



MAY 27 2009

NEF-09-00097-NRC

Director  
Office of Nuclear Material Safety and Safeguards  
U.S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
11555 Rockville Pike  
Rockville, MD 20852

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

Subject: National Enrichment Facility Operational Readiness Review for Initial Plant Operations Presentation

On May 12, 2009, Louisiana Energy Services, LLC (LES) Management presented a presentation on the Operational Readiness Review for the National Enrichment Facility at NRC Headquarters in Rockville, Maryland. The presentation included various NEF activities and corresponding schedules (Enclosure 2), copies of which were provided to, and retained by, attending NRC representatives.

Due to the confidential nature of the NEF activity schedules identified in the presentation, LES requests that such be withheld from public disclosure pursuant to 10 CFR Part 2.390(a)(4). Accordingly, a redacted version of the presentation, with schedules obscured, is provided in Enclosure 3 for public disclosure purposes. In addition, an affidavit requesting the withholding of the specified content of the presentation in accordance with 10 CFR Part 2.390(b)(1) is provided in Enclosure 1.

Should you have any questions concerning the above withholding request, please contact Stephen Cowne, LES Director of Quality and Regulatory Affairs at (575) 394-5253.

Respectfully,

A handwritten signature in black ink, appearing to read "Gregory OD Smith", is written over a horizontal line.

Gregory OD Smith  
Chief Operating Officer and Chief Nuclear Officer

NM5501

Enclosures: 1) Affidavit  
2) Non-Redacted Version of Operational Readiness Review for Initial Plant Operations Presentation  
3) Redacted Version of Operational Readiness Review for Initial Plant Operations Presentation

cc:

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**ENCLOSURE 1**

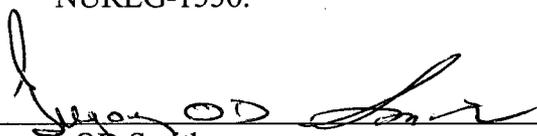
**Affidavit**

**ENCLOSURE 1**

**Affidavit**

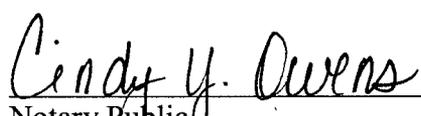
I, Gregory OD Smith, Chief Operating Officer and Chief Nuclear Officer of Louisiana Energy Services, LLC at the National Enrichment Facility (NEF), make the following representations that to the best of my knowledge and beliefs:

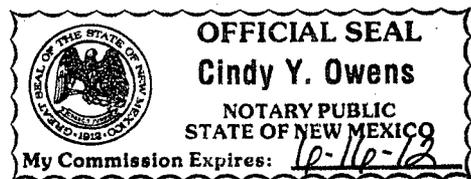
1. LES, as the owner of the indicated information, wishes to have withheld from public disclosure, the following text:
  - National Enrichment Facility Operational Readiness Review for Initial Plant Operations Presentation given to the NRC in Rockville, Maryland May 12, 2009.
2. The information contained in the presentation (document) cited in Item 1 for which exemption from public disclosure is requested contains schedule information and project milestones for which LES was previously granted public disclosure withholding on April 7, 2008 in a letter from the NRC to LES, *Approval of LES Request for withholding scheduler information from public disclosure.*
3. The information contained in the document cited in Item 1 for which exemption from public disclosure is requested identifies critical schedules of NEF activities and has the potential to result in substantial harm to the competitive position of LES and could reduce or foreclose the availability of profit opportunities if it is disclosed.
4. LES therefore requests that this information be exempt from disclosure pursuant to the provisions of 10 CFR Part 2.390(a)(4). The information stated in this affidavit has been submitted in accordance with 10 CFR Section 2.390 and NUREG-1556.

  
\_\_\_\_\_  
Gregory OD Smith  
Chief Operating Officer and Chief Nuclear Officer  
Louisiana Energy Services, LLC  
National Enrichment Facility

I certify the above named person appeared before me and executed this document on this

27<sup>th</sup> day of May, 2009

  
\_\_\_\_\_  
Notary Public  
My commission expires: 10-16-12



**ENCLOSURE 3**

**Redacted Version of LES Presentation**



# **Operational Readiness Review for Initial Plant Operation**

**May 12, 2009**

# Opening Remarks



Opening Remarks by Gregory Smith, COO/CNO

# Agenda



## Agenda

- Introduction and Objective
- Milestones
- Operating Envelope for Initial Plant Operation
- Production Envelopes for Subsequent Operation
- License Amendments Needed
- ORR Preparations and Follow Up
- Closing

- Describe the schedule for the Operational Readiness Review (ORR).
- Describe the Structures, Systems, and Components (SSCs) needed to support the operating envelope for safe plant operation.
- Discuss the license amendments needed to support initial plant operation.
- Discuss the SSCs needed to support the production envelope for subsequent safe plant operation.
- Explain how LES will prepare for the ORR.
- Address NRC questions and comments.

