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1644

44-10-4

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Those Eligible To Read the Attached

Date 10/27/44

Subject Product Contamination of the Air 10/16/44 to 10/22/44

By G. Koval

To K. Z. Morgan

Copy 7 E. C. Bell

Cant find.

Before reading this document, sign and date below

Name	Date	Name	Date
E.C. Bell	10-31-44		
[illegible]	10/31/44		

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

David R. Hamrin 4/21/95
Technical Information Officer Date
ORNL Site

ChemRisk Document No. 1644

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1. K. Z. Morgan
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4. W.A.Rodger
5. [redacted]
6. [redacted]
7. [redacted]
8. R.W.[redacted]
9. G.Koval
10. [redacted]

10/27/44

K. Z. Morgan — Health Physics

G. Koval — Health Physics

PRODUCT CONTAMINATION OF THE AIR
10/16/44 to 10/22/44

Dust samples were collected in Bldgs. 706A and 205 by electro-static precipitation. The rate of air flow through the precipitron was 11.5 C.F.M. Precipitation lasted 30 minutes. Samples were counted on alpha counter #7-712. Results were corrected for radium and thoeium active deposit counts.

A concentration of 7.8×10^{-9} μgms per c.c of air was found in cell 5 of the semi-works on October 20th. On October 20th the reading was 2.3×10^{-8}. Both of these runs were made during the centrifuging of W. concentration solutions. A check made outside the door of the cell during this same operation on October 19th showed only 1.4×10^{-12} μ gms per c.c of air. On October 21st the semi-works returned to operations with Clinton concentrations and air dropped to below tolerance levels.

All other concentration of product found in the air were below the tolerance level of 5×10^{-10} μgms per c.c of air.

The results of all surveys are listed on the following page.

G. Koval

GK/ah

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8-15-51 N T Bra SUPERVISOR CENTRAL FILES ORNL

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Location	Time of Survey		Count/min due to Product	μCuries per c.c of air	μgms of Product per c.c of air
Bldg.706A Rm.34 N.Hood	10/16/44	10:35AM	11	$1.6x10^{-12}$	[redacted]
" " " N.W.Hood	10/18/44	2:27PM	8	$1.2x10^{-12}$	[redacted]
" " " N.W.Hood	10/19/44	1:45PM	6	$8.8x10^{-13}$	$1.4x10^{-11}$
" " "32 S.E.Hood	10/16/44	1:23PM	10	$1.5x10^{-12}$	$2.3x10^{-11}$
" " " S.E.Hood	10/18/44	2:10PM	5	$7.3x10^{-13}$	$1.1x10^{-11}$
" " " S.E.Hood	10/19/44	2:10PM	4	$5.8x10^{-13}$	$9.1x10^{-12}$
" " " S.E.Hood	10/20/44	10:55AM	6	$8.8x10^{-13}$	$1.4x10^{-12}$
" " "57 N.W.Hood	10/16/44	1:30PM	5	$7.3x10^{-13}$	$1.1x10^{-11}$
" " "54 W.Hood	10/16/44	3:20PM	100	$1.5x10^{-11}$	$2.3x10^{-10}$
" " " W.Hood	10/17/44	12:47PM	8	$1.2x10^{-12}$	$1.9x10^{-11}$
" " " W.Hood	10/18/44	3:25PM	10	$1.5x10^{-12}$	$2.3x10^{-11}$
" " " W.Hood	10/19/44	9:55AM	10	$1.5x10^{-12}$	$2.3x10^{-11}$
" " " N.Hood	10/17/44	1:05PM	0	0	0
" " " N.Hood	10/19/44	10:00PM	22	$3.2x10^{-12}$	$5.0x10^{-11}$
" " "22 N.Hood	10/17/44	10:35AM	1	$1.5x10^{-13}$	$2.3x10^{-12}$
" " " N.Hood	10/19/44	1:40PM	26	$2.8x10^{-12}$	$4.4x10^{-11}$
" " "62	10/18/44	10:50AM	13	$1.9x10^{-12}$	$3.0x10^{-11}$
" " "	10/19/44	10:40AM	2	$2.9x10^{-13}$	$4.5x10^{-12}$
" " "64	10/16/44	10:35AM	8	$1.2x10^{-12}$	$1.9x10^{-11}$
" " "	10/18/44	10:50AM	9	$1.3x10^{-12}$	$2.8x10^{-11}$
" " "33&35 N.W.Bench	10/18/44	12:35PM	8	$1.2x10^{-12}$	$1.9x10^{-11}$
" " " N.W.Hood	10/18/44	2:45PM	12	$1.8x10^{-12}$	$2.8x10^{-11}$
" " " S.C.Bench	10/19/44	1:05PM	25	$2.7x10^{-12}$	$4.2x10^{-11}$
" " " N.E.Hood	10/19/44	12:55PM	4	$5.8x10^{-13}$	$9.1x10^{-12}$
" " "27 E.Side	10/20/44	10:20AM	0	0	0
" " "79 Center	10/19/44	3:25PM	6	$8.8x10^{-13}$	$1.4x10^{-11}$
" " S.W. Cell 6	10/17/44	1:50PM	1	$1.5x10^{-13}$	$2.3x10^{-12}$
" " " Outside Cell5	10/17/44	2:25 PM	0	0	0
" " " Cell 6	10/18/44	1:45PM	4	$5.8x10^{-13}$	$9.1x10^{-12}$
" " " Cell 6	10/18/44	1:57PM	4	$5.8x10^{-13}$	$9.1x10^{-12}$
" " " Cell 5 Centrifuge	10/19/44	2:15PM	3434	$5.0x10^{-10}$	$7.8x10^{-9}$
" " " "	10/20/44	2:15PM	10,212	$1.5x10^{-9}$	$2.3x10^{-8}$
" " " Cell 6 Centrifuge	10/20/44	2:30PM	148	$2.2x10^{-11}$	$3.4x10^{-10}$
" " " Outside of cell 4-5	10/20/44	3:00PM	6	$8.8x10^{-13}$	$1.4x10^{-12}$
" " "Back door of Cell 4	10/21/44	1:28PM	12	$1.8x10^{-12}$	$2.8x10^{-11}$
" " " Front door of cell 4	10/21/44	1:30PM	6	$8.8x10^{-13}$	$1.4x10^{-12}$
Bldg.205 Rm.D Front of Barrier	10/16/44	1:48PM	15	$2.2x10^{-12}$	$3.4x10^{-11}$
" " " Behind Barrier	10/16/44	1:48PM	50	$7.3x10^{-12}$	$1.1x10^{-10}$
" " " "	10/18/44	1:00PM	91	$1.3x10^{-11}$	$2.0x10^{-10}$
" " " "	10/19/44	11:50AM	0	0	0
" " " Front of Barrier	10/20/44	3:52PM	12	$1.8x10^{-12}$	$2.8x10^{-11}$
" " "Behind Barrier	10/20/44	3:50PM	12	$1.8x10^{-12}$	$2.8x10^{-11}$
" " "Behind Barrier during 204 Supernatatant transfer	10/22/44	3:39AM	70	$1.0x10^{-11}$	$1.7x10^{-10}$

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Location	Time of Survey		Count/min due to Product	μCuries per c.c of air	μgms of Product per cc of air
Bldg.205 Rm.D In front of Barrier during transfer	10/22/44	3:39AM	0	0	0
Bldg.205 Rm.E	10/18/44	1:35PM	10	1.5×10^{-12}	2.3×10^{-11}
Bldg.205 Rm.C	10/18/44	2:05PM	20	2.9×10^{-12}	4.5×10^{-11}

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