

March 3, 2005

NEF#05-009

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 the Decommissioning Funding Plan

- 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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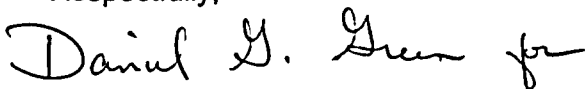
4. Letter NEF#04-037 dated September 30, 2004, from R. M. Krich (Louisiana Energy Services, L. P.) to Director, Office of Nuclear Material Safety and Safeguards (NRC) regarding "Revision to Applications for a Material License Under 10 CFR 70, "Domestic licensing of special nuclear material," 10 CFR 40, "Domestic licensing of source material," and 10 CFR 30, "Rules of general applicability to domestic licensing of byproduct material"
5. Letter NEF#04-052 dated December 10, 2004, from R. M. Krich (Louisiana Energy Services, L. P.) to Director, Office of Nuclear Material Safety and Safeguards (NRC) regarding "Response to NRC Request for Additional Information Regarding Decommissioning Funding Plan"
6. Letter NEF#05-01 dated January 7, 2005, from R. M. Krich (Louisiana Energy Services, L. P.) to Director, Office of Nuclear Material Safety and Safeguards (NRC) regarding "Response to NRC Request for Additional Information Regarding Depleted Uranium Hexafluoride Disposition Costs"

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. The Reference 5 and 6 letters provided the LES responses to NRC requests for additional information and clarification regarding the decommissioning funding plan and depleted uranium hexafluoride disposition costs, respectively.

In a January 27, 2005, conference call between LES and NRC representatives, the responses provided in the Reference 5 and 6 letters were discussed. During this conference call, the NRC requested that additional clarification be provided concerning the National Enrichment Facility (NEF) Decommissioning Funding Plan. This clarifying information concerning the NEF Decommissioning Funding Plan is included in the Enclosure 1. Enclosure 2 provides the associated updated Safety Analysis Report (SAR) pages. These updated SAR pages will be formally incorporated into the applicable license application section 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 the National Enrichment Facility Decommissioning Funding Plan
2. Updated Safety Analysis Report Pages

cc: T.C. Johnson, NRC Project Manager

ENCLOSURE 1

**Clarifying Information
Related to the
National Enrichment Facility Decommissioning Funding Plan**

**Clarifying Information Related to the
National Enrichment Facility Decommissioning Funding Plan**

1. Regarding the depleted uranium disposition costs in the January 7, 2005, submittal, ICF Consulting (ICF) staff requested that LES document the sources and bases for the costs presented. LES identified documents submitted in discovery that provide some of the support requested and noted that additional supporting documents would be part of a forthcoming discovery submission.

LES Response:

Supporting documentation for the depleted uranium hexafluoride disposition costs was provided by the following letters.

- Letter dated November 1, 2004, from Jim Curtiss (Winston & Strawn) to Lindsay Lovejoy (NIRS/PC) and copied to Lisa Clark (NRC) – Enclosure pages LES-PRO-000653 through LES-PRO-000655 (Proprietary)
- Letter dated January 31, 2005, from Jim Curtiss (Winston & Strawn) to Lindsay Lovejoy (NIRS/PC) and copied to Lisa Clark (NRC) – Attachment 3 (Proprietary)

**Clarifying Information Related to the
National Enrichment Facility Decommissioning Funding Plan**

2. Regarding the Gross Domestic Product implicit price deflators used by LES to escalate costs from January 2002 to January 2004, ICF staff could not verify that the appropriate deflator values were used. LES agreed to check the documentation for these calculations.

LES Response:

LES has reviewed the documentation for these calculations. As a result, the attached Safety Analysis Report (SAR) Table 10.1-14 is revised to reflect the use of an escalation factor of 3.67% to adjust from 2002 costs to 2004 costs. The attached revised SAR pages will be formally incorporated into SAR Chapter 10, "Decommissioning," in a future revision. Also, as a result of correcting the escalation factor, the escalated cost for dispositioning the depleted uranium hexafluoride given in the application as \$5.50/kg U is now \$5.70/kg U versus the figure of \$5.62/kg U given in the January 7, 2005 response.

