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U. S. Nuclear Regulatory Commission
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ATTN. Mr. Christopher Ryder, Project Manager
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Your ref:
Our ref: LTR-RAC-09-74-NP

October 14, 2009

Subject: Westinghouse Columbia Fuel Fabrication Facility Decommissioning Funding Plan Revision and RAI Responses (TAC NO. L32850)

Reference: *Letter Christopher Ryder to Gerard Couture, Request For Additional Information Regarding Revised Westinghouse Decommissioning Cost Estimate, September 17, 2009*

Westinghouse Electric Company LLC (WEC) hereby provides responses to the Requests For Additional Information (RAIs) along with a revised Decommissioning Funding Plan and updated cost estimate to terminate SNM-1107 in support of 10CFR70.25 (e) and Chapter 11 of the SNM-1107 License Application. The cost estimate and revised plan address the changes necessary to adequately respond to the RAIs transmitted to WEC by above listed reference. These changes do not impact the Westinghouse Standby Trust Agreement submitted to the commission on July 27, 2009.

Westinghouse requests NRC approval of the revised Decommissioning Fund Value for the CFFF. If you have any questions or comments regarding the details of this report, please contact me at (803) 647-2045.

Sincerely,

Gerard F. Couture, Manager
Licensing & Regulatory Programs
Westinghouse Columbia Fuel Fabrication Facility

Docket 70-1151 License SNM-1107

Enclosure: Report Westinghouse Columbia Fuel Fabrication Facility Decommissioning Funding Plan (Westinghouse Proprietary) (SUNSI)
Attachment: RAI Responses and Revised Cost Estimate Summary (Westinghouse Proprietary)

cc: U. S. Nuclear Regulatory Commission
Attn. Mr. Richard Gibson Region II
Atlanta Federal Center
61 Forsyth Street, SW, Suite 23T85
Atlanta, Georgia 30303-3415

[

] (d) (e)

RESPONSES TO THE USNRC
REQUEST FOR ADDITIONAL INFORMATION
WESTINGHOUSE ELECTRIC COMPANY
COLUMBIA FUEL FABRICATION FACILITY
2009 DECOMMISSIONING COST ESTIMATE

1. Aspects of the DCE suggest that the estimated cost of decommissioning could potentially be an underestimate. Discuss the extent to which the itemized costs are sufficient to complete decommissioning in the following respects:

1.a. Some elements of the decommissioning cost estimate (DCE) anticipate that the work will be performed by Westinghouse staff, while other elements are ambiguous about the assumptions concerning who will perform the work. In the bounding case, decommissioning would be performed by a third party, resulting in costs that would be higher the when Westinghouse does the decommissioning. Section 4.6.3 of the cost estimate, for example, states that "each component of the scope of work should be evaluated to determine if the work can be performed by in-house personnel, by the prime contractor, or if the work is better suited to be subcontracted." Elements of the Work Breakdown Structure (WBS) described in Appendices D and E of the cost estimate (e.g., WBS #1.1.2 "Inventory Disposition" and WBS #1.7 "Westinghouse Oversight") are explicitly identified to be performed by Westinghouse staff, which suggests that such costs would be lower than if done by a third party.

RESPONSE 1.a:

[

] (d) (e)

[

] (d) (e)

1.b. The submittal states that certain prerequisite activities, including inventory disposition, removal of certain equipment, SNM recovery, and equipment cleaning, will be performed by Westinghouse. From the detailed cost estimate for WBS # 1.1 at page 5 of Appendix D, the estimates of the labor and materials necessary to carry out the work assigned to Westinghouse do not appear to be included in the cost estimate. The DCE should include the costs of all activities necessary to accomplish decommissioning.

RESPONSE 1.b:

[

] (d) (e)

1.c. On page 11 of Appendix d, the cost estimate for WBS # 1.7, "Westinghouse Oversight," apparently assumes that Westinghouse personnel will perform the activities in WBS # 1.7. The unloaded labor rates for WBS # 1.7 appear to be based on actual Westinghouse salary data, because, with one exception, they do not correspond to the unloaded rates for third-party contractor personnel under WBS # 1.1 – 1.6. However, the DCE does not provide loaded labor rates for Westinghouse personnel or a loading factor, although the summary cost estimate adds a 5% fee to the labor costs for WBS # 1.7. Without loaded labor costs, the accuracy of the summary cost estimate for WBS # 1.7 cannot be reviewed, nor can it be determined if the loaded labor rates for WBS # 1.7 are, at a minimum, equivalent to the rates of an independent third-party contractor.

