POOR ORIGINAL

PDR 70-687

UNION CARBIDE CORPORATION
MEDICAL PRODUCTS DIVISION
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RECEIVED FEB 24 1981 U.S. Nuclear Regulatory Commission NMSS Mail Section

February 9, 1981

RECEIVED APR 27 1981 U.S. NUCLEAR REGULATORY COMMISSION

U. S. Nuclear Regulatory Commission
Material Control & Accountability
Licensing Branch
Division of Safeguards
Mail Stop 881SS
Willste Building
7915 Eastern Avenue
Silver Spring, MD 20910

DOCKETED USNRC FEB 24 1981 NMSS MAIL SECTION DOCKET CLERK

Attn: Mr. R. Jackson

Gentlemen:

The Materials and Plant Protection Amendment 3 to the Union Carbide Corporation SNM-639 license, item 7.2 prescribes item checks of discrete items and containers of SNM daily. It is requested that the wording of item 7.2 be amended to read as follows:

> "Accurate records shall be established and maintained which provide on a daily basis knowledge of the identity and location of all unirradiated SNM in discrete items and containers.

This change is requested because daily item checks of irradiated SNM has become impractical; however, by reason of the fact that this material has been irradiated, it is rendered self-protected within the definition of 10 CFR 73.6 b.

Applicant.............
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There are from 75 to 100 discrete items or containers which hold irradiated SNM at any time during routine operation. a general breakdown of these items follows:

Location	Item	Quantity	Radiation Level @ 3'
Reactor Core	Irradiation Target	28 ea.	~5000 Rem/hr. each
Hot Cell	Irradiation Target	1 to 6 ea.	5000 Rem/hr. each
Hot Cell	U & fission pdt. waste solutions (~15 gms ea.) in septum sealed bottles.	20 to 60 ea.	100 to 5000 Rem/hr. each
Hot Cell	U Oxide with fission pdts.	1 to 26 ea.	100 to 1000 Rem/hr. each

It is not practiable to perform daily item checks on irradiation targets in the reactor core because it would require that the reactor be shut down each day and all of the targets would have to be removed. This would seriously hinder efficient isotope production. All other irradiated SNM is located in the hot cells where processing goes on practically continusouly 6 days per week. Radiochemical separation operations would have to be interrupted if daily item checks were required.

Because these items are self-protected by contained radioactivity and because of the security measures[1] employed, we believe that daily item checks of this material are unnecessary. Any unauthorized diversion would require special knowledge and equipment which would prevent such diversion from being carried out without detection. Daily item checks will be made on all unirradiated material.

[1]UCC Physical Security Plan forwarded to the Commission 5/18/80.

The new wording of 7.2 that is hereby requested also omitted the word "quantity" as an ingredient of the item check. Although each MBA custodian could assess the approximate amount of material contained in discrete items other than sealed targets by noticing the volume of solution, quantity of powders and qualities such as colors and textures of material, an absolute determination of quantity cannot be made unless the material contained is sampled and assayed. Since we do not believe it is the intent of this license condition to re. 're daily assays, we request that the word "quantity" be left out.

For the above reasons, we believe this license change can be made without endangering life, property and the common defense.

A check in the amount of $150.00 is enclosed for the fee prescribed by 10 CFR 170.31. 1. G for an administrative license amendment.

Thank you for your consideration.

Very truly yours,

James J. McGovern
Business Manager
Radiochemicals

JJMcG:js
Enclosure (CHECK $150.00)