**Clarifying Information Related to the
National Enrichment Facility Decommissioning Funding Plan**

3. Regarding the unit transportation costs, LES had stated that the costs are independent of distance traveled and accounts for the different rates for transporting UF_6 and U_3O_8 . ICF staff indicated that this statement needed additional explanation to determine if it is reasonable. LES indicated that the estimate was obtained from Transport Logistics International, that the quoted phrase came directly from the estimate, which had been submitted in discovery, and that further discussion of the basis for the value would be provided.

LES Response:

Supporting documentation for the depleted uranium hexafluoride transportation costs was provided by the following letter.

- Letter dated January 31, 2005, from Jim Curtiss (Winston & Strawn) to Lindsay Lovejoy (NIRS/PC) and copied to Lisa Clark (NRC) – Attachment 4 (Proprietary)

**Clarifying Information Related to the
National Enrichment Facility Decommissioning Funding Plan**

4. In Table 10.1-5 of the December 10, 2004, submittal, LES provided an estimate of the decommissioning costs. However, it was unclear if the laboratory sampling costs of \$320,000 were included in this estimate. LES indicated that it would clarify these costs.

LES Response:

The sample analysis cost of \$320,000 is included in the \$1.4 million line item on Table 10.1-5. The attached Table 10.1-5 is revised accordingly to indicate this cost item. However, because of the modeling for the Final Radiation Survey activity, the sample analysis cost is expressed in terms of equivalent man-hours at the Project Management man-hour rate. The attached revised SAR page will be formally incorporated into SAR Chapter 10 in a future revision.

**Clarifying Information Related to the
National Enrichment Facility Decommissioning Funding Plan**

5. ICF is using decontamination method unit cost estimates in NUREG/CR-6477, "Revised Analyses of Decommissioning Reference Non-Fuel-Cycle Facilities," to judge the reasonableness of the LES cost estimates. However, the unit cost values were not presented in the LES submittals. LES agreed to review NUREG/CR-6477 and determine whether their model was capable of producing unit cost estimates of the type requested so that a comparison with NUREG/CR-6477 could be made, as applicable.

LES Response:

Unit costs have been computed for the decontamination of National Enrichment Facility (NEF) components and compared to the unit costs computed from NUREG/CR-6477, as available, in the attached Table 1, Unit Cost Factor Comparison. The unit costs show a close comparison and, given the expected low contamination levels for the component decontamination (especially ceilings, floors and walls) at the NEF, reflect reasonable cost estimates. Supporting summary discussions of the decommissioning processes associated with each of the categories of components, for which unit costs are provided, are included in the Table 1 Notes.

The unit costs were computed on a per unit basis (includes equipment decontamination, dismantlement, and preparation for disposal). Additional details were obtained from Urenco to further define quantities (i.e., lot units) from their estimate to obtain a best estimate for the unit costs. Man-hour estimates from SAR Table 10.1-3 were multiplied by the appropriate rates and divided by the number of units to arrive at the unit costs. The NUREG/CR-6477 unit costs were taken from Appendix D, "Details of Decommissioning Reference Facilities," for the reference facilities in Sections D.1 and D.2, for comparison purposes using the associated decommissioning category costs. The unit costs were computed by dividing by the unit quantities from the details provided in Appendix D of NUREG/CR-6477. These unit costs were then escalated from their base cost 1998 values to 2002 values using Gross Domestic Product implicit price deflators for first quarter 2002 (i.e., 103.45) and first quarter 1998 (i.e., 96.089) to yield an escalation factor of approximately 7.36%.

**Clarifying Information Related to the
National Enrichment Facility Decommissioning Funding Plan**

6. In Table 10.1-14 of the December 10, 2004, submittal, LES presented estimates for third-party contractor costs. However, ICF staff could not duplicate the estimate values used. LES stated it would provide further explanation to the derivation of the numbers.

LES Response:

The third party contractor cost for decommissioning operations associated with planning and preparation, decontamination and dismantling of radioactive facility components, restoration of contaminated areas on facility grounds, and the final radiation survey includes an overhead rate on direct staff labor of 110%, plus 15% profit on labor and its overheads. The estimate for third party contractor cost was derived as follows.