# Initial Plant Operation Milestones



- [REDACTED] – Ready for inspection of the following programs
  - Permanent Plant Modifications
  - Facility Changes and Change Process (10 CFR 70.72)
  - Management Organization and Controls
- [REDACTED] – Ready for inspection of the following programs
  - Radiation Protection
  - Maintenance and Surveillance of Safety Controls
  - Emergency Preparedness
- [REDACTED] – Ready for Emergency Preparedness Inspection/Exercise
- [REDACTED] – Ready for NRC Operational Readiness Review for Initial Plant Operation

## Operating Envelope for Initial Plant Operation:

- **UF6 Operations in the Separations Building Module**
  - Items Relied On For Safety (IROFS)
  - Criticality Accident Alarm System (CAAS)
  - Feed System
  - Tails System
  - Product System
  - Dump System
  - Cascades
  - Cascade Power Supply
  - Gaseous Effluent Ventilation System (GEVS)
  - Local Operator Controls
  - Radiation Monitoring Systems and Controls
- **Command & Control in the Technical Services Building**
  - Plant Control Room
  - Plant Monitoring and Alarm Systems
  - Plant Control System (PCS)
  - Cascade Monitoring System (CMS)

## Operating Envelope for Initial Plant Operation (cont):

- **Emergency Response from the Technical Services Building**
  - Emergency Operations Center
  - Fire Brigade Dispatch Area
  - Medical Response Facility
- **Utilities supplied from the Central Utilities Building**
  - Electrical Distribution System
  - Compressed Air System
  - Centrifuge Cooling Water System
  - Standby Diesel Generators
  - Nitrogen System
  - Local Operator Controls
- **Security Systems**
  - Controlled Access Area (CAA) security measures
  - Physical Security Plans
  - Information System Security Plans

## Operating Envelope for Initial Plant Operation (cont):

- **Life Safety Systems**
  - Fire Detection and Suppression Systems
  - Emergency Egress Lighting
  - Ventilation Systems
  - Public Address System
  
- **Other Support Systems**
  - Cylinder Receipt and Storage
  - Personnel Decontamination Facility
  - Waste Storage Facility
  - Liquid Collection Facility
  - Chemistry Lab
  - On Line Mass Spectrometer

## Operating Envelope for Initial Plant Operation (cont):

- Programs
  - Nuclear Criticality Safety (IP-88015, IP-88016, IP-88017)
  - Permanent Plant Modification (IP-88070)
  - ISA Implementation (IP-88156)
  - Environmental Protection and Effluent Control (IP-88158, IP-88045)
  - Facility Changes and Process (IP-88151)
  - Radiation Protection (IP-83030)
  - Transportation Activities (IP-86740)
  - Operational Safety (IP-88020)
  - Management Organization and Controls (IP-88005)
  - Training (IP-88010, IP-88150)
  - Emergency Preparedness (IP-88050, IP-88051)
  - Fire Protection (IP-88055, IP-88154)
  - Process Safety Information (IP-88056)
  - Material Control and Accountability (IP-88153)
  - Industrial Safety (IP-88160, IP-88159)
  - Maintenance and Surveillance of Safety Controls (IP-88025)
  - Waste Management (IP-88035, IP88157)
  - Functional Verification of IROFS (IP-88155)

## Production Phase 1 Envelope:

- Continue Placing Cascades into Production
- Production Related Systems in the CRDB
  - GEVS (local extract and fume hood GEVS)
  - Cylinder Storage
  - Ventilated Room
  - Sub-Sampling System
  - Chemistry Lab
  - Mass Spectrometer Room
  - Personnel Decontamination Room
- Production Related Systems in the SBM
  - Blending and Liquid Sampling Systems
  - Autoclave
- Miscellaneous Production Related Systems
  - UBC Basin
  - Cooling Towers

## Production Phase 2 Envelope:

- Continue Placing Cascades into Production
- Production Related Systems in the CRDB
  - Cylinder Receipt and Shipment
  - Expanded Cylinder Storage
  - Liquid Effluent Collection and Treatment System
  - Decontamination Workshop
  - Vacuum Pump Rebuild Shop
  - Solid Waste Storage Room
- Miscellaneous Production Related Systems
  - UBC Storage Pad

## SSCs Not Required for Initial Plant Operation



- Some structures, systems, and components (SSCs) provided in the overall plant design that are needed to support the production phases will be fully implemented prior to entering that phase of production.
- The functions of these SSCs are either not needed for initial plant operation or will be provided by an alternate means. For these functions:
  - License Basis Documents will be updated to describe the actual plant configuration at startup.
  - Integrated Safety Analysis (ISA) evaluations will be performed to verify the safe operation of the plant in this configuration.
  - 70.72(c) evaluations will be completed to determine approval authority for the changes.

