

Docket No. 70-3070

NOV 10 1993

Mr. Peter G. LeRoy
Licensing Manager
Louisiana Energy Services
c/o Duke Engineering & Services, Inc.
P.O. Box 1004
Charlotte, NC 28201-1004

Dear Mr. LeRoy:

This is a follow-up to our open meeting on November 2, 1993. In that meeting the Nuclear Regulatory Commission staff and its contractor, Science Applications International Corporation (SAIC), met with you to discuss our comments on your October 14, 1993, third revision of your proposed license conditions (PLC). Enclosure 1 is a list of our comments. Enclosure 2 is a list of attendees.

In the meeting you expressed concern that some of our required license conditions may be too prescriptive. We reviewed this issue and determined that our comments in Enclosure 1 are appropriate.

You should also update your Safety Analysis Report (SAR) to reflect changes in the PLC. Note that a few of our comments relate to the SAR.

We also discussed the potential need for additional information on the product sampling autoclave. We will contact you separately on this matter.

We request that LES submit the revised license conditions as soon as possible, to minimize any potential impact in the review schedule. We are available to meet or answer questions, as necessary to expedite the process. If you have any questions, please contact Dr. Lidia A. Roche' of my staff (301-504-2695).

Sincerely,

Original Signed By

John W. N. Hickey, Chief
Enrichment Branch
Division of Fuel Cycle Safety
and Safeguards, NMSS

- Enclosures: 1. NRC staff comments
- 2. Meeting Attendees-11/2/93

cc: Attached list

DISTRIBUTION: Docket 70-3070

PDR/LPDR	NRC File Center	TCombs, GPA	DJoy
ETenEyck	RFonner, OGC	EHoller, OGC	CNielsen, RES
RBrady	GBidinger	JSpraul	EShum
FCEB r/f	NMSS r/f	YChen	AGiarratana

OFC	FCEB	FCEB	E	FCEB	E	FCEB	E	FCEB		FCEB	E
NAME	LRochè/ij	YFaraz		MHorn		GBidinger		DMartin		JHickey	
DATE	11/10/93	11/10/93		11/10/93		11/10/93		11/10/93		11/10/93	

C = COVER

E = COVER & ENCLOSURE

N = NO COPY

OFFICIAL RECORD COPY

150015

NRC FILE CENTER COPY

9311170242 931110
PDR ADDCK 07003070
C PDR

NF05

ENCLOSURE 1

NRC STAFF COMMENTS ON LES
PROPOSED LICENSE CONDITIONS (PLC) DATED 10/14/93
NRC CONTACT: Dr. Lidia Rochè - (301) 504-2695

General Comments Applicable to:

Safety Analysis Report

1. Update the Safety Analysis Report (SAR) to reflect changes in the PLC. For example, your letter of October 14, 1993, states that the boundary between Radiation Control Zones (RCZs) and Radiation Control Areas (RCAs) will be based on the criteria provided in Section 8.2 of the SAR, (also reflected in Section 3.2.1 of the PLC). However, Sections 3.2.1.2 and 3.2.3 of the PLC and Section 11.8.2.2 of the SAR, state that RCZs will be both permanent and temporary. Such inconsistencies must be resolved.
2. Add to Section 6.4.9 of the SAR the following commitments:
 - a. Administrative controls shall be implemented on operations such as welding, torch-cutting, other "hot work," and any non-routine use of flammable or combustible materials. (For guidance, NFPA 51B, Fire Prevention in Use of Cutting and Welding Processes, should be consulted.)
 - b. Regular walk-down audits of the facility shall be implemented to detect and correct departures from good housekeeping practices or operating procedures that may influence fire safety. (Weekly or at least monthly audits are recommended.)
 - c. The fire hazard analysis shall be reviewed and updated at biennial intervals or sooner in case of substantial changes in the facility or processes. Deficiencies, if any, revealed by the analysis shall be corrected expeditiously.
3. Provide ranges and alarm set-points for monitors listed in Table 8.4-1 of the SAR.

License Conditions

4. You have designed your Radiation Protection Program to only show compliance with the radiological limit of 5 rem a year. In addition, the program must also show compliance with the weekly 10 mg intake limit based on chemical toxicity of soluble uranium. You must also ensure that your action levels, lower limits of detections (LLD), intake criteria for controlling areas, and administrative limits are low enough to account for uncertainties in determining uranium intakes.
5. You should provide the full date on your PLC, not just the month.