- The total workdays for each labor category associated with planning and preparation, decontamination and dismantling of radioactive facility components, and the final radiation survey in SAR Table 10.1-7 were determined. For each labor category, the total labor cost was then determined by multiplying the total workdays by the associated labor rates from SAR Table 10.1-8.
- For each labor category associated with planning and preparation, decontamination and dismantling of radioactive facility components, and the final radiation survey, the total cost including the overhead rate of direct staff labor was then determined by adding 110% to the total labor cost, i.e., multiplying the total labor cost by (1+1.10). (It should be noted that the cost estimate associated with restoration of contaminated areas on facility grounds was activity based as reflected in SAR Table 10.1-4. Therefore, the overhead rate on direct staff labor was not added to this cost.)
- The resultant costs of each of the labor categories were then summed and the resultant value was added to the cost of restoration of contaminated areas on facility grounds to provide a total cost, including the 110% overhead rate on staff labor.
- Multiplying this total cost, including the 110% overhead rate on staff labor, by 1.15, to allow for a 15% profit on labor and overheads, provides the total third party cost.
- This total third party cost was then used to determine the adjustment to SAR Table 10.1-14 for the Cost of Third Party Use associated with planning and preparation, decontamination and dismantling of radioactive facility components, restoration of contaminated areas on facility grounds, and the final radiation survey. This adjustment was determined by subtracting the non-third party use costs for planning and preparation, decontamination and dismantling of radioactive facility components, restoration of contaminated areas on facility grounds, and the final radiation survey provided in SAR Table 10.1-14 from the total third party cost.

**Clarifying Information Related to the
National Enrichment Facility Decommissioning Funding Plan**

7. It is unclear how the labor hours in Table 10.1-3 (Decontamination or Dismantling of Radioactive Components) relate to decontamination hours listed in Table 10.1-7 (Total Work Days by Labor Category), because there are considerably more hours listed for decontamination in Table 10.1.7 than in Table 10.1-3. The differences may be for decontaminating the separations building module. If so, a footnote to that effect would be helpful.

LES Response:

The total work days shown on SAR Table 10.1-7 also includes the Separation Module input derived from SAR Table 10.1-9. This input was obtained using the total costs in Table 10.1-9 and dividing by the cost per day for each labor category. Table 10.1-3 does note that the man-hours are specific to the Other Buildings (Note 1 to Table 10.1-3). A footnote has been provided in the attached revised Table 10.1-7 to add clarity relative to the total costs shown being inclusive of the Separations Modules. The attached revised SAR page will be formally incorporated into SAR Chapter 10 in a future revision.

**Clarifying Information Related to the
National Enrichment Facility Decommissioning Funding Plan**

Table 1, Unit Cost Factor Comparison

Component	Decontamination Process Discussion	Unit Cost (2002 Dollars)			Unit Basis
		NEF	³ H Reference Lab (NUREG/CR-6477, Appendix D.1)	¹⁴ C Reference Lab (NUREG/CR-6477, Appendix D.2)	
Fume Cupboards (Hoods)	Note 1	\$1355	\$1868	\$1879	per cupboard (hood)
Lab Benches	Note 1	\$648	\$555	\$1798	per bench
Sinks	Note 1	\$393	N/A	\$322	per sink
Ventilation Ductwork	Note 2	\$261	\$107	\$104	per meter of ductwork
Drains	Note 3	\$395	N/A	N/A	per drain
Ceilings	Note 4	\$4	\$39	\$39	per square meter
Floors	Note 4	\$9	\$52	\$52	per square meter
Walls	Note 4	\$6	\$36	\$37	per square meter
Storage Tanks	Note 5	\$37	N/A	N/A	per tank
Equipment/Materials (e.g., stations, autoclaves)	Notes 1, 6	\$600	N/A	N/A	per piece
Storage Areas	Note 4	\$33	N/A	N/A	per square meter
Other (tools and consumables used during decommissioning, e.g., screwdrivers, hammers, wrenches)	Note 1	\$624	N/A	N/A	per piece

**Clarifying Information Related to the
National Enrichment Facility Decommissioning Funding Plan**

Table 1 Notes

1. Lab benches / Sinks / Fume Cupboards/ Tools / Equipment / Materials

Good radiological management procedures will be observed throughout operations within the Separation Plant, Technical Services Building (TSB) and the final Decommissioning Facility consistent with NEF commitments to maintain occupational doses and doses to members of the public as low as reasonably achievable (ALARA). Consequently contamination occurring on the working surfaces of lab benches / sinks / tools / fume cupboards will be monitored, cleaned and maintained in good order through the day-to-day working operation. Dilute citric acid swabbing has proved to be a successful method for day-to-day cleaning/decontamination.

