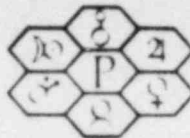


Regulatory Docket File



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MARVIN PESSES
PRESIDENT U.S.

REG.
NRC SECTION

May 23, 1978

Mr. Earl G. Wright
Radio Isotopes
Licensing Branch
Division of Fuel Cycle & Material Safety
United States Nuclear Regulatory Commission
Washington, D. C. 20555

RE: Amendment License STB-1245
Docket #40-8406

Dear Mr. Wright:

First, let me apologize for not replying to your letter of March 16 in a more timely fashion. I am particularly chagrined over this, in view of the fact that I have been pushing you in an attempt to get the amendment approved, since a number of our customers are suffering hardships as a result of our being unable to receive material from them. Unfortunately, we have had a number of personnel changes in our office which resulted in a rather sizable amount of correspondence being misfiled. I can assure you that I am even more anxious now to bring this matter to a conclusion than I was last time we spoke; our suppliers are even more anxious than we are, and it would serve everyone's purposes to expedite this as rapidly as possible. I would be pleased to come to Washington if necessary in order to help move this thing forward; this is in the interest of our customers, ourselves, and our nation's energy conservation program.

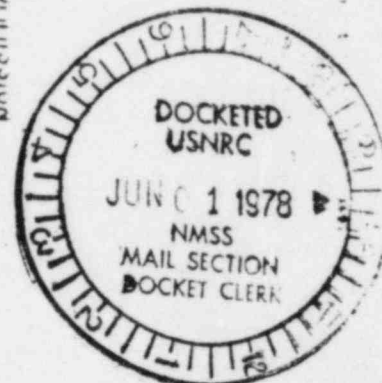
We are pleased to reply to the questions you raised in your letter as follows:

- 1) The thorium containing scrap will be received by us in 55 gallon steel drums. The material will be moved to our melt shop, charged into a high frequency induction furnace along with nickel, and/or silicon, and/or copper, and/or iron and melted under a thin slag cover under an argon atmosphere. The resultant melt is cast into a heavy steel chill mold. This slag is then either broken or sheared for shipment to our customers. Our customers use this material as less than 2% of their charge (dilute it 98%). The thorium content of any slag that results we have found will be less than .02%.

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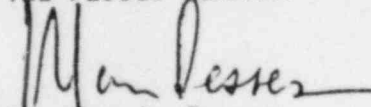
- 2) The maximum amount of source material that we will use at any one time for each phase of the operation would be, as specified above, 1%. The only hazard we can possibly imagine would be in the event we had a lining fail in one of our furnaces and the resultant molten metal would go through the furnace lining. We have a pit underneath our furnace into which this material would drop, chill, be broken up later, and put back into a future melt. We cannot conceive of any real potential radiological hazard to any of our workers or to the public as a result of this.
- 3) The employees on the furnace when we melt hazardous materials of any kind wear proper safety equipment; the area in which they function operates under a negative pressure from a very good exhaust system. The employees in this case wear monitoring equipment which continuously samples the air at the level of their nostrils. We also have available and use radiation survey meters. These filter samples are analyzed for thorium on our quontometer and are also checked for radiation. The slag from the melting operation, which is essentially an insoluble silicate and is diluted, will be buried in one location and at a minimum depth of 4 ft.; successive burials will be separated by at least 6 ft.; not more than 12 burials will be made in any one year. The total quantity of radioactive material buried at any one location will not exceed 1,000 times the amount specified in Appendix C of Part 20 of Rules and Regulations, i.e., 1,000 microcuries. We have 22 acres at our plant, approximately 75% of which is presently unused. Attached hereto you will find a plot plan showing the area in which burials will be made. One of the types of instrumentation we use is a Victoreen's Model No. 490, Thyac III. Before and after we begin the short runs which involve the use of thoriated metal, a complete plant survey is made. This includes a physical survey of the location of materials and equipment and measurement of levels of radiation or concentration of materials present. We have never had any airborne or liquid releases, nor do we anticipate ever having any. However, the material collected in our dust collector is checked after each run for possible radiation. Our company records will show the location where burials of slag resulting from melting radioactive materials have been made, and a record will be kept of each burial, amount, the time, date, location, et al.

We trust that we have answered all your questions satisfactorily, that our procedures will be acceptable, and that we will hear from you shortly with approval for the amendment to our license.

Thanking you for your cooperation, and looking forward to hearing from you, we are,

Very truly yours,

THE PESSES COMPANY


Dr. Marvin Pesses

MP/tj

Enc. Blueprint