# SSCs Not Required for Initial Plant Operation



	SSC	Transition to Production Phase 1
1	Local Extract GEVS Fume Hood GEVS	The plant design has been changed to place the Safe By Design GEVS permanently in the UF6 handling area of SBM 1001. The Local Extract GEVS will be temporarily combined with the Safe By Design GEVS in the SBM. When the GEVS Room is ready in the CRDB, the Local Extract GEVS will be transitioned, along with the Fume Hood GEVS, to the CRDB GEVS.
2	CRDB Cylinder Storage	Feed containers and tails containers will be stored in the feed, tails, and product stations in the UF6 handling area. The cylinders will be moved to the CRDB when it is ready to accept cylinders for storage.
3	Ventilated Room	The ventilated room in the CRDB is needed for maintenance of chemical traps and replacement of faulty valves on full UF6 cylinders. Full chemical traps, if any, will be stored in a waste storage room until the ventilated room is available. UF6 cylinders with faulty valves will be stored until the ventilated room in the CRDB is available or returned to the vendor for repairs.
4	Sub-Sampling System	The Sub-Sampling System that will be installed in the Mass Spectrometry Lab will be needed for analysis of Product delivery samples. Sub-Sampling is needed for Production Phase 1 when the Blending and Liquid Sampling System is complete.
5	Chemistry Lab	LES has a chemistry lab at the Carlsbad Environmental Monitoring and Research Center (CEMRC) to provide chemistry services until the Chemistry Lab in the CRDB is complete.

# SSCs Not Required for Initial Plant Operation



	SSC	Transition to Production Phase 1
6	Mass Spectrometry Lab	LES has a chemistry lab at the Carlsbad Environmental Monitoring and Research Center (CEMRC) to provide Mass Spectrometry Services until the Mass Spectrometry Lab in the CRDB is complete.
7	Personnel Decontamination Facility	A portable facility will be provided for personnel decontamination until the CRDB decontamination shower is built.
8	Autoclaves Blending and Liquid Sampling	These systems will be installed prior to shipping finished product.
9	UBC Basin	The UBC Basin will be completed to support Production Phase 1. Until then, drainage from the following sources will be collected in a temporary tank, sampled and disposed of: <ul style="list-style-type: none"> <li>• Fire Water Pump House Floor Drain</li> <li>• Domestic Water Pump House Floor Drain</li> <li>• CUB Oily Water Separator Effluent</li> <li>• TSB Oily Water Separator Effluent</li> </ul>
10	CCWS Cooling Towers	The Cascade Cooling Water System (CCWS) Chillers will have the capacity to provide sufficient cooling for the first several cascades. The Cascade Cooling Water Towers will be installed and operational as needed to support production needs.

# SSCs Not Required for Initial Plant Operation



	SSC	Transition to Production Phase 2
1	CRDB Shipping and Handling Area	Cylinders will be received via an unloading facility on the west side of the UF6 handling area of SBM 1001 until the CRDB shipping and handling area is complete.
2	Liquid Effluent Collection and Treatment System Room	Liquid effluent will be collected in Safe By Design containers and sampled for Uranic content. It will then be stored, disposed of, or treated in a portable facility until the Liquid Effluent Collection and Treatment System is complete. Quantities of less than 1 gallon per month are expected.
3	Decontamination Workshop	Items that need decontaminated will be stored or disposed of until the Decontamination Workshop is complete. Operating experience from existing Urenco plants indicates that decontamination requirements will be minimal. Approximately, three 55 gallon drums should accommodate all equipment requiring decontamination prior to the Decontamination Workshop being completed.
4	Vacuum Pump Rebuild Workshop	The Vacuum Pump Rebuild Workshop will not be needed initially because the normal operating life of a vacuum pump is 2-2 1/2 years. In the event that a pump does fail, it can be left in place or stored in a safe by design storage area until the Vacuum Pump Rebuild Workshop is complete.
5	Solid Waste Storage Room	Solid waste will be stored in drums or shipped off-site until the Solid Waste Storage Room is complete.
6	UBC Pad	Cylinders will be stored in the SBM or CRDB until UBC Storage Pad is ready for use.

# Second Readiness Review Milestones



- Blending and Liquid Sampling complete in the SBM UF6 area.
- South end and bunkered area of CRDB ready for:
  - GEVS (local extract and fume hood GEVS)
  - Cylinder Storage
  - Ventilated Room
  - Sub-Sampling System
  - Chemistry Lab
  - Mass Spectrometer Room
  - Personnel Decontamination Room
- UBC Basin and Cooling Towers complete
- Ready for NRC Readiness Review for Production Phase 1.