6. The term "designee" is used throughout the PLC. Define "designee."
7. The development and production of oil and gas wells from the surface within the 179 hectare (442 acre) CEC site boundary shall be prohibited for the duration of license.

Decommissioning Funding Documents

8. With reference to the decommissioning funding document forms submitted as part of the license application, the following revisions are necessary for conformance with Regulatory Guide 3.66:
 - a. Section 5 of the Form of External Trust Agreement (Exhibit I, Attachment A to LES Application For Licenses) at page A-2 to include the following: "No withdrawal from the Fund can exceed 20 percent of the outstanding balance of the Fund unless NRC approval is attached."
 - b. Section 5 of the Form of Standby Trust Agreement (Exhibit I, Attachment C to LES Application For Licenses) at page C-2 to include the following: "No withdrawal from the Fund can exceed 20 percent of the outstanding balance of the Fund unless NRC approval is attached."

Specific Comments on License Conditions:

Chapter 1: Standard Conditions and Special Authorizations

§ 1.3 Possession Limits

9. LES' request for 300 millicuries of Cesium-137 and 100 millicuries of Cobalt-60 shall be limited to sealed sources. If unsealed materials are needed, much lower quantities may be requested.

§ 1.4 Authorized Activities

§ 1.4.1 Location Where Material Is Used

10. Add the storage areas to this section.

§ 1.5 Exemptions and Special Authorizations

§ 1.5.1 Safety Evaluation Process

11. Under b), add "safeguards" to "...or component important to safety."
12. Add to the first full paragraph, on top of page 1-7: "LES shall implement the QA program as described in Chapter 10 of the SAR."

§ 1.5.2 Exemptions and Special Authorizations

13. Under A, last paragraph, last line, revise to read as follows: "liens, or limited partnership, within 60 days of the change(s)."

Chapter 2: Organization and Administration

§ 2.1 Organizational Responsibilities and Authority

14. The Chemistry Manager is responsible for analysis of effluents. Clarify who is in charge of collecting the samples and making sure the effluents are below limits.
15. Clarify whether the Industrial Safety Manager is responsible for all facility safety programs or just industrial safety.
16. Specify who is in charge of the training program.
17. Identify the positions that have authority to shut down operations that threaten the health and safety of plant personnel, the public, or the environment.
18. The Projects Individual and his responsibilities should be included in § 2.1. Among his responsibilities include conducting and reporting quarterly nuclear criticality safety inspections.

§ 2.2 Personnel Education and Experience Requirements

19. The CEC Manager should also be familiar with chemical and industrial safety.
20. On page 2-6, revise the qualifications of the QA Manager as follows: "The Quality Assurance Manager shall have, as a minimum, a bachelor's degree (or equivalent) in an engineering or scientific field and at least four years of responsible nuclear experience in the implementation of a quality assurance program. The QA Manager shall have at least two years experience in a QA organization at a nuclear facility."
21. On page 2-7, add to the qualifications of the Health Physics Manager the following sentence: "At least two years of experience shall be at a facility that processes uranium, including uranium in soluble form."
22. On page 2-8, in the second paragraph, replace "at least one individual" with "a Project Individual."
23. On page 2-8, revise the third paragraph to read: "Should a change to the facility require a nuclear criticality safety evaluation, the analysis shall be performed by an individual who, as a minimum, possesses the qualifications of the Projects Individual. An independent review of the analysis shall be performed by an individual who, as a minimum, has the education and training of a Projects Individual. In addition, this individual shall have at least two years of experience performing criticality safety analyses and implementing criticality safety programs."

§ 2.3 Safety Committee

24. Add the QA program to the list of programs to be audited.

§ 2.5 Training

25. Include a commitment to evaluate the training program at least every two years (no more than 27-month intervals), and to review the program content to ensure the programs are current and adequate.
26. Specify that the effectiveness of all required training shall be evaluated with appropriate measurement tools.

§ 2.6 Operating Procedures

27. Training requirements shall be satisfied prior to "implementation of the procedure" and not prior to "receipt of licensed material."
28. Identify the purpose of the biennial review and who is responsible for conducting it.