Therefore, at decommissioning, it is not anticipated that additional decontamination of these items will be required. The items will be dismantled, volume reduced, radiologically characterized and shipped to a licensed disposal facility. For the sinks in the final Decommissioning Facility, at the end of decommissioning, these sinks will be cleaned, volume reduced and shipped to a licensed disposal facility.

Any contaminated tools, for which it proves not to be cost effective to maintain clean during operations, will be replaced with new tools during operations. Consequently, at close of operations only one set of tools will be required to be decontaminated and shipped to a licensed disposal facility.

2. Ventilation Ductwork

Experience has shown ventilation ductwork to be only lightly contaminated. As such, the ductwork will be dismantled, volume reduced, radiologically characterized and shipped to a licensed disposal facility.

3. Drains

There are no process drains in the NEF Separation Plant.

In the TSB, there are drains from all rooms where operations or processes of a potentially contaminated nature are undertaken to a liquid effluent collection and treatment room. These drains will be removed, decontaminated, volume reduced and shipped to a licensed disposal facility.

4. Floors, Walls, Ceilings and Storage Areas

Experience from the decommissioning of Separation Plants has shown that there is no contamination on walls, ceilings and floors in the facilities at the end of their life. This has been confirmed by radiological characterization at the end of operations and at the end of building strip out prior to demolition. This lack of contamination results from the proven contained nature of the vacuum processes

**Clarifying Information Related to the
National Enrichment Facility Decommissioning Funding Plan**

Table 1 Notes (continued)

and good operational practices, including implementation of the ALARA program throughout the entire facility, which support maintenance of a clean facility throughout the operational life.

For the TSB and final Decommissioning Facility, an allowance has been conservatively provided in the cost estimate for cleaning of storage areas within the TSB and the floors, walls, and ceilings in the final Decommissioning Facility.

5. Storage Tanks

Storage tanks appear both in the TSB and in the final Decommissioning facility. Storage tanks include the open decontamination baths and closed tanks within the Liquid Effluent Collection and Treatment System. During operations these storage tanks are emptied, de-sludged and inspected (closed storage tanks through inspection hatches), routinely. The accumulation of sludge within the storage tanks during operation is not allowed due to criticality considerations.

Consequently at the close of operations, the storage tanks are expected to be clean, emptied, inspected and in good order. Prior to removal from plant, the storage tanks would be flushed in-situ, radiologically characterized, removed, volume reduced, and shipped to a licensed disposal facility. Therefore, extensive decontamination of the storage tanks at decommissioning is not anticipated.

With respect to the TSB, all contaminated or potentially contaminated effluents are pumped to the liquid effluent treatment room and then to the Treated Effluent Evaporative Basin. The decommissioning of the Treated Effluent Evaporative Basin is addressed in SAR Table 10.1-4.

6. Stations / Autoclaves

Experience from the decommissioning of Separation Plants has shown that the cylinder stations, both take-off and feed, and liquid sampling autoclaves are free of contamination. Any small contamination levels, which may occur around the cylinder valve end of the station during change out procedures, are monitored and cleaned during operations consistent with NEF commitments for implementation of the ALARA program. Therefore, decontamination of the cylinder stations and autoclaves at the end of their operational life is not required. The stations and autoclaves will be dismantled and shipped to a licensed disposal facility.

Cold Traps / Vacuum Pump Trap Sets / Centrifuge Feed and Take-off Vessels

During decommissioning, cold traps, vacuum pump trap sets and centrifuge test facility vessels will be emptied of process material, purged, removed from plant, cut open, decontaminated, volume reduced, and shipped to a licensed disposal facility.

