



UNION CARBIDE CORPORATION

CARBON PRODUCTS DIVISION

P. O. BOX 500, LAWRENCEBURG, TENNESSEE 38464

June 9, 1967

Mr. Charles A. Keller, Director
Production Division
United States Atomic Energy Commission
Oak Ridge Operations
Oak Ridge, Tennessee 37830

Dear Mr. Keller:

Ref: OPN:PFB:EJS

This letter is in response to your May 3, 1967 letter informing us of the results your SS Materials Survey No. OR-226 of our Lawrenceburg Technology Operations. We have delayed this response to you until we have had a chance to obtain the detail results of your sample evaluation.

We can report that the following specific steps have already been taken.

1. We have prepared a procedure manual which sets forth our controls of special nuclear materials. This report was submitted to United States Atomic Energy Commission, Washington, D. C., Attn: J. A. McBride, Division of Materials Licensing on May 6, 1967.
2. We are instituting a periodic calibration check on all scales in our facility, including the ones used in weighing SS material. When our volume of SS business picks up again, we plan to institute a spot check procedure on operator accuracy.
3. Our largest inventory of SS material and the area of greatest potential for possible inventory error is in the AVR scrap. We have finally completed negotiations to have NFS reprocess this material starting next month. We believe that when this is done, we should have much better information on the exact dimensions of "the crossover".
4. We have now instituted procedures to have measured discards and other known losses properly recorded in our accountability records for the month in which they occur.

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MRA
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HW Young
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Mr. C. A. Keller

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5. We have now adopted the procedure of placing inventory stickers on items as they are inventoried.
6. On future campaigns, we plan to keep internal scrap recovery current with its generation at least to the point of homogenizing the scrap where feasible to a form amenable to more accurate measurement (i. e., ashing of uranium contaminated graphite crucibles, etc.).

As a general comment, we believe that most of the sample discrepancies you reported were attributable to the difficult matter of estimating U content of inhomogeneous scrap. For example, where you withdrew small samples of inhomogeneous scrap, we noted that your results were high on nine and low on eight batches. Several of our errors on the oxide batches were attributable to our use of the improper weight conversion and we are studying ways to avoid this in the future. We suspect that some of our errors arising in the gamma scan of whole scrap may be due to the presence of thorium daughters. We would expect to avail ourselves of the best current practices for making these difficult estimates on any future campaigns.

We believe that our current ledger system is adequate and would appreciate further clarification on the subsidiary ledger you suggest in Item 9.

We normally use the nominal job enrichment in labelling in process material since our established procedures are to make isotopic checks first upon receipt of material and again on each of the many product shipments which are made. Also, where there is sufficient reason to suspect in-process crossover, additional checks have been made.

We are appreciative of the helpful advice and criticism which your Production Division has given us here in Lawrenceburg. I feel that we have learned many valuable lessons from our first large SS material campaigns which should greatly improve our performance on future jobs.

Yours truly,

*L. D. Stoughton*L. D. Stoughton, Manager
Lawrenceburg Technology Operations

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