RESPONSE 1.c:

[

(d) (e)

1.d. Demonstrate that the labor costs for WBS # 1.7 are equivalent to the costs of an independent third-party contractor performing the same work.

RESPONSE 1.d:

[

] (d) (e)

1.e. In Table 6.2, the total for the "Direct Burial" column exceeds the total quantity of waste according to Table 6.1. The difference is carried over into the Waste Volume Summary table in Appendix D. Discuss the difference in the stated volume of waste.

RESPONSE 1.e:

[

] (d) (e)

1.f. Describe the method for assuring funds for decommissioning and a description of the means for adjusting the cost estimate and associated funding level periodically over the life of the facility.

RESPONSE 1.f:

Westinghouse most recently updated the financial Standby Trust Agreement and submitted to the commission July 27, 2009. SNM-1107 has a specific requirement in section 11.1.2, Decommissioning Funding Plan and Financial Assurance Mechanism to update and provide adjustment of the cost estimate and associated funding to NRC in compliance with the governing regulations which requires that the cost estimates be adjusted at intervals not to exceed 3 years.

For the CFFF the governing regulations follow:
§ 70.25 Financial assurance and recordkeeping for decommissioning.
(b) Each applicant for a specific license authorizing possession and use of unsealed special nuclear material in quantities specified in paragraph (d) of this section shall either--
(1) Submit a decommissioning funding plan as described in paragraph (e) of this section; or
(e) Each decommissioning funding plan must contain a cost estimate for decommissioning and a description of the method of assuring funds for decommissioning from paragraph (f) of this section, including means for adjusting cost estimates and associated funding levels periodically over the life of the facility. Cost estimates must be adjusted at intervals not to exceed 3 years. The decommissioning funding plan must also contain a certification by the

licensee that financial assurance for decommissioning has been provided in the amount of the cost estimate for decommissioning and a signed original of the financial instrument obtained to satisfy the requirements of paragraph (f) of this section.
(f) Financial assurance for decommissioning must be provided by one or more of the following methods:
(2) A surety method, insurance, or other guarantee method. These methods guarantee that decommissioning costs will be paid. A surety method may be in the form of a surety bond, letter of credit, or line of credit.

2. For each of the following aspects of the submittal, discuss how the submittal is complete and accurate.

2.a. In the DCE, a note to Table 4.1 on page 4-22, which presents the worker unit cost schedule used in the DCE, states that the hourly labor rates in the table are "fully burdened rates." The summary labor cost breakdowns on pages 5 through 11 of Appendix D are unloaded labor costs. When the loaded rates in Table 4-1 are compared to the unloaded labor costs presented on pages 5 through 10, it appears that a loading factor of 1.96 is consistently used for third-party labor (e.g., the unloaded rate of $60.00 for Sr. Project Manager in the cost breakdowns is the equivalent of a loaded labor rate for Sr. Project Manager in Table 4-1 of $117.60 or 1.96 times the unloaded rate.)

RESPONSE 2.a:

[

] (d) (e)

2.b. Using the labor breakdowns on pages 5 through 10 and the loaded rates in Table 4-1, the labor cost figures in the Cost Estimate Summary for WBS # 1.1 through 1.6 presented in the first two pages of Appendix D cannot be reproduced. The effect can been seen most clearly for WBS # 1.4, which contains labor for only one function, Waste Coordinator, in the amount of 4664 hours at an unloaded rate of $47 per hour for a total of $219,208. When 4664 hours are multiplied by the loaded rate of $92.12 per hour presented in Table 4-1, the total of labor is $429,648. The same result, $429,648, occurs when $219,208 is multiplied by 1.96. However, page 1 of the Cost Estimate Summary in Appendix D indicates a labor cost for WBS # 1.4 of only $411,212, a difference of minus $18,436. Similarly, total labor, unloaded without fee, for WBS # 1.3 on page 7 is $7,070,624. Multiplying that amount by 1.96 results in a loaded labor cost without a fee of $13,858,423. In contrast, the first page of the Cost Estimate Summary provides an amount for loaded labor without a fee of $13,263,784, a difference of minus $594,639.

