NUCLEAR FUEL SERVICES, INC.
a subsidiary of The Babcock & Wilcox Company

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Proprietary Information/Trade Secret/Commercial Information

21G-10-0029
GOV-01-55-04
ACF-10-0047

February 26, 2010

Director
Office of Nuclear Material Safety and Safeguards
U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555

References:
1) Docket No. 70-143; SNM License 124
2) Letter from B. Marie Moore to NRC, dated December 1, 2009 (21G-09-0180), Updated Decommissioning Cost Estimate as Required by 10 CFR 70.25(e)
3) Letter from NRC to B. Marie Moore, dated December 22, 2009, Non-Acceptance of Updated Decommissioning Cost Estimate
4) Letter from David C. Ward to NRC, dated January 11, 2010 (21G-10-0004), Request for Extension for Submittal of Revised Decommissioning Cost Estimate
5) Letter from NRC to David C. Ward, dated January 21, 2010, Extension of Time for Revised Decommissioning Cost Estimate

Subject: Revision to the Updated Decommissioning Cost Estimate Submitted Per 10 CFR 70.25(e)

Dear Sir:

In response to the NRC letter dated December 22, 2009 (Reference 3), Nuclear Fuel Services, Inc. (NFS) hereby submits a revision to the Updated Decommissioning Cost Estimate submitted on December 1, 2009 (Reference 2). NFS agrees that the earlier estimate was based on overly conservative assumptions and appreciates the opportunity to refine the estimate.

Attachment 1 contains the general Basis and Assumptions for how the cost estimate was prepared, the total decommissioning cost, and a summary of the funding mechanisms for financial assurance. This attachment is suitable for release to the public.

Attachment 2 contains the revised cost estimate. Due to the extensive changes made to this cost estimate, the attached revision is a complete replacement for the one

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submitted in Reference 2. The information contained in Attachment 2 is considered proprietary in nature as set forth in the enclosed affidavit; therefore, NFS requests that this information be withheld from public disclosure.

The attachment summarizing the major differences between the 2006 and 2009 estimates that was provided in the December 1, 2009, submittal is no longer accurate and should be disregarded during review of the revised cost estimate provided herein.

If you or your staff have any questions, require additional information, or wish to discuss this, please contact me, or Mr. Rik Droke, Licensing and Compliance Director, at (423) 743-1741. Please reference our unique document identification number (21G-10-0029) in any correspondence concerning this letter.

Sincerely,

NUCLEAR FUEL SERVICES, INC.

BM Moore for

David C. Ward
Interim Director of Safety and Regulatory

DMG/pdj
Attachments

Copy:

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Region II, Atlanta Federal Center
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Mr. Galen Smith
Senior Resident Inspector
U.S. Nuclear Regulatory Commission

AFFIDAVIT

TRADE SECRETS OR COMMERCIAL INFORMATION

I, B. Marie Moore, representing the Safety & Regulatory Department at Nuclear Fuel Services, Inc. (NFS), that to the best of my knowledge and beliefs, make the following representation contained herein:

A. The following document(s) which Nuclear Fuel Services, Inc. (NFS) wishes to have withheld from public disclosure is:

Attachment 2 to Letter (21G-10-0029) dated February 26, 2010:

Updated Decommissioning Cost Estimate as Required by 10 CFR 70.25(e) (Revised) February 26, 2010

B. The information contained in the document(s) cited in A above has been held in confidence by Nuclear Fuel Services, Inc. (NFS), in that it contains trade secrets or commercial information as specified in Title 10, Code of Federal Regulations, Part 2.390(a). The basis for requesting that this document(s) be withheld from public disclosure is explicitly marked on the cover page to each of the aforementioned documents and/or the top of each affected page, as appropriate, in accordance with 10 CFR 2.390(b)(i)(B).

C. The information contained in the document(s) cited in A above is the intellectual property of Nuclear Fuel Services, Inc. (NFS), and as such is customarily held in confidence by Nuclear Fuel Services, Inc. (NFS). As such, Nuclear Fuel Services, Inc. (NFS) has customarily submitted privileged and confidential information of this type to the Nuclear Regulatory Commission (NRC) and to its predecessor, the Atomic Energy Commission (AEC), in confidence.

