UCN-7721B
(2 1-86)

OAK RIDGE Y-12 PLANT INFORMATION CONTROL FORM

3244

DOCUMENT DESCRIPTION (Completed By Requesting Division)

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Author(s): Requestor: Steve Wiley

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☒ Other (Specify): To Be Released to ChemRisk, Phase II

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Document will be distributed at meeting ☒ No ☐ Yes

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DIVISION REVIEW AND APPROVAL (Completed By Requesting Division)

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S.W. Wiley 2/24/95
Signature Date

Signature Date

THE REMAINDER OF THIS FORM TO BE COMPLETED BY THE TECHNICAL INFORMATION OFFICE

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M. L. Bowers 3/7/95
Technical Information Office Date

Conditions/Remarks:

DIVISION	DEPARTMENT	SECTION	BUILDING	ROOM
Industrial Relations	Medical Department	Industrial Hygiene	Bldg. 9706-2	34

DESCRIPTION OF RECORDS	FROM	THROUGH	CODE NUMBER
Meetings, Procedures, Solvent, Exposures, Stack Sampling, Uranium, etc. Listing of all folders included in this box enclosed. M through Z	1951	1957	[redacted] Y-12 2090-IH-4

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m L Bonk 3/7/95

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BOX NUMBER 2 OF 5

LOCATION IN RECORDS CENTER

SECTION	TIER	DR.
Indef. 20	9	16

CLASS OF FILE

RECORD [X] NON-RECORD [ ]

RECORDS VERIFIED BY: Bill Everett

DATE 2/14/58

T-2078 TRANSFER OF RECORDS

Uranium Contamination
Stack Sampling (Precipitron)-Building 9206
(Notes)

CORU Entire File Folder
4
#32

#3244

Velocity Readings 11-3-52

1	2	3	4	5
2770	2485	2770	1735	2480
2700	2450	2720	1820	2400
2650	2350	2790	1740	2440
8120	3)7285	3)8280	3)5295	3)7320
2706	2428	2760	1765	2440

Average - 2414 ft./min. or 27278 ft³/min

(P-2)

Sampler # 36

Time - 15:40 - 16:22 - 42 min.

Rotometer reading - 66-64. - 57

Sampler 15 ft. from exhaust

Vol. Air - 2,394.

(P-1)

Sampler # 34

Time - 15:40 - 16:21 - 41 min

Rotometer reading - 70-58 - 54.12

Sampler at exhaust duct

Vol. Air. 2218.92

Crusher in room 17 operated until 16:00

Burning saw coolant + oily rags (code 47) in room 42.

Burning Ammonia cake (code 47), oxide (code 25) + Carbon (code 91) in room 41.

Burning Carbon (code 91) in room 40.

I do not think the burning temp. was at the maximum.

Don Hyrd

11-4-52

(3)

P-1
Sampler # 34
time 0943 - 1024 = 41 min.
Rotometer reading - 80 - average - 5
30
110

Vol. Air - 1927

#6.87

Room # 42 -
Burning mop-water solids & rags (code 57) also screening & burning floor sweepings.
operating furnace # 2 only.

Room # 41.
Burning ammonia cake (code 60), (code
Solids from filter press in room 106, thre
furnaces with carbon (code 91), One furna
furnace
empty

Room # 48
Burning carbon (code 91) in four furna
[illegible]

Room # 17
Pressing, pickling & warshing.
Room # 16 filtering
Sampler at exhaust duct.
maintenance men cleaning roof

11-4-52

P-2 (4)

Sampler #36

time - 09:43 - 10:17 - 34 min.

Rotometer reading - 66 - 45 - [illegible] 475

Vol. Air - 1598

Room #42.

Burning mop-water solids + rags (code 51) [illegible] screening + burning floor sweepings.

operating furnace #2 only.

Room #41

Burning Ammonia cake (code 60), (code 47) Solids from filter press in room 106, carbon [illegible] in three furnaces, + one furnace empty.

Room #40 code 91

Burning carbon (code 91) in four furnaces.

Room #17

Pressing, Pickling + Washing.

Room #16 filtering

Sampler 15 ft. from exhaust dust.

Maintenance men cleaning roof.

11-4-52

P-3

(5)

Sampler # 36

Rotameter reading - 66-40

time - 10:21 - 11:21 - 60 min.

Vol. Air - 2760

11-4-02

P-4

(6)

Sampler # 34

Rotameter reading - 41 - 14 - @ 25.7

time - 10:28 - 11:11 - 43 min.

using special filter.

Vol. Air - 1076

11-4-5[illegible]

(9)

P-5

Sampler #34

time - 12:50 - 13:39 - 49 min

Rotameter reading 80-35 [illegible] 05

Vol. Air 2401

Room #412

Burning in furnace #1 & 2

Furnace #[illegible] was not operating proper[illegible]

properly

11-4-86-2

P-6

(6)

Sample # 36

time - 12:49 - 1448 - 59 min.

Atometer reading 60-33 40.5

Vol. Air - 2360

Room # 42.

Burning in furnace # 1 & 2

Furnace # 1 was not operating properly.

11-4-52

P-7 (9)

Sampler # 34

Rotameter, reading - 47 - 15 - and 26

time - 13:45 - 1452 - 67 min.

used special filter

Vol. Air - 1541

23.25

23.25

P-8 (18) 11-4-52

Sampler # 36

Time - 13:53 - 15:00 - 67 min.

