



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

September 10, 1996

30-16055

MEMORANDUM TO: John R. Madera, Chief
Nuclear Materials Licensing Branch, RIII

FROM: Donald A. Cool, Director
Division of Industrial and
Medical Nuclear Safety, NMSS

SUBJECT: REQUEST FOR TECHNICAL ASSISTANCE IN THE REVIEW OF THE
"BUILDING RECOVERY PROJECT" REPORT FROM ADVANCED MEDICAL
SYSTEMS, INC. (AMS)

I am responding to your technical assistance request (TAR) e-mailed on July 6, 1996. In this TAR, you requested that we review AMS' "Building Recovery Project" (BRP) in coordination with other Headquarters organizations. In a letter dated June 10, 1996, AMS solicited NRC's authorization to proceed on an extensive building recovery project on its London Road facility. The AMS BRP addressed topics that are of concern to AMS and the NRC. The AMS proposal included a description of a twelve point scope of work, a timetable for the work, and proposed mechanisms for funding some of the scope points. The letter requested that all twelve tasks be permitted to go forward since the final goal would "only be achieved when the entire project is complete."

Each of the twelve points listed in the scope of work was expanded in Appendix A of the June 10, 1996 letter. However, the first task, disposal of sealed sources and bulk cobalt-60, and the second task, disposal of dry solid waste, were further supported by information provided in Appendices B and C. With enough information to act on the first two tasks, NRC conveyed to AMS via telephone on June 25, 1996, that Tasks 1 and 2 needed to be addressed immediately, and that the other ten tasks would be considered at a later date on their own merit. AMS agreed with that approach, and submitted on July 1, 1996, an amendment request in regard to the decommissioning financial assurance, specifically desiring a modification to its standby letter of credit. On August 5, 1996, Amendment No. 44 to material license No 34-19089-01 was issued, authorizing AMS to proceed with the actions described in the July 1, 1996 letter, for the purpose of completing Tasks 1 and 2 of the BRP described in the June 10, 1996 letter.

Because of the complexity of Tasks 1 and 2, it was recommended that these first two tasks be completed as expeditiously as possible. Completing source and waste removal defined in Tasks 1 and 2 will then allow the licensee to concentrate on the subsequent tasks with more focus and resources, and allow the NRC to address those tasks in an orderly manner, rather than all at once.

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The ten remaining tasks were delineated to give an overview in the June 10, 1996 BRP, and are addressed individually below. Most of the remaining tasks will require further details for completion.

Task 3. Radiological Stabilization of the Basement. The issue described in this task is the decontamination of the basement area for unrestricted release of the basement, outside of the Waste Hold Up Tank (WHUT) room, and the stabilization of the radioactive material in the WHUT room, to ensure that liquids do not enter or exit the room for the duration of the safe storage period. It is recommended that this task be pursued (decontamination of basement and stabilizing material in WHUT room); however, the evaluation of the feasibility of decontaminating and decommissioning the WHUT room should be made by AMS.

Task 4. Hydrological Stabilization of the Basement. This task addresses the issue of water collecting in the underground drains and flowing to the new manhole which is presently isolated from the area sewer system. AMS presently collects this water in hold-up tanks, analyses the water for cobalt-60, then discharges it to a catch basin if the analysis shows no cobalt-60 content. There is presently a separate request from AMS, dated June 25, 1996, requesting authorization to discharge directly from the manhole to the catch basin with no hold-up for analysis, and sampling the water once a week from the manhole instead, to verify that the water from the underground drain is not contaminated from the soil surrounding the underground drain. This issue is being addressed in a separate TAR, expected to be completed by early September.

Task 5. Modifying Conceptual Decommissioning Plan and Decommissioning Funding Plan. This task discusses the resubmittal of the Conceptual Decommissioning Plan and a subsequent Decommissioning Funding Plan in light of the decrease in inventory and the unrestricted release of parts of the London Road facility. Pursuant to the completion of disposal of the 40,000 curies or so of bulk and sealed cobalt-60 sources, and of the low-level waste generated from decontamination of the facility, the estimates of cost for decommissioning of the facility should be readdressed. However, in all the correspondence to date, AMS has emphasized and requested approval for SAFSTOR methodology for its cost estimates; all correspondence from Headquarters addressing this issue have indicated why SAFSTOR would not be an option, and that the Generic Environmental Impact Statement (GEIS), NUREG-0586, intends SAFSTOR to be an allowed use of a safe storage for a few days to a few months for material licensees. This continues to be our position. In addition, in a letter from Kevin Null to David Cesar dated August 5, 1996, condition number 24 was added to AMS' license to require that AMS submit to NRC for review a revised Conceptual Decommissioning Plan (CDP) and cost estimate not later than August 30, 1996, and, assuming NRC approval of the CDP, a revised Decommissioning Funding Plan that will contain a description of a new decommissioning financial instrument not later than September 15, 1996. NRC will review this new plan upon its arrival.