D. The information contained in the document(s) cited in A above has not been made available to public sources by Nuclear Fuel Services, Inc. (NFS), nor has Nuclear Fuel Services, Inc. (NFS) authorized that it be made available. In accordance with Nuclear Fuel Services, Inc. (NFS) policies governing the protection and control of information, proprietary information contained herein has been made available, on a limited basis, to others outside NFS only as required and under suitable agreement providing for nondisclosure and limited use of the information.

E. The public disclosure of the information contained in the document(s) cited in A above is likely to cause substantial economic harm to the competitive advantage held by Nuclear Fuel Services, Inc. (NFS). The basis for withholding said information is that it contains distinguishing aspects of a process, methodology,

or component(s), the exclusive use of which provides a competitive advantage for NFS in product optimization or marketability.

F. The proprietary information that Nuclear Fuel Services, Inc. (NFS) requests to be withheld from public disclosure is contained in the entire document(s) as so marked.

B Marie Moore 2/26/10

B. Marie Moore Date
Safety & Regulatory
Nuclear Fuel Services, Inc.

I certify the above named person appeared before me and executed this document on this the 26th day of February, 2010.

PAMELA DIANNE JONES NOTARY PUBLIC STATE OF TENNESSEE UNICOI COUNTY

State of Tennessee Notary Public My commission expires: 09/28/2010

Attachment 1
General Basis and Assumptions, Total Cost, and Financial Assurance

4 pages to follow

Attachment 1

General Basis and Assumptions

Qualification:

The decontamination and decommissioning (D&D) cost estimate is based on the experience of the NFS technical personnel preparing the estimate and historical data obtained from past and current D&D projects at NFS. The cost estimates were prepared by the NFS Engineering Department, which has developed numerous other decommissioning financial assurance cost estimates over the last 20 years. These estimates have been prepared for new business ventures such as:

- Converting Rocky Flats Uranyl Nitrate (UN) to oxide
- Removing heels from UF_6 cylinders and converting to UN
- Converting U/Al alloy to UN
- Downblending UN
- Blending presscake
- Blending U/Al
- The BLEU Project (Uranyl Nitrate Building, BLEU Preparation Facility, Oxide Conversion and Effluent Processing Buildings)

NFS has also completed other D&D activities amounting to more than $500 million dollars, under a DOE contract, including removal of process equipment from old process lines in Buildings 302/303, 301, 130, and 111. NFS has completed equipment removal and building decommissioning of Buildings 234, 400, 410 and 200 Complex, and continues with exterior D&D projects including excavation of the Radiological Burial Ground and remediation of three surface impoundments and surrounding North Site Area. NFS routinely generates and submits to its customer (DOE) cost estimates based on the actual and estimated cost of these projects.

Summary:

The initial steps in the estimate are to determine expected waste volume associated with decontamination, disassembly, sectioning and packaging of a contaminated facility and equipment for final disposal. The volumes of waste that would be shipped to a disposal facility are then used to estimate the number of operator-hours required for the project based on actual factors collected from past projects. The waste volumes and operator-hours are then used in factors to estimate work-hours for support functions such as supervision, engineering, health physicists, radiation technicians, maintenance and other groups along with material costs, and special services. Rates and overhead charges (direct and indirect) are then applied to the estimated work hours based upon previous project quotations, inflated to present day dollars, to generate a total cost estimate.

Scope:

The estimate scope assumes that NFS facilities which have been involved in licensed activities and are known or suspected to have radiological contamination will be dismantled, where possible decontaminated, and shipped for disposal. The remaining site will be left intact. No consideration is made in this estimate for decontamination or cleanup of any known or suspected chemical contamination (non-radiological) of any of the buildings or grounds. Such activities are regulated by the EPA/State of Tennessee. Within the Erwin Facility there are areas where the D&D liability is covered under contract with the Navy Nuclear Propulsion program and areas where the D&D liability is the responsibility of NFS from its commercial activities or the responsibility of a NFS joint venture partnership. The costs for these three activities are estimated separately and then totaled into one complete number.

The estimate is considered a Class 4 estimate as defined by the Association for the Advancement of Cost Engineering, Recommended Practice No. 18R-97, "Cost Estimate Classification System – As Applied in Engineering, Procurement, and Construction for the Process Industries."

