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Date 6-14-45

Those Eligible  
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Subject Activity of Effluent

Copy 2 - R. K. Harris

Water from the Settling Basin

By R. K. Harris

To M. C. Leverett

*Vallado*

*Jm*



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**INV. 64**

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pages and 0 figures.  
No. 2 of 2 copies. Series A

June 14, 1945

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M. C. Leverett

R. K. Harris

### Activity of the Effluent Water from the Settling Basin

I'll answer what I can of the following questions from Dr. Wirth.

1. Yes, the Beta activity has been slowly increasing during the last month.
2.  $\text{CaCl}_2$  has been used in W5 to decontaminate all wastes with exception of the material in W5 at present.  $\text{CaCl}_2$  has not been added to these W5 wastes because experience the last two weeks has shown that  $\text{CaCl}_2$  has had very little effect in decontaminating W5 wastes both on the Lab. scale and in the tank. We have been able to jet from W6 very slowly. This week the W6 wastes have been averaging 45,000 cts. Samples from W5 taken each day this week have been averaging 75,000 Bcts/cc/min. *Samples from W5, taken each day this week, have been averaging 120000 Bcts/cc/min.* Decontamination experiments are in progress by D. Humme's group on wastes containing mostly iodine activity. These wastes are from the 706-D scrubber during a dissolving period. A report on these experiments should be available on 6-16-45. Sodium hypochlorite plus Bismuth nitrate looks promising according to Humme.
3. Can't answer.
4. A. Yes.  
B. There is much more short lived active material. Not certain that it is predominately B activity.  
C. This is evidently true according to experience since 706-D started. It might be that 205 wastes had more an' ons like  $^{-1}\text{F}$ ,  $^{-2}\text{CO}_2$ ,  $^{-3}\text{PO}_4$  etc., which enabled  $\text{CaCl}_2$  to pp't activity in the tanks. Most of the activity in the future to W5 and W6 will be due to iodine as other 706-D process wastes will be sent to W9 and held.
5. The amount of raw water used as a diluent has been approximately the same, perhaps even more than was used previously.
6. Not certain.

CLASSIFICATION CANCELLED

DATE 2/24/66

For The Atomic Energy Commission

*H. R. Cansell*  
Chief, Declassification Branch *cc*

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This document has been approved for release to the public by:

*David R. Harris* 10/24/95  
Technical Information Officer Date  
ORNL Site

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M. C. Leverett

June 6, 1945

W5 will be scavenged continuously and the supernatant will be jettied to W6 only on days when the liquid is near the overflow level, and when the amount of activity entering the tank is low. To make this procedure most effective it will be necessary for the 206 Area supervisor to have a daily forecast of the amount of activity which will be discharged to W11 during each shift. The forecast can be given to the area operator with the waste volume forecast on the 8-4 shift.

When the present situation has cleared, it may be possible to send more of the waste solutions to W5; thus, conserving the limited amount of space (87,000 gallons on 6/6/45) in W9. The procedures outlined above will be revised at that time.

R. B. Briggs,



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