes with commensurate Quality Assurance applied to each class as outlined below:

System Class I (QA Condition 1):

Those systems, structures and components (SSC) necessary to prevent or mitigate events that could result in exposure to any offsite individual to 500 mg-min/m³ hydrogen fluoride and/or inhalation of 10 mg uranium.

A quality assurance program is applied to these systems incorporating the 18 criteria of Appendix B as detailed by ANSI NQA-1.

System Class II (QA Condition 2):

Those SSC that are not System Class I.

Good engineering practices will be applied to these SSC to ensure quality. Any special requirements needed will be added by specification rather than classification.

Feedback on LES' QA Program (Duke Power QA Topical Report) will be given by the NRC.

- Issuance of Construction Permit/Operating License

Discussion of licensing operation of one cascade with construction of other cascade(s) in progress. Also discuss NRC's expectations of licensing proceedings with respect to issuing a combined CP/OL similar in concept to Part 52. For example, will "one step" license require submittal of Physical Security Plan and Material Control and Accountability Plan with initial license application.

- Classified visits to Urenco facilities

Update from NRC on receiving permission for these visits from European governments.

- Update on Security.

Update from NRC on personnel security clearances, especially Fluor Daniel and status of classified design package from Urenco.

- Importation of Centrifuges

Discussion led by Myron Kratzer on the importation of classified equipment.

Lunch Break

Part 2 - License Application Detail, Design of Autoclaves, and Safety Analysis Assumptions. 1:30 - 3:30 PM

Discuss with the NRC LES' understanding of the level and amount of information necessary for a conceptual one-step license application. Handouts for this issue are attached.

Discuss with the NRC the design of the autoclaves need not incorporate a relief device. Since the normal operating pressure of the autoclaves will be approximately 3.2 - 5.4 psig, with a trip setpoint of approximately 10.6 psig, the autoclaves are not required to meet the requirements of Section VIII of the ASME code. Section VIII excludes "vessels having an internal or external operating pressure not exceeding 15 psi[g] with no limitation on size." The significance of this is Section VIII would require a relief device. Based upon the above criteria, no relief device is needed.

Discuss with the NRC LES' understanding of designing the facility for natural phenomena. Once the facility has been designed to withstand the design basis earthquake or tornado, no further analysis need be performed. For example, once the separations building has been designed to withstand wind speeds which correspond to the 10,000 year tornado, no evaluation of what wind speeds could cause building failure is necessary.

Louisiana Energy Services
System Information Development
For License Application

1) System Description.

A description of the system's function, interfaces with other systems, processes, safety, reliability, maintainability, and any environmental factors contributing to the system design.

2) Process Flow Diagram/Block Flow Diagram

See example attached.

3) P&ID/One Line Diagram (System Diagram)

See example attached.

4) General Arrangements and Sections

See example attached.

5) Performance Specifications

Specification for detailing specific functions and design requirements to a vendor for fabrication of equipment.

6) Control Logic

7) Equipment Design

8) Operational Plans

9) Test Requirements (ITAAC)

Louisiana Energy Services
System Information Development
For License Application

Process/Utility Systems	Safety/ QA Class	1 2 3 4 5 6 7 8 9								
		1	2	3	4	5	6	7	8	9
320 UF6 Pipework and Valves (Cascade Hall)	II	X	X		X					
340 Portable Equipment	II	X								
410 UF6 Feed	I	X	X	X	X	X	X	X		X
	II	X	X	X	X		X			
420 Product Take-off	II	X	X	X	X		X			
430 Tails Take-off	II	X	X	X	X					
450 Contingency Dump	II	X	X		X					
460 Blending System	I	X	X	X	X	X	X	X		X
	II	X	X	X	X		X			
470 Product Liquid Sampling	I	X	X	X	X	X	X	X		X
	II	X	X	X	X		X			
490 Portable Test Equipment	II	X								
611 Main Cooling Water System	II	X	X		X					
612 Machine Cooling Water System	II	X	X							
613 Demin Water Supply System	II	X	X							
617 Spray Water System	II	X	X							
618 Air Cooling (Product Containers)	II	X	X							
619 Air Cooling (Blending Containers)	II	X	X							
620 Hot Refrigerant	II	X	X							
625 Cold Refrigerant Systems	II	X	X							
630 Plant and Instrument Air	II	X	X							
640 Nitrogen	II	X	X							
650 Hot Water (Building Heating, Domestic Hot Water)	II	X	X							
660 Liquid Effluent	II	X	X			X				
677 Effluent Exhaust (Vacuum pumps, UF6 Connection/ Disconnection Points)	II	X	X			X				
	II	X	X			X				
678 Gaseous Effluent Vent	II	X				X				
680 Hoisting/Transportation Equipment	II	X				X				
Utility/Potable Water Standby Generator	II	X				X				