ENCLOSURE 2

Updated Safety Analysis Report Pages

10.1 SITE-SPECIFIC COST ESTIMATE

10.1.1 Cost Estimate Structure

The decommissioning cost estimate is comprised of three basic parts that include:

- A facility description
- The estimated costs (including labor costs, non-labor costs, and a contingency factor)
- Key assumptions.

10.1.2 Facility Description

The NEF is fully described in other sections of this License Application and the NEF Integrated Safety Analysis Summary. Information relating to the following topics can be found in the referenced chapters listed below:

A general description of the facility and plant processes is presented in Chapter 1, General Information. A detailed description of the facility and plant processes is presented in the NEF Integrated Safety Analysis Summary.

A description of the specific quantities and types of licensed materials used at the facility is provided in Chapter 1, Section 1.2, Institutional Information.

A general description of how licensed materials are used at the facility is provided in Chapter 1, General Information.

10.1.3 Decommissioning Cost Estimate

10.1.3.1 Summary of Costs

The decommissioning cost estimate for the NEF is approximately \$942 million (January, 2004 dollars). The decommissioning cost estimate and supporting information are presented in Tables 10.1-1A through 10.1-14, consistent with the applicable provisions of NUREG-1757, NMSS Decommissioning Standard Review Plan (NRC, 2003).

More than 97% of the decommissioning costs (except tails disposition costs) for the NEF are attributed to the dismantling, decontamination, processing, and disposal of centrifuges and other equipment in the Separations Building Modules, which are considered classified. Given the classified nature of these buildings, the data presented in the Tables at the end of this chapter has been structured to meet the applicable NUREG-1757 (NRC, 2003) recommendations, to the extent practicable. However, specific information such as numbers of components and unit rates have been intentionally excluded to protect the classified nature of the data

Table 10.1-5 Final Radiation Survey
Page 1 of 1

Activity	Costs (\$000)	Labor Shift-worker (multi-functional) (Man-days)	Labor Project Management (Man-days)	Labor HP&S (Man-days)	Activity Duration (Months)
Prepare Survey Plans and Grid Areas	500	439	334	360	8
Collect Survey Readings and Analyze Data	1,400 (Note 1)	1,261	343	1,013	16
Sample Analysis			568		
Final Status Survey Report and NRC Review	300	0	533	0	8
Confirmatory Survey and Report	200	0	355	0	6
Terminate Site License	100	0	178	0	2
TOTAL	2,500	1,700	2,311	1,373	(Note 2)

Notes:

- The \$1.4 million cost assigned to the conduct of the final radiation survey includes a cost of \$365,000 to conduct the sampling and perform the sample analysis by a contractor. The sampling labor cost component (\$45,000) was estimated assuming \$60/hr (HP&S man-hour rate) for an estimated 500 samples with an average sample duration of 1.5 hours/sample. The analysis cost component (\$320,000) for the 500 samples was estimated using a conservative \$640/sample based on recent actual 2004 lab analysis costs. Because of the modeling for this activity, this sample analysis cost is expressed in terms of equivalent man-hours at the Project Management man-hour rate.
- Some activities will be conducted in parallel to achieve a 36 month time frame.

Table 10.1-7 Total Work Days by Labor Category
 (Based on a 7.5 hr Working Day)
 Page 1 of 1

Task	Shift-worker (multi-functional)	Craftsman	Supervision	Project Management	HP&S	Cleaner
Planning and Preparation (see Table 10.1-2)	82	0	0	1,969	144	0
Decontamination and/or Dismantling of Radioactive Facility Components (Note 2)	56,067	1,896	6,156	1,478	1,828	2,897
Restoration of Contaminated Areas on Facility Grounds (Note 1) (see Table 10.1-4)	0	0	0	0	0	0
Final Radiation Survey (see Table 10.1-5)	1,700	0	0	2,311	1,373	0
Site Stabilization and Long- Term Surveillance (see Table 10.1-6)	0	0	0	0	0	0

Notes:

1. Cost estimate is activity-based.
2. The values shown are inclusive of the Separations Module input derived using the total costs in Table 10.1-9 and dividing by the cost per day for each labor category.

