HW-10754

HW-10754

#1 Dr. E. R. Jette, Attn: Mr. R. Philip Raymond
#2 A.B. Greninger - O.H. Greager
#3 J.B. Work - R. [illegible]
#4 700 File
#5 Pink
#6 Yellow

DECLASSIFIED ~~CONFIDENTIAL~~

RECEIVED

MAY 22 1956

300 AREA
CLASSIFIED FILES

BEST AVAILABLE COPY

RECORD CENTER COPY

August 17, [illegible]

APPROVED FOR PUBLIC RELEASE

This document consists of 2 pages. No. 6 of 6 copies, Series A

Dr. E. R. Jette
Los Alamos Scientific Laboratory
Box 1663
Los Alamos, New Mexico

Attention: Mr. R. Philip Raymond

Dear Raymond:

This will let you know that I have received the copy of [illegible]'s paper which I had left with you. The other article that I mentioned during our discussion is by [illegible] in [illegible], Ausgabe B, Vol. [illegible], August [illegible]. The English translation of the title is, "Separation of Dust on [illegible] and in Air Filters".

In connection with further studies with your proposed [illegible] system you appreciate the necessity of [illegible] the experimental [illegible] with a [illegible] system of known and controllable particle size distribution. [illegible]

Any further work you do with the [illegible] will be of considerable interest [illegible]

[redacted]

REPRODUCED FROM BEST AVAILABLE COPY

DECLASSIFIED

CONFIDENTIAL

is not to become excessive. In this case too, however, diffusion becomes of importance for sub-micron particles since exceptional face velocities would otherwise be required to insure removal of this size of particles.

We believe you will be interested in some work done here in which a four foot section of an 8" column packed with 1/2" Berl saddles was tested. For an air stream containing approximately 1 grain per 1,000 cfm of an aerosol whose average particle size was about 1 micron, 65-85% of the particles were removed at an air flow of 30-60 cfm and water flow (counter current) of 1-4 gallons per minute. By the introduction of steam into the air stream to build up the particle size, the removal was increased to 90-95%. For your information, a filter made from CWS No. 6 paper removed 99.9% of the particles from this air stream when operated at its rated capacity. Preliminary work here indicates that a sand filter operating at a superficial velocity of six feet per minute will also achieve this high degree of clean up.

In general we would favor a system that does not use water or other liquids to effect the removal of particles. The handling and disposal of substantial quantities of hot liquid wastes, even at low radiation levels, is believed to be a more difficult problem than the replacement of a hot self-contained filter unit. The sand filter would appear particularly suitable for this purpose, since it can be permanently sealed in the ground. At your installation, with water in limited supply and the source of a large fraction of the supply located as it is with respect to your operations, and with the soil apparently not too suitable for use as cribs, it is believed that either scrubbing, even with recirculation, would not be an attractive choice for your new laboratory building.

If we can be of further service to you in this problem, do not hesitate to call on us.

Very truly yours,

[illegible] Division Chief
[illegible]

[illegible]