§ 2.6.1 Preparation of Procedures

29. Procedures should also identify limits important to environmental protection as applicable.
30. To minimize the potential for conflict between departmental and administrative procedures and maximize consistency throughout facility procedures, commit to developing and implementing policies for an integrated approach to procedure development and approval.

§ 2.7 Internal Audits and Inspections

31. The responsible Superintendent should respond in writing to deficiencies noted in inspections and audits.
32. The second sentence, first paragraph, states: "Audits and inspections are the responsibility of the QA Manager." In light of the license condition that "The FSRC shall conduct at least one facility audit per year...." (page 2-9), the second sentence should read: "Audits (except those conducted by the FSRC), and inspections (except nuclear criticality safety inspections conducted by a Projects Individual) are the responsibility of the QA Manager."
33. The last sentence, first paragraph, revise to read: "As a minimum, they shall assess programs and activities related to:"
34. In this section, "Quality Assurance" is on the list of functions to be audited under the QA Manager. It should be made clear that the activities related to QA that are to be audited under the CEC QA Manager are QA activities performed by personnel outside the CEC QA organization. The activities performed by the CEC QA organization

should be audited by personnel outside the CEC QA organization. For example, the activities of the CEC QA organization could be audited as part of the FSRC annual audit (see page 2-9).

§ 2.9 Records

35. Records of the FSRC activities shall be maintained for the life of the facility.

Chapter 3: Radiation Protection

§ 3.2.1 Restricted Areas - Personnel Contamination Control

36. Delete "personnel" from the first sentence. The program should control contamination of all kinds.
37. Specify action levels for skin and personal clothing contamination at the time of egress from RCAs and RCZs. (See Regulatory Guide 8.24)

§ 3.2.2 Ventilation

38. Commit to designing ventilation equipment such that normal air flow and leakage flow are from areas of lesser potential contamination to areas of higher potential contamination. Commit to performing quarterly checks (e.g., smoke tests) to ensure compliance with this requirement.
39. Commit to performing efficiency (leak) tests for 0.3 μm AMAD particles in the GEVS and TSA HEPA filter systems prior to first use.
40. Commit to measuring the differential pressure across HEPA filter systems on a prescribed frequency (e.g., monthly). Commit to operating filters only within differential pressure values recommended by the manufacturer.
41. The last line uses the term "abnormal release." Quantify or define what constitutes an abnormal release.

§ 3.2.3 Work Area Air Sampling

42. The representativeness of the air samples of the work station should be checked annually and when significant process or equipment changes have been made.
43. Propose an LLD which is lower than 5% of the value listed in Appendix B of 10 CFR 20.1001 - 20.2402, Table 1, Column 3. For natural uranium, 5% of the radiological DAC would result in a worker intake of about 2 mg for a weekly exposure. Note that for soluble uranium, footnote 3 of Appendix B of 10 CFR 20.1001 - 20.2402, implies a DAC of 0.2 mg/m^3 based on the weekly intake limit of 10 mg.
44. First bullet. Propose an action level which is less than 10% of the radiological DAC. For natural uranium, 10% of the radiological DAC

would result in a worker's intake of about 4 mg for a weekly exposure. State whether the air concentration level is averaged over the entire week or applicable to any one given time. Replace "when uranium concentration are expected to exceed"... by..."when uranium concentrations are likely to exceed."

§ 3.2.4 Radioactivity Measurement Instruments

45. Commit to calibrating air flow measuring devices used for air samplers upon installation and subsequently on an annual basis.
46. Commit to calibrating all radiation measuring instruments on at least a semi-annual basis and following installation and maintenance.
47. Commit to using calibration sources which are $\pm 5\%$ of the stated value and traceable to NIST or equivalent.
48. Commit to determining on a daily basis (less frequently only if necessitated by long counting intervals), the background and efficiency of laboratory counting instruments, when in use for radiation protection purposes.

§ 3.2.5.1 Barriers

49. Commit to maintaining a prescribed minimum air pressure differential (e.g., 0.25 inches water) in glove boxes containing removable surface contamination. Commit to checking the differential pressure on a weekly basis while the glove box contains removable surface contamination.
50. Commit to maintaining the air flow through the open face of hoods within a prescribed range (e.g., 100 to 150 feet per minute) when in use.
51. Commit to checking air flow rates through hoods on a monthly basis while in use.