Louisiana Energy Services
System Information Development
For License Application

Other Building Systems	Safety/ QA									
	Class	1	2	3	4	5	6	7	8	9
VAC	II	X	X		X					
UF6 Areas:	II	X								
Non UF6 Areas	II	X		X	X					
Site Electrical Distribution	II	X		X	X					
Separation Building Electrical	II	X		X	X					
UPS in Separation Building	II	X	X		X					
Fire Suppression	II	X								
Fire Detection	II	X								
Monitors and Alarms	II	X								
(Radiation, Criticality)	II	X								
Distributed Control System	II	X							X	
Control Room	II	X							X	
Security	II	X							X	
Communications	II	X							X	
Material Accountability	II	X			X					
Environmental Monitoring	II	X			X				X	
Cylinder Storage	II	X			X					
Cylinder Receipt & Handling	II	X	X		X				X	
CAB Testing & Manufacturing	II	X			X				X	
Separations Building	II	X			X				X	
Health Physics & Chemistry Labs	II	X			X				X	
Maintenance & Decontamination	II	X	X		X					
Waste Storage & Processing	II	X								

Louisiana Energy Services
ITAAC for the Claiborne Enrichment Center

ITAAC Objectives:

- Specify acceptance criteria based upon specific high-level safety limits, such as those derived from the General Design Criteria, but more specific and quantified.
- Retain as much as possible of the existing NRC inspections, tests, and related review processes.
- Develop and apply concept of validation attributes.
- Provide for application of Quality Assurance to process.
- Ensure NRC approval process is incorporated into process.

Acceptance Criteria and Validation Attributes

- Functional level acceptance criteria developed from the GDC.
- Functional level acceptance criteria ensures integrity of safety function while allowing flexibility for safety-acceptable construction tolerances that do not impair standardization.
- Validation attributes provide readily measurable or otherwise verifiable bases for demonstrating acceptance criteria conformance in the cases where acceptance criteria can not be directly verified.
- Validation attributes that are non-conforming can be acceptable as long as it is satisfactorily demonstrated the acceptance criteria are still met. For example, 50,000 BTUs per hour must be transferred from a system. This is accomplished by using a pump that operates at 100 gpm at 100 psig. When the pump is tested, it only pumps 99 gpm, but this is acceptable because the 50,000 BTUs per hour can still be transferred.

Tests, Inspections and Analyses

- Most required inspections, tests and analyses, as well as acceptance criteria, are based upon NRC or standard industry requirements and experience.
- The LES license application will identify those tests and analyses necessary to demonstrate the as-built facility conforms to the design description presented in the license application.

Louisiana Energy Services
EAAC for the Claiborne Enrichment Center

Example: Feed Autoclave

General Description:

The feed autoclaves at the Claiborne Enrichment Center are designed as an integral part of the UF₆ Feed System. The UF₆ Feed System is designed to supply a continuous flow of purified UF₆ at the required rate from UF₆ cylinders. The feed autoclaves have also been designed to protect facility personnel, the public and the environment from the effects of releases of UF₆.

The autoclave will contain manual and automatic stop valves, an automatic flow control valve, and pressure and temperature instruments to control the process gas. The autoclave will be equipped with internal pressure, temperature and air quality monitoring equipment. It will be provided with a hydraulic system to allow the door to be opened, closed, locked and unlocked. The autoclave will be connected to a central gaseous effluent system for scrubbing the air within the autoclave prior to the autoclave door being opened. The gaseous effluent system will be equipped with detectors which will indicate the presence of UF₆, hydrogen fluoride, or uranyl fluoride.

Design Features:

The process variables, namely pressure, temperature and position, and modes of all active components are automatically controlled. Deviations from specified values will be detected and alarmed. On receipt of the first alarm level, an operator will be able to manipulate the process to try and restore the desired level of performance. On a second alarm level, actions will automatically function to put the system in a safe configuration.

Acceptance Criteria:

1. The design basis internal pressure of _____ psig shall not be exceeded under all normal and postulated accident conditions.
2. The design basis internal temperature of _____ F shall not be exceeded under all normal and postulated accident conditions.
3. The design basis leakage rate of _____ cfm at _____ F and _____ % relative humidity shall not be exceeded under all normal and postulated accident conditions.
4. The autoclave will be constructed in accordance with the performance specifications outlined in section _____ of the Safety Analysis Report.

Inspections, Tests, and Analyses

1. Analyses shall be conducted to ensure the internal pressure, temperature and leakage rates are not exceeded under all normal and postulated accident conditions.
2. A hydrostatic test of the autoclave will be conducted to ensure integrity of autoclave at appropriate pressures and temperatures.
3. The instruments and controls outlined in the attached matrix and shown on the attached flow diagram will be verified to be calibrated and operating correctly. These instruments will ensure the acceptance criteria for not exceeding certain temperatures and pressure will be met.