70-687

UNION CARBIDE - TUXEDO

I. Status of Licenses

A. 31-3334-1 expired January 31, 1960

B. SNM-221, 498, C-3885, SMB-470 will remain separate.

C. 31-3334-2 (Irradiator) will likely be included since it is installed in the hot lab.

II. Possession Limits

A. Are the relatively high possession limits needed for research and development or for processing, packaging, and shipment to AEC authorized recipients? If the latter, separate the desired possession limits.

B. Why the high limit for Pm-147, Ce-144, Sr-90, and Cb-Zr-95?

C. Does 6(a)(E) include the 24,000 curies of Cobalt 60 on 31-3334-2 irradiator license?

D. What is the estimated curie content of mixed fission products contained in four spent fuel elements?

III. Facility and Surrounding Area

A. Surrounding Area

1. What does Prospect Mt. Corp. plan to do in area next to UCNC property?

2. It appears that part of the 25 acre Indian Kill Pond is on UCNC property. What is the water used for and the possibility of it becoming contaminated?

3. Hazards report states that drinking water supplies cannot be contaminated by plant because of distance or use of wells. What are the ponds and lakes used for and the possibility of using them for drinking water in the future?

4. Will the environmental survey program be expanded from that stated in the hazards report? Perhaps more than three air monitoring stations.

McCluskey

5. Item F.1. on page 17 of Hot Lab Hazards report states that the area is for technological development. The Laurel Park housing area is already nearby. What are the prospects of other housing developments in nearby areas?

6. On page 18 of Hot Lab Hazards report states that Sterling Forest area is of low population density. It will grow to 4,000 families in next 25 years which is approximately:

$$\frac{4 \frac{\text{persons}}{\text{family}} \times 4{,}000 \text{ families}}{27 \text{ miles}^2} \sim 593 \frac{\text{persons}}{\text{mi}^2}$$

Is this low population density? What about industries that locate in Sterling Forest area?

B. Facility

1. What is the water storage reservoir next to the stack used for? Is it a tank and where is its source of water?

2. Is there any meteorological equipment installed at the site?

3. Is the property line fenced all the way around?

IV. Ventilation Systems

A. On page 6 of the Hot Lab Hazards report it states that air from the charging area normally discharges to the second floor. Where on the second floor? What occupancy is made of the area where this air is discharged?

B. On page 6 it also states that all exhaust air passes through roughing filters plus absolute filters. This is essentially a single filtration system. What consideration has been given to a fire in the duct system resulting in a rupture of the filter system? Has consideration been given to installing a fire detection system in the duct system?

C. What quality control measures are used on purchase and installation of absolute filters?

D. On page 12 does all exhaust air from the iodine processing cell go through the activated carbon units? Where are the units located? Are they just on the processing equipment?

E/ On page 25(e)(para. 3) they consider Strontium 90 as the limiting isotope. What if Iodine 131 were present in the solid form and was involved in an explosion with volatization and the material bypasses the carbon traps in D. above?

V. Hazards of Various Operations

A. On page 24(E)(& & b) it states there is only an external hazard. How about oxidation or flaking? Solid could be powder form that presents a considerable contamination hazard.

B. Appendix B, page 6, Spills. Does this mean there is no danger of excessive dose from a spill or does it mean spills of such magnitude there is not E construed to be a danger of excessive dose? Will the person involved be qualified to evaluate the situation?

C. Appendix B, page 14, Item 4. Evaluate the possibility of contamination arising from this method of transfer?

VI. Procedures

A. Appendix A, page 3(E) states "when approval of the Committee is sought." This appears to leave it to the individual to seek their approval only when he wants to. Perhaps sought should be changed to read required.

B. Appendix B, page 2(7). Use of equipment is authorized by whom?

C. Appendix B, page 7(5). How do you gain entrance to the filter room if the Health Physicist is gone or on vacation?

VII. Miscellaneous & General

A. What evaluation has been made of radiation levels in occupied areas above the charging area when roof plugs of the cells may be removed? (page 3)

B. On page 14 regarding personnel monitoring, are pocket chambers read by a commercial laboratory? What commercial labs provide these services? Approved by whom?

C. Appendix A, page 9 (R & S). These statements are not consistent with the use of dilution factors for the maximum credible accidents which were postulated.

D. Appendix B, page 8 (3). Capacity in what units.

E. There are several statements in the Hot Lab Hazards report saying there is no undue hazard to the population in unrestricted areas. How about the hazards in restricted areas and inside the building? For example, on page 26, para. 4, no mention is made of hazard from contamination in the cell, etc?

VIII. Emergency Procedures

A. Means of activating emergency procedures. Who directs emergency operations and what are the administrative procedures governing emergencies?

B. Is there an automatic shut off mechanism for the ventilation system and if so, how does it function?

C. Are there first aid facilities and decontamination supplies outside the laboratory area and if so what do they consist of?

D. What means are used to notify civil authorities in case of an emergency involving release of radioactive material to the surrounding area?