Table 10.1-14 Total Decommissioning Costs
Page 1 of 2

(Note 7)

Task/Components	Costs (\$000)		Total (\$000)	Percentage	Notes
	Separations Modules	Other Buildings			
Planning and Preparation (see Table 10.1-2)	1,200	0	1,200	1%	1
Decontamination and Dismantling of Radioactive Facility Components (see Table 10.1-9)	24,060	1,110	25,170	20%	8
Restoration of Contamination Areas on Facility Grounds (see Table 10.1-4)	1,357	0	1,357	1%	2
Final Radiation Survey (see Table 10.1-5)	2,500	0	2,500	2%	3
Cost of Third Party Use	39,829	1,232	41,061	32%	11
Site Stabilization and Long-term Surveillance	0	0	0	0%	4
Waste Processing Costs (see Table 10.1-10)	3,690	0	3,690	3%	5
Waste Disposal Costs (see Table 10.1-10)	17,904	440	18,344	14%	6
Equipment Costs (see Table 10.1-11)	21,260	100	21,360	17%	--
Supply Costs (see Table 10.1-11)	910	0	910	1%	--
Laboratory Costs (see Table 10.1-12)	870	0	870	1%	--
Period Dependent Costs (see Table 10.1-13)	10,000	0	10,000	8%	--
SUBTOTAL (2002)	123,580	2,882	126,462		--
SUBTOTAL (with escalation to 2004)	128,115	2,988	131,103		12
Tails Disposition (2004)	--	--	622,169		9
Contingency (25%)	--	--	188,318		--
TOTAL (2004)	--	--	941,590		10

Table 10.1-14 Total Decommissioning Costs
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Notes:

1. The \$1,200 includes planning, site characterization, Decommissioning Plan preparation, and NRC review for the entire plant.
2. Cost provided is for removal and disposal of liners and earthen covers of the facility Treated Effluent Evaporative Basin. The cost assumes transport and disposal of approximately 33,000 ft³ of contaminated soil and basin membrane at recent commercial rates. The cost of removal of the facility Treated Effluent Evaporative Basin material (33,000 ft³) is based on a \$30/ft³ disposal cost and includes the cost of excavation (\$5.00/yd³ which includes labor and equipment costs) and cost of transportation (\$4.00/mile for approximately 1,100 miles from the NEF site to the Envirocare facility in Utah). Other areas outside of the plant buildings are not expected to be contaminated.
3. The \$2,500 includes the Final Radiation Survey, NRC review, confirmatory surveys and license termination for the entire plant.
4. Site stabilization and long-term surveillance will not be required.
5. Waste processing costs are based on commercial metal melting equipment and unit rates obtained from Urenco experience in Europe.
6. Includes waste packaging and shipping costs. Waste disposal costs for Other Buildings are based on a \$150 per cubic foot unit rate which includes packaging, shipping and disposal at Envirocare in Utah.
7. More than 97% of the decommissioning costs for the facility are attributed to the dismantling, decontamination, processing, and disposal of centrifuges and other equipment in the Separations Building Modules, which are considered classified. Given the classified nature of these buildings, the data presented in these Tables have been structured to meet the applicable NUREG-1757 recommendations, to the extent practicable. However, specific information such as numbers of components and unit rates has been intentionally excluded to protect the classified nature of the data. The remaining 3% of the decommissioning costs are for the remaining systems and components in Other Buildings.
8. The \$1,110 for Other Buildings includes the decontamination and dismantling of contaminated equipment in the TBS, Blending and Liquid Sampling Area, Centrifuge Test and Post Mortem Facilities, and Gaseous Effluent Vent System.
9. Refer to Section 10.3, for Tails Disposition discussion.
10. Combined total for both decommissioning and tails disposition.
11. An adjustment has been applied to account for use of a third party for performing decommissioning operations associated with planning and preparation, decontamination and dismantling of radioactive facility components, restoration of contaminated grounds, and the final radiation survey. The adjustment includes an overhead rate on direct staff labor of 110%, plus 15% profit on labor and its overheads.
12. The escalation cost factor applied is based on the Gross Domestic Product (GDP) implicit price deflator. The resulting escalation cost factor for January 2002 to January 2004 is a 3.67% increase. The escalation cost factor is not applied to the tails disposition costs since these costs are provided in 2004 dollars.