Task 6. Free Release Remainder of Building. This task discusses the characterization and remediation of the London Road facility, similar to Task 3 but referring to decommissioning the areas outside of the basement. After decontamination, surveys pursuant to NUREG-5849, "Manual for Conducting Radiological Surveys in Support of License Termination," will be performed by AMS, submitted to the NRC, with a request for confirmatory surveys for all but the WHUT room, Hot Cell, and the ventilation room. This task is approved.

Task 7. Request Exemption from Physical Inventory. This task discusses AMS intention to request an exemption from the inventory license condition and discusses the reasons for this request. Because the plug to the storage well has become lodged, physical inventory of the sources in the well is not possible. A license condition (14.c.) requires that an inventory be performed by June 1, 1993, and every 60 months thereafter. At present, the licensee is in violation of that condition, as noted in a letter to AMS dated August 13, 1993, although attempts have been made to remove the plug. Review and determination by the NRC will be made with the information that is provided when the exemption request is submitted. In the meantime, the determination of what should be in the well should be established from past inventories. There is a large variation in the quantity of material that AMS has estimated to be present in the well, depending on which piece of correspondence is read (June 10, 1996 BRP letter indicates approximately 3000 curies of cobalt-60, while July 10, 1996, Revision 3 of Strategic Plan estimates 4000 curies of cobalt-60).

Task 8. Request Exemption from Emergency Plan Requirements. This task discusses the requirement for an Emergency Plan in accordance with 10 CFR 30.32 in light of the large possession limit authorized in the license. After completion of Tasks 1 and 2 of the BRP, license quantity limit requirements should be significantly reduced, from maximum amounts of 150,000 curies of solid metal and 135,000 curies of sealed cobalt-60 in AMS' present license, to a maximum of 10,000 curies, including the cobalt-60 in the plug well. AMS also indicates that the cobalt-60 will be sealed, non-dispersible material. After disposition of all disposable material, AMS should first submit an amendment to modify the possession limit on the license (see task 10), and, after receiving a lower possession limit, submit either an Emergency Plan in accordance with 10 CFR 31.32, using Regulatory Guide 3.67, "Standard Format and Content for Emergency Plans of Fuel Cycle and Material Facilities," and NUREG-1140, "A Regulatory Analysis on Emergency Preparedness for Fuel Cycle and Other Radioactive Material Licensees," as guidance, or, in accordance with Title 10 CFR 30.32(i)(1), an evaluation that indicates that a dose of 1 rem effective dose equivalent or 5 rem to thyroid could not be delivered to a member offsite (which AMS indicates it could show).

Task 9. Request Extension of Safe Storage Period for WHUT Room. This task describes the desire of the licensee to continue the WHUT room in a storage capacity based on personnel exposure and waste volume considerations. Revisiting the WHUT room evaluation of whether to continue existing storage of the room, or decontaminate, should be performed at least as often as a license renewal, taking into consideration As Low As Reasonably Achievable analyses.

AMS should be reminded that the longer the storage of the WHUT room, the longer its remediation will need to be considered in the estimation of decommissioning costs, and the higher the cost of the decommissioning funding instrument, coupled with the rising cost of waste disposal and inflation. Consideration of continued storage will be based on the information provided in AMS' request for storage extension.

Task 10. Request Reduction in License Limit. This task will request a reduction in the licensed maximum possession limit of radioactive material. As indicated in the Task 8 discussion, this should be accomplished by AMS as soon as possible after Tasks 1 and 2 are completed. The decommissioning funding plan is based on the quantity of material the licensee is authorized to possess, and therefore, the funding plan complexity and liability coverage might be reduced by a reduction of the possession limit. Although the "quantity" criteria for having to consider an emergency plan is still exceeded, the development and analysis of the plan, and the demonstration of the potential of exposing an offsite individual to less than 1 rem effective dose equivalent would be easier to complete.

Task 11. Submit Long-Range Strategic Plan. This task discusses AMS' on-going plan to issue subsequent revisions to its Strategic Plan. AMS submitted its latest revision dated July 10, 1996. AMS should continue to submit the plan since it provides information on progress made by AMS to resolve identified issues.

Task 12. Perform Routine Operations and Meet Regulatory Commitments. This task discusses AMS' intention to track outstanding regulatory and compliance issues along with the above 11 tasks. Although this task does not generate a deliverable item except the task list of the BRP, the NRC can review this present list in the future to monitor progress of activities at AMS.

Attachment: Incoming TAR

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