



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

October 8, 1997

MEMORANDUM TO: Monte Phillips, Chief
Nuclear Materials Inspection Branch 2
Division of Nuclear Materials Safety, Region III

FROM: John W. N. Hickey, Chief *J. W. N. Hickey*
Low-Level Waste and Decommissioning
Projects Branch
Division of Waste Management
Office of Nuclear Material Safety
and Safeguards

30-17951

SUBJECT: TECHNICAL ASSISTANCE REQUEST REGARDING LOST
ANHEUSER-BUSCH, INC AMERICIUM-241 SOURCE (IMNS 5841)

This is in response to Francis Hruby's letter dated, September 19, 1997, regarding the Division of Waste Management's (DWM's) request for additional, site-specific, information to evaluate Anheuser-Busch, Inc's (ABI's) proposed actions for the disposal of scrap metal bales that may contain a lost Americium-241 (^{241}Am) source. In his letter Mr. Hruby states that ABI will not be able to provide the site-specific information that the staff requested until a facility is found that is willing to smelt the scrap bales and, instead, provides a table of default values for use by the Nuclear Regulatory Commission staff in estimating potential doses from the smelting of the source. Mr. Hruby also states that the intent of ABI's original request, dated June 13, 1997, was "to receive NRC's general concurrence on the proposed methodology, identify one or more smelters willing to accept the RIMCO and/or NUCOR bales, perform a smelter-specific impact assessment, then solicit the NPC's final approval prior to implementation"

As stated in our memorandum to you, dated September 8, 1997, ABI's dose assessments were derived using models and standards that are currently the subject of debate in the Health Physics community and have not yet been endorsed by NRC. As such, the potential doses to the public and workers from the processing (smelting) of the scrap metal bales containing the ^{241}Am source may be greater than those in the licensee's dose estimates. Therefore, we do not concur with ABI's proposed methodology.

However, we have concluded that it may be appropriate to allow ABI to forward the scrap bales to an unlicensed facility for smelting, as long as the potential doses to workers and the public, estimated using site-specific information, are sufficiently low. Because ABI is unable to provide site-specific information at this time, we believe it is appropriate to develop bounding estimates of potential doses to workers and the public from the ^{241}Am using a dose calculation methodology being developed by NRC and conservative input parameters. If the bounding estimates are sufficiently low, we will inform you that ABI should proceed with obtaining

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301-415-6749

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- 2 -

smelting can be performed in a manner that ensures that there is no threat to public health and the environment. Note that this methodology will not be available for use until November 1997, at the earliest.

If you have any questions concerning the staff's response, please contact Nick Orlando at 301-415-6749.

TICKET: LLDP-7134; IMNS 5841

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-2-

the information requested in our September 8, 1997, memorandum. Note that the dose assessment methodology will not be available for use until November 1997, at the earliest. Upon receipt of the information requested in our September 8, 1997, memorandum, we will perform a site-specific dose assessment to determine if the smelting can be performed in a manner that ensures that there is no threat to public health and the environment.

Mr. Hruby also requests that NRC staff provide ABI with the input values NRC staff will use to perform the independent dose assessment in order to allow ABI to locate a candidate smelter. Upon completion of our bounding calculations we will forward this information to you. In the interim, we suggest that ABI move forward with their attempts to locate a smelter willing to consider accepting the scrap bales.

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