



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

Docket file
70-687

OCT 15 1984

SGFF:DRJ
70-687

Union Carbide Subsidiary B. Inc.
(Company B)
Sterling Forest Research Center
ATTN: Mr. J. J. McGovern
Business Manager, Radiochemicals
P. O. Box 324
Tuxedo, New York 10987

Gentlemen:

This is a follow-up letter to our generic letter of August 16, 1983, which provided clarification relative to investigative and corrective actions to resolve statistically significant shipper-receiver differences as required by 10 CFR 70.58(g)(3).

Apparently, there is still some confusion as to whether the 50-gram U-235 (U-233 or Pu) de minimis specified in 70.58(g)(3) applies to (a) each individual container or lot (i.e., each line item of the 741 form), (b) each total shipment, (c) cumulative shipments of like material, (d) both line items and total shipments, but not cumulative shipments, or (e) all three types of S/R comparisons. As required by 70.58(g)(2), shipper-receiver comparisons are to be made for (a), (b), and (c), above, but 70.58(g)(3) only applies to statistically significant SRDs associated with or within a given shipment. Hence, there is no requirement to investigate (or resolve) significant SRDs on a cumulative basis. We want to make it clear that the 50-gram U-235 (or U-233 or Pu) de minimis in 70.58(g)(3) does apply to any S/R evaluation made relative to a given shipment, whether it be for a line item or total shipment. It should be noted, however, that if a shipper uses more than one line to list a batch (or lot) of material (where each container of the batch holds material of the same composition and same enrichment or isotopic distribution), the S/R comparisons need only be done on a batch basis rather than for each container. Perhaps we should also note that the word "differences" (within the phrase "those shipments which involve differences" near the end of 70.58(g)(3)) is the basis for concluding that investigations are intended for all significant SRDs not exempted by the de minimis. That is, if an investigation were only intended for significant SRDs on a total shipment basis, the phrase in question would read "those shipments which involve a difference".

In summary, all S/R comparisons are to be evaluated for both element and isotope. Any statistically significant S/R difference (whether for element only, isotope only, or both) must be investigated and resolved unless the U-235 (or U-233 or Pu) S/R difference associated with the particular line item or total shipment, as the case may be, is less than 50 grams.

The questions and answers presented in the enclosure to this letter should eliminate any remaining confusion. If, upon comparing the commitments (or lack thereof) in your Fundamental Nuclear Material Control Plan (FNMC Plan) against the statements in this letter and enclosure, you find that there are conflicts or ambiguities, we urge you to submit appropriate revisions to your FNMC Plan so as to make it consistent with our stated licensing and regulatory policy.

Sincerely,

Original signed by Willard B. Brown

Willard B. Brown, Chief
Fuel Facility Safeguards
Licensing Branch
Division of Safeguards, NMSS

Enclosure:
As stated

Distribution:

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	<u>SRD(U)</u>	<u>Combined LE (U)</u>	<u>SRD (U-235)</u>	<u>Combined LE (U-235)</u>
All quantities in grams				
*Statistically significant				
<u>Situation 1</u>				
Line Item 1	250*	200	60*	30
Line Item 2	750*	200	20	30
Total	1000*	800	80	100
<u>Situation 2</u>				
Line Item 1	250*	200	60*	30
Line Item 2	750*	200	(20)	30
Total	1000*	800	40	100
<u>Situation 3</u>				
Line Item i	250*	200	60	100
<u>Situation 4</u>				
Line Item j	250*	200	40	100
<u>Situation 5</u>				
Line Item k	250	300	40*	30

QUESTIONS AND ANSWERS

Situation 1, TABLE 1

Question: Are the significant SRDs for the line items and total shipment (as noted) exempt from investigation because the SRD (grams U-235) for the total shipment is not both statistically significant and greater than 50 grams?

Answer: No, Line item 1 is subject to investigation for both element and isotope, and the total shipment is subject to investigation for element. Line item 2 is not subject to investigation (for the significant element difference), however, because the U-235 SRD is less than 50 grams.

Situation 2, TABLE 1

Question: Are the significant SRDs for the line items and total shipment (as noted) exempt from investigation because the SRD (grams U-235) for the total shipment is less than 50 grams?

Answer: No, Line item 1 is subject to investigation for both element and isotope. Line 2 and the total shipment are both exempt because each has a U-235 S/R difference of less than 50 grams.

Situation 3, TABLE 1

Question: Is the significant SRD (grams U) exempt from investigation because the SRD (grams U-235) for the line item is not both statistically significant and greater than 50 grams?

Answer: No, the element difference is significant and must be investigated because the corresponding U-235 difference exceeds 50 grams.

Situation 4, TABLE 1

Question: Is the significant uranium difference for this line item exempt from investigation because the associated U-235 SRD is less than 50 grams?

Answer: Yes.

Situation 5, TABLE 1

Question: Is the significant U-235 difference for this line item exempt from investigation because the SRD is less than 50 grams?

Answer: Yes.