RESPONSE 2.b:

[

] (d) (e)

Quote from Inquiry 2.b.

When 4664 hours are multiplied by the loaded rate of $92.12 per hour presented in Table 4-1, the total of labor is $429,648. The same result, $429,648, occurs when $219,208 is multiplied by 1.96. However, page 1 of the Cost Estimate Summary in Appendix D indicates a labor cost for WBS # 1.4 of only $411,212, a difference of minus $18,436.

Response:

[

] (d) (e)

Quote from Inquiry 2.b.

Similarly, total labor, unloaded without fee, for WBS # 1.3 on page 7 is $7,070,624. Multiplying that amount by 1.96 results in a loaded labor cost without a fee of $13,858,423. In contrast, the first page of the Cost Estimate Summary provides an amount for loaded labor without a fee of $13,263,784, a difference of minus $594,639.

Response:

[

] (d) (e)

2.c. For each of the first six WBS, recalculating the labor cost estimate, multiplying the labor hours listed on pages 5 through 10 by the loaded labor rates supplied in Table 4-1, results in an amount significantly higher than the labor cost estimate presented in the Cost Estimate Summary in Appendix D. Over the cost estimate for labor costs for WBS # 1.1 – 1.6, this

difference is approximately $1.1 million greater than the labor costs presented in the cost estimate, before fee is added.

RESPONSE 2.c:

[

] (d) (e)

2.d. The costs allocated to travel and living, which are included in all WBS elements, except WBS # 1.7, are inadequately explained. The fee is applied to these costs, implying that they are incurred by a third-party contractor. They appear to be items of overhead, broken out separately in the DCE.

RESPONSE 2.d:

[

] (d) (e)

2.e. In Section 6.1.5, the submittal states that, whenever possible, written quotes for subcontractor work were obtained. It is unclear how the quotes were converted into final costs in the Cost Estimate Summary in Appendix D. For example, WBS # 1.1 on page 5 shows on subcontract quote for $75,000. The first page of Appendix D shows subcontract costs, prior to addition of a fee, of $83,250, but this increase is not explained. Similar unexplained increases in subcontracting costs between the work breakdown tables and the cost estimate summary occur for WBS # 1.3 and, in particular, for waste transportation costs and waste disposal costs in WBS # 1.4. At page 8, costs for waste transportation of $1,811,400 are increased to $2,010,654 in the pre-fee cost estimate summary and costs for waste disposal of 11,459,281 are increased to $12,719,802. Security force subcontracting costs pre-fee in WBS # 1.7 increase from $822,030 to $912,453. In each case, the subcontracting cost is increased by a factor of 1.11.

RESPONSE 2.e:

[

] (d) (e)

2.f. Section 4.5 of the cost estimate states that, to demonstrate compliance with regulatory criteria,

the submittal follows the methodology in three NRC guidance documents: Draft Regulatory Guide NUREG-1727, "NMSS Decommissioning Standard Review Plan". NUREG-1549, "Decision Methods for Dose Assessment with Radiological Criteria for License Termination". References to NUREG-1727 and NUREG-1549 raise questions about the decommissioning cost estimate (DCE). NUREG-1549 was superseded by NUREG-1757, "Consolidated Decommissioning Guidance," Volume 2. NUREG-1727 was superseded by NUREG-1757, Volume 3. The guidance states aspects of decommissioning, used by the NRC staff during a review, that can influence the estimated cost of decommissioning. The submittal lacks a discussion of how the use of the outdated guidance achieves the same level of completeness and accuracy in a DCE as the newer guidance.

RESPONSE 2.f:

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] (d) (e)

[

] (d) (e)

2.g. Discuss the itemized costs so that figures can be understood and assessed to ensure that the total DCE is accurate.

RESPONSE 2.g:

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] (d) (e)

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] (d) (e)