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S. D. Smiley
 Assistant Superintendent
 S Division

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PEROXIDE PROCESS - 234-5 BUILDING

The mechanical line being developed at Los Alamos is designed around the peroxide precipitation process. Development work, at that site, on this process has progressed to the point where actual plant equipment can be designed for future use.

The process for converting the peroxide to a reducible fluoride is known. From the reduction step on, no change is necessary in the present process.

The possibilities of a satisfactory peroxide process were recognized before design and construction of the R. G. line, but the development work necessary for this process had not progressed far enough to have been included in that line. This was due to the need for putting all available manpower on the design and construction and the lack of immediate facilities for development work of this nature.

The gain to be realized by the adoption of the peroxide method is so great that the amount of work necessary for development of this process can certainly be justified at this time. Some of the possibilities contingent on this process are:

1. The elimination of the oxidation step in the 234-5 process.
2. The elimination of one or more of the following:
 - (a) The entire Isolation Building, (231), process.
 - (b) Some of the steps of the Isolation Building process.
 - (c) Wet chemistry steps of the 234-5 Building.
3. The recycling of all wastes from the 234 process to the existing plant facilities; (231 or 224 Buildings).
4. The elimination of the need for glass lined equipment in the purification and recovery operation and the elimination of the Supernate Concentration equipment.

SPECIAL RE-REVIEW
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5. The elimination of the need for using tantalum in the process equipment.
6. The elimination of the need of a caustic scrubbing system for the process fumes.

Because of these, and many more possible advantages to be gained, it is recommended that serious consideration be given to the handling of peroxide in the R. M. Line before the design or construction develops any further.

C. T. Grosz
C. T. GROSWITH
CONTACT ENGINEER

CTG:ls:ej

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