§ 3.2.6 Surface Contamination

52. Identify the areas that will be surveyed for surface contamination and provide survey frequencies. NRC staff recommends that RCAs and RCZs be surveyed at least once every month, and the lunch and change rooms be surveyed at least once every week.
53. Commit to periodically surveying laundered protective clothing for gross alpha and gross beta contamination. Provide action levels. Propose actions to be taken if these levels are exceeded.
54. Provide an action level for cleanup of removable surface contamination in an RCZ.

§ 3.2.7 Bioassay Program

55. Provide an LLD for urine bioassay samples in terms of $\mu\text{g/l}$. The LLD should be set so that a detection and measurement can be made of a single intake of less than 10 mg of soluble (Class D) uranium by a reference man. The air and bioassay sampling periods specified by license condition, and detection instrument capabilities should also be taken into account in setting an LLD.
56. Commit to restricting workers from activities that could routinely or accidentally result in internal exposures to soluble uranium, until a urinalysis result is less than a specific threshold value (e.g., 15 $\mu\text{g/l}$).
57. First Paragraph. A bioassay program that is able to detect an intake activity of 5% of the ALI specified in 10 CFR Part 20 is inappropriate from the standpoint of the chemical toxicity of uranium. An intake of 5% of the ALI corresponds to about 150 mg of uranium-238 (175 mrem EDE). Criteria for performing bioassay should be based on intakes of less than 10 mg of depleted uranium. NRC staff recommends the first paragraph to be revised as follows:

"Internal radiological exposures shall be evaluated annually."

"Based on air sampling monitoring data, bioassays shall be performed for all personnel who could have had an intake of ___ mg of uranium. The bioassay program shall be able to detect an intake activity corresponding to ___ mg of uranium."
58. Second Paragraph. Revise the beginning of the second sentence as follows: "If a worker could have inhaled radionuclide concentrations that would exceed ..."
59. Second Paragraph. Lower the criterion for performing a bioassay after suspected or known internal exposure to uranium. For a Class D compound of uranium, 12 DAC hours corresponds to an inhalation of about 10 mg of uranium-238. The criterion for performing a bioassay should be set at a small fraction of the regulatory limit.

Chapter 4: Nuclear Criticality

§ 4.1.4.5: Active Ventilation Systems

60. Add a license condition as follows: "At least every three years (maximum interval of 42 months), the licensee shall survey the ventilation ducts for uranium deposition. As a minimum, if uranium deposition (other than surface contamination) is found, corrective action shall include removal of the uranium."

Chapter 5: Environmental Protection

§ 5.1.1 Gaseous Effluents

61. Action levels for gross alpha shall be based on the weekly gross alpha analysis results (not the running quarterly average).
62. The LLD for alpha isotopic shall be $1E-17$ $\mu\text{Ci/ml}$.
63. Isotopic analysis shall be conducted on quarterly composites.
64. The report which identifies the cause of exceeding the 40 CFR 190.10 limit and the corrective actions to be taken to reduce release rates shall be submitted within 30 days.
65. The last paragraph of this section concerning the chemical traps should be moved to § 3.2.2 Ventilation.

§ 5.1.2.2 Sewage Treatment System Effluent

66. CEC shall analyze a composite sample for Tc-99 on a semiannual basis. The LLD shall be no greater than $3E-7$ $\mu\text{Ci/ml}$.
67. CEC shall also analyze the semiannual composite sample for uranium.

§ 5.2 Environmental Monitoring

68. Delete the first paragraph on page 5-4 which begins "Locations of sample sites..." Samples that are specified in Table 5.2-1 cannot be changed without NRC approval. If the intent of this paragraph is to allow flexibility in the exact sample location for a sample specified in Table 5.2-1, the text should be clarified.
69. Commit to submitting a biennial report summarizing the monitoring program results.
70. On Table 5.2-1 Radiological Environmental Monitoring Program:

Preoperational Monitoring

- AP1, AP2 Specify the sector.
- AP6 Delete the 2nd sentence.
- AP7 Location is not needed. It is represented by AP1, AP3.
- AP3 The maximally exposed individual is not located at the site boundary.
- Liquid/Shoreline Sediment. Delete: "Combine samples from ...composites."

- Liquid/Bottom Sediment. Delete "Combine samples from...composites."

