

PA.09-3



UNITED STATES  
ENERGY RESEARCH AND DEVELOPMENT ADMINISTRATION  
WASHINGTON, D.C. 20545

October 24, 1975

Memo to Files

CARNEGIE-MELLON SYNCHROCYCLOTRON

On October 23, 1975, W. J. McCool (HQ-OS), E. K. Loop (HQ-OS), R. E. Allen (HQ-OS), J. Pingel (CH), B. J. Davis (CH), R. Drucker (CH-BAO) and I met at Germantown to discuss the clean-up of radioactivity at the Saxonburg accelerator site. After discussion, we concluded acceptable criteria would include removal of all material necessary to reduce the residual surface activity to a maximum of 0.04 mR/hr above ambient background. Since ambient background is 0.03 to 0.05 mR/hr, the above 0.04 mR/hr criterion will essentially be the 0.08 mR/hr (induced + background) case discussed previously. However, CH will obtain formal agreement with Carnegie-Mellon University with regard to use of this criterion. In particular, Bobby Joe Davis will be responsible for composition of an appropriate letter for Bauer's signature. We anticipate no problem in using this criterion since 0.08 mR/hr (induced + background) has been previously agreed to by Carnegie-Mellon University. We will not put any removed material into a landfill. All removed material will go to the Morehead burial site. CH will provide a formal reply to the OS memo.

Mr. McCool suggested that ERDA offer its services for future radiological monitoring of the Saxonburg site. Bobby Joe Davis commented that the appropriate radiation safety agency within the state of Pennsylvania has examined the proposed 0.08 mR/hr (induced + background) case and has found this acceptable under Pennsylvania law. It is now estimated that the 0.08 mR/hr (induced + background) case will require approximately \$200,000 in FY 76 operating costs. Reduction to 0.04 mR/hr (induced + background) would cost an estimated \$475,000.

Bobby Joe Davis commented that the principal radioactivities at the Saxonburg site are: Na-22 (approximately 70% of the total dose rate), Eu-152 (approximately 15% of the total dose rate), and Co-60 (approximately 15% of the total dose rate). Na-22 has a 2.6 year half



life; Co-60 has a 5.27 year half life; and Eu-152 has a 13 half year life. The Na and Co activities are easily understandable in terms of high energy neutron reactions. I am puzzled by the Eu activity however.

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