Procedure:

The procedure used in developing the waste volumes involves obtaining information such as floor plans, equipment lists, process and instrumentation drawings (P&IDs), materials of construction, and if applicable inspection of installed systems and structures. The engineer, through discussions with project members, reviews process utilities, site utilities, equipment sizes, and other data as necessary to estimate systems, piping runs, possible process contamination, and the potential for decontamination, if feasible. Disposal volume is estimated based on the size of the equipment, potential for sectioning, and potential for void filling with other smaller items. Estimates are made individually for each building in the project scope. Where available, a detailed equipment listing is used for the estimate basis. Otherwise, overall volume is estimated from P&IDs and/or inspections. D&D operational man-hours are then estimated for each identified task or equipment system based on historical data by applying a difficulty factor to the tasks. The difficulty factors are determined based on site specific conditions such as accessibility, radiation control measures, effort involved in sectioning, personal protective equipment (PPE) required, etc. These can range from 0.10 to 3.0 operator-hours/ft^3 of waste volume.

The total work-hours are then allocated to each of the Five phases of the D&D project (Planning, Decontamination and Dismantling, Restoration of Contaminated Areas, Final Radiation Survey, and Site Stabilization and Long-Term Surveillance) based on historical factors. Support functions consisting of project managers, engineering, health physicists, operation specialists, environmental specialists, supervision, maintenance, NDA specialist, and radiation technicians are determined by historical factors and based on a percentage of project operational hours. The total labor hours are then calculated from these factored estimates. Labor hour prices, including indirect overhead, are applied to these hours to calculate the total labor estimate for each project phase.

The total waste volume is used to estimate the total disposal cost. Disposal rates are applied based on the disposal costs stated in NFS' contracts with disposal sites. These rates include the cost of the container; preparing the container for transportation; transportation to each disposal site and return; and the fee charged by each disposal site.

Materials needed for decontamination, sectioning, PPE, and contamination control are factored into the total costs based on historical factors and the waste volume. The general materials and equipment costs are estimated based on a factor of the total operator-hours. Specifics include tools/equipment for sectioning (saws, blades, torches); PPE (Tyvex suits, shoe covers, respirators); decontamination (cheesecloth, cleaning materials, high pressure cleaning equipment); contamination control (portable ventilation units, tents). Special services, such as equipment rentals, crane service, and laboratory analyses are estimated based on historical factors from previous D&D projects.

As conducted in previous D&D Projects at NFS, it is assumed that once all equipment, piping and accessories are removed from a building, any remaining contamination will be fixated if necessary. The building will be demolished by contract. The demolition cost is estimated based on the square footage footprint of the building using factors from historical projects. The calculated cubic footage of rubble is added to the disposal volume estimate.

The estimate assumes that after a building is removed, an average of four feet of soil will also have to be removed from the building footprint and surrounding area for disposal. Estimated soil volumes are based on general knowledge of previous plant operations and knowledge gained through decommissioning, sampling and construction activities. Generally, the areas where soil excavation depths are estimated to average four feet deep include the building footprints and adjacent areas which extend along the northern and western boundaries of the protected area. Additionally, average excavation depths of four feet are also estimated for certain building footprints and surrounding areas in the central section of the protected area. This section of the plant includes Buildings 111, 130, 105 Complex, and certain 300 Complex Buildings where processing or processing support activities have been conducted. The total area where four feet of excavation is expected is about 448,100 ft^2.

Final survey, backfill, and long term surveillance contract costs are based on the process area total square footage. The non-process areas are assumed left intact.

The total estimated costs are then summarized and a 25% contingency is applied per the NUREG-1757 guidance to obtain a total estimated cost.

Total Decommissioning Cost Estimate

The total estimated cost for decommissioning is approximately 336 Million Dollars.

Financial Assurance Information

Financial assurance information regarding assumption of liability for decommissioning costs is contained in SNM-124, Part I, Chapter 7, Section 7.2, and Part II, Chapter 9, Appendices A and B. Due to NFS contracts with the U.S. Department of Energy (DOE), the U.S. Government would be expected to pay approximately 309 Million Dollars of this latest estimated decommissioning cost. The remaining 27 Million Dollars would be covered by NFS and its contracts with commercial partners, the majority of which is guaranteed to the NRC in the form of Irrevocable Standby Letters of Credit. Other financial assurance instruments may be utilized if determined by the NRC to meet the requirements specified in Title 10, Code of Federal Regulations, Part 70.25.

Attachment 2
Revised Cost Estimate
101 pages to follow