# Third Readiness Review Milestones



- CRDB Building complete and ready for:
  - Cylinder Receipt and Shipment
  - Expanded Cylinder Storage
  - Liquid Effluent Collection and Treatment System
  - Decontamination Workshop
  - Vacuum Pump Rebuild Workshop
  - Solid Waste Storage Room
- UBC Pad ready for cylinder storage
- Ready for NRC Readiness Review for Production Phase 2.

# License Amendments Needed for ORR



**LES has identified 16 license amendments needing NRC approval prior to the first ORR and 1 license amendment needed for approval prior to Production Phase 1. In addition, 1 change requires further evaluation and could result in an LAR.**

LICENSE AMENDMENTS SUBMITTED				
Item	LAR No.	Change Title	Description	Date
1	LAR-09-001	FNMCP Rev 7	This is a complete revision to reflect current organization instrumentation, and measurement control characteristics.	January 9
2	LAR-09-003	First Five Information System Security Plans	1.0 Master Site ISSP 1.1 Master Plant Control & Core Systems (PCCS) ISSP 1.1.1 PCCS PCS Local Control Centers (LCC) ISSP 1.1.2 PCCS PCS Clients ISSP 1.1.3 PCCS PCS Servers ISSP	February 3
3	LAR-09-004	PCCS Drives & Centrifuge Monitoring System	1.1.4 PCCS Drive & Centrifuge Monitoring System (CMS) ISSP	February 18
4	LAR-09-006	PCS Mobile Rigs and Systems ISSP	1.1.5 PCCS PCS Mobile Rigs / Systems ISSP	March 2
5	LAR-09-007	CRDB Building/Bunker Design & TSB IROFS Relocation	Change applicability of IROFS from the Technical Services Building to the Centrifuge Receipt and Dispatch Building	April 3
6	LAR-09-009	Process IROFS Removal, IROFS3, 47b, C18 and the addition of C21	Replace active engineered controls with passive flow restrictor	May 8
7	LAR-09-012	Possession of Additional Byproduct Materials	Addition of Cs-139 and Hg-203 byproduct materials.	April 30
8	LAR-09-013	Cylinder Overpack Elimination	Remove the requirement for use of thermal overpacks for 48" cylinders	May 5
9	LAR-09-015	Classified PM Network ISSP	1.2 Classified Plant Management Network ISSP	April 30
10	LAR-09-017	Physical Security Plan	Modify CAA Boundary	May 1
11	LAR-09-019	LES SPPP – Addition of TSB as a classified area	Addition of required security systems to protect the TSB as a classified area.	May 7

# License Amendments Needed for ORR



UPCOMING LICENSE AMENDMENTS			
Item	Change Title	Description	Date
<b>Amendments needed for ORR</b>			
1	IROFS 35 Replacement	Replace fire propagation IROFS with combustible controls IROFS. Fire propagation will remain as fire code requirements.	May 22
2	Constructing while operating	Allows continued phased facility construction while simultaneously conducting enrichment processing.	██████
3	Enrichment Level Limit in License	Increase the Licensed enrichment level to allow for fluctuations during the enrichment process.	██████
4	Assay Sampling Rig	Establish IROFS as required.	██████
5	MC&A Accounting Mechanism	Manual accountability instead of automatic/electronic system.	██████
<b>Amendments needed for Production Phase 1</b>			
1	Prevent autoclave opening in event of internal leak	Prevent worker consequences in the event of a cylinder leak inside the autoclave.	██████

POTENTIAL LICENSE AMENDMENTS			
Item	Change Title	Description	Date
1	CRDB GEVS (SBD GEVS)	Move the Safe By Design GEVS from the CRDB into the SBM.	██████

# Operational Readiness Preparations



- A process similar to the one used for the Hot Acceptance Testing Readiness Review will be followed.
- The Safety Analysis will be completed to support the initial plant operation.
- License Basis Documents will be updated to support the Operational Readiness Review.
- Assessments will be conducted to verify readiness in each program area.
- IROFS will be verified operable.
- Issues will be documented and tracked to closure using the Corrective Action Program.
- Functional Area Managers will affirm readiness for receipt of feed material on site and initial plant operation.

# Follow Up Items



- Submit License Amendments
- Coordinate preparations and logistics to support the NRC for the ORR inspection.
- Communicate schedule progress for Operational Readiness Review with NRC and coordinate any changes to the plan.

## Closing Remarks by Gregory Smith, COO/CNO

Operating Envelope for  
Initial Plant Operation