Operational Monitoring

- AP1, AP2 Specify the sector.
- AP3 The maximally exposed individual is not located at the site boundary.
- AP3 Isotopic analysis shall be conducted on a composite sample on a quarterly basis.
- AP6 Delete 2nd sentence.
- AP7 Location is not needed. It is represented by AP1, AP3.
- Liquid/Shoreline Sediment. Delete "Combine samples from...composites."
- Liquid/Bottom Sediment. Delete: "Combine samples from...composites."

Chapter 6: Special Processes

71. Feed autoclaves, feed purification cubicles, product and tails cylinder stations, and blending receiver cylinder stations shall be equipped with load cells to monitor cylinder contents and these load cells shall be operable at all times that the individual pieces of equipment are in use for UF₆ transfer.

§ 6.2 Occupational Safety

72. Provide specific commitments related to training of personnel who have access to RCAs and RCZs. Include topics to be covered, refresher training requirements, and continuous evaluation of the effectiveness of the program.
73. For alpha-in-air monitors, add the equivalent alarm setpoint for alpha.
74. For alpha-in-air monitors, specify locations, i.e., UF₆ handling, utility, and blending areas.

§ 6.5 Limiting Conditions for Operation

§ 6.5.1 Autoclaves

75. Under 6.5.1.a, add: "... or air pressure exceeding ____ psia."

§ 6.6.3 Cylinder Fill Limits

76. Commit to checking the weight of feed cylinders.

§ 6.6.4 Safety Analysis Report

77. Replace "The design and construction shall be in accordance with the standards identified in the SAR" with "The design, construction and operation shall be in accordance with standards and representations identified in the SAR."
78. Delete "License Condition" from the last sentence and replace it with "Section."

§ 6.6.5 Quality Assurance Criteria

79. Revise license conditions as follows:
 - Item B: Quality assurance controls of System Class I items and activities shall be in accordance with the basic and supplemental provisions of ASME-NQA-1-1989, "Quality Assurance Program Requirements for Nuclear Facilities," including the changes made by the ASME-NQA-1a-1990 Addenda and the ASME-NQA-1b-1991 Addenda.
 - Item C: Quality Assurance of System Class II items shall be in accordance with SAR Section 10.19.

Chapter 7: Decommissioning Plan

80. Append the following sentence to the second paragraph: "These cost estimates along with their bases will be submitted to the NRC for review."

Chapter 8: Emergency Plan

81. Specify that LES shall maintain an NRC approved emergency plan.

ENCLOSURE 2

NRC ATTENDANCE SHEET

<u>NAME</u>	<u>AFFILIATION</u>	<u>TELEPHONE</u>
Lidia A. Roché	NRC/NMSS	301 504-2695
John Hickey	NRC/NMSS	301 504-3328
Peter LeRoy	LES	704 382-2834
Hugh Hammond	LES	704 382-0795
Marcia D. Lane	LES	704 875-5335
Don Joy	NRC/NMSS	301 504-2353
Dan Martin	NRC	301 504-2369
Joe Price	SAIC	704 318-4620
George Bidinger	NRC/NMSS	301 504-2683
Gene Holler	NRC/OGC	301 504-1520
Jack Spraul	NRC/QA	301 504-2446
Yawar Faraz	NRC/NMSS	301 504-2669
Jerome Roth	NRC/NMSS	301 504-3427

LES SERVICE LIST

Dr. W. Howard Arnold
President
Louisiana Energy Services
2600 Virginia Avenue, N.W.
Suite 608
Washington, DC 20037

Mr. Michael Mariotte
Executive Director
Nuclear Information and
Resource Service
1424 16th Street, NW
Suite 601
Washington, DC 20036

Mr. Peter G. LeRoy
Licensing Manager
Louisiana Energy Services
c/o Duke Engineering & Services, Inc.
P.O. Box 1004
Charlotte, NC 28201-1004

Mr. J. Michael McGarry, III
Winston & Strawn
1400 L Street, NW
Washington, DC 20005

Mr. Ronald L. Wascom
Deputy Assistant Secretary
Office of Air Quality and
Radiation Protection
Louisiana Dept. of Environ. Quality
P.O. Box 82135
Baton Rouge, LA 70884-2135

Ms. Diane Curran
Harmon, Curran, Gallagher, &
Spielberg
2001 S Street, NW Suite 430
Washington, DC 20009-1125

Nathalie M. Walker, Esq.
Sierra Club Legal Defense Fund, Inc.
400 Magazine Street, Suite 401
New Orleans, LA 70130