Rotometer reading - 45 - 24. [illegible]

used special filter 29 29 cfm

Vol. Air (3283)

45
24
2 | 69
34 1/2

11-6-02

P-3 (13)
Sampler # 37
located at exhaust duct.
time T1 12:22 - 61 min. Q1 62 cfm.
T2 12:53 Q2 38 "
100
43.7 .37

P-4 (14) Vol. Air 2623
Sampler # 36
located 15 ft from exhaust duct.
Time T1 12:24 - 30 min. Q1 55 cfm.
T2 12:54 Q2 48
103
45.5 .43

P-5 (15) Vol. Air - 1360
Sampler # 34
located at exhaust duct.
Special filter
time. T1 13:00 - 43 Min. Q1 45 cfm.
T2 13:43 Q2 10
55
24.5 .22

P-6 (16) Vol. Air - 1032
Sampler # 36
located 15 ft. from exhaust duct.
Special filter
Time T1 13:00 - 45 min Q1 40 cfm
T2 13:45 Q2 10
55
22.5 .21

Vol. Air - 1035

11-5-62

Operating conditions for samples P-3, P-4, P-5 + P-6

Room # 42.

Burning mop-water solids in furnace 1 + 2.
Also screening.

Room # 41

Burning carbon (code 90) in three furnaces
Ammonia cake (code 60) in two furnaces + mop-water solids in one furnace.

Room # 42

Burning carbon (code 91) in four furnace.

Room # 16 + 17

no activity

11-5-52

1	2	3	4	5	6	7	8	9
819	2614	2220	2464	2454	2182	2344	1464	14[illegible]

total – 22,051 Average 2,450 ft/min.
2450 X 11.3 = 27,685 c.f.m.

P-1 (11)
Sampler # 34
located at exhaust duct.
Time T_1 0937 – 47 min q_1 70 cfm
T_2 1024 q_2 30
100 43

Room # 40 Vol. Air 2021
Burning carbon (code 91) in four furnaces
Room # 41
Burning carbon (code 91) in three furnaces
solids from filter press in room 106, Ammonia
cake (code 60) + two furnaces empty.
Room # 42.
Burning mop-water solids (code 57) + [illegible]
sweepings. Screening + burning in furnace [illegible]
Room # 17.
Pickling, Pressing + washing
Room # 16.
Ammonia ppt.

11-6-62

P-2 (12)

Sample # 36

Located 15 ft. from exhaust duct.

Operating conditions are the same as P-1 sample.

Time t_1 0938 - 46 min. q_1 54 cfm

t_2 1027 34

88 37.75

Vol. Air. 1862

11-6-52

Operation conditions are the same as for samples P-1 & P-2 except in room #16. filters & not Pot.

P-3. - samples at duct. (19)

Samples #34

time t_1 0936 - 25 min. q_1 80 cfm

t_2 1001 q_2 21

101 43.25

Vol. Air - 1075

P-4 samples 15 ft. from duct. (20)

Samples #36

time t_1 0938 - 60 min. q_1 65 cfm

t_2 1038 q_2 27

92 38.5

Vol. Air - 2280

P-5 samples at duct. (21)

Samples #34

time t_1 1008 - 19 min. q_1 44 cfm

t_2 1027 q_2 10

54 24.25

Special filter.

Vol. Air - 456

P-6 Samples at duct. (22)

Samples #34

time t_1 1317 - 43 min. q_1 56 cfm

t_2 1400 {Vol. Air - 1419} q_2 19

P-7 Samples 15 ft. from duct. Samples #36

time t_1 1316 - 45 min. q_1 [illegible]

11-6-52

P-1 (17)

Sampler # 34

time t_1 0901 – 32 min. q_1 80 cfm.

t_2 0933 q_2 27

Sampler at exhaust. 107 [illegible]

Vol. Air. 1472

P-2 (18)

Sampler # 36

time t_1 0902 – 32 min. q_1 62 cfm.

t_2 0934 q_2 51

Sampler 15 ft. from exhaust. 113 [illegible]

Vol. Air 1568

Room # 42

Burning coolant + solids (code 60) from Rm. 17

Screening + burning in furnace 1+2. few chips in solids.

Room # 41 Burning carbon (code 91) in three furnaces, solids from filter press in Rm. 106, oxide (code 81), + two furnaces empty.

Burning full blast.

Room # 40.

Burning carbon (code 91) in three furnaces, carbon (special) in one.

Room # 16 Ammonia ppt.

Room # 17 maint. repair work.

11-7-[illegible]

1	2	3	4	5	6	7	8	9
2592	2620	2167	2747	2383	2086	2100	1460	1453

2178 ft/min. X 11.3 = 24,611 ft³/min. [illegible]

P-1 at Duct. (24)
Sampler # 34
time t_1 0954 - 58 min. q_1 61 ~~cfm~~
t_2 1052 q_2 55
Vol. Air - 2842

2)116
(58)

P-2 - 15 ft. from Duct. (25)
Sampler # 36
time t_1 0953 - 59 min. q_1 61 ~~cfm~~
t_2 1052 q_2 57
118

Vol. Air - 3009 ft³

Room # 42.
House cleaning.
Room # 41
Burning carbon (code 91) in two furnaces, 3[illegible]
marsh oxide (code 26) in one furnace, Ammon[illegible]
(code 60) in one furnace + Oxide (code 80) in one f[illegible]
One furnace empty.
Room # 40
Burning carbon (code 91) in four furnace[illegible]
Room # 17.
Maintenance repair.
Room # 16

P-3, at duct.

Sample # 34

time t_1 1315 - 60 Min.

t_2 1415

q_1 61

q_2 55

116

Vol. Air - 2940

P-4 - 15 ft. from duct.

Sample # 36.

time t_1 1315 - 60 Min.

t_2 1415

q_1 58

q_2 56

4

Vol. Air - 2940

$P_1 = 0.249\ g$

$P_2 = 0.173\ g.$

Hi-Vol #36

P_1 = 47.5 ave. T = 25 min.
40.7 cfm

P_2 = 50. T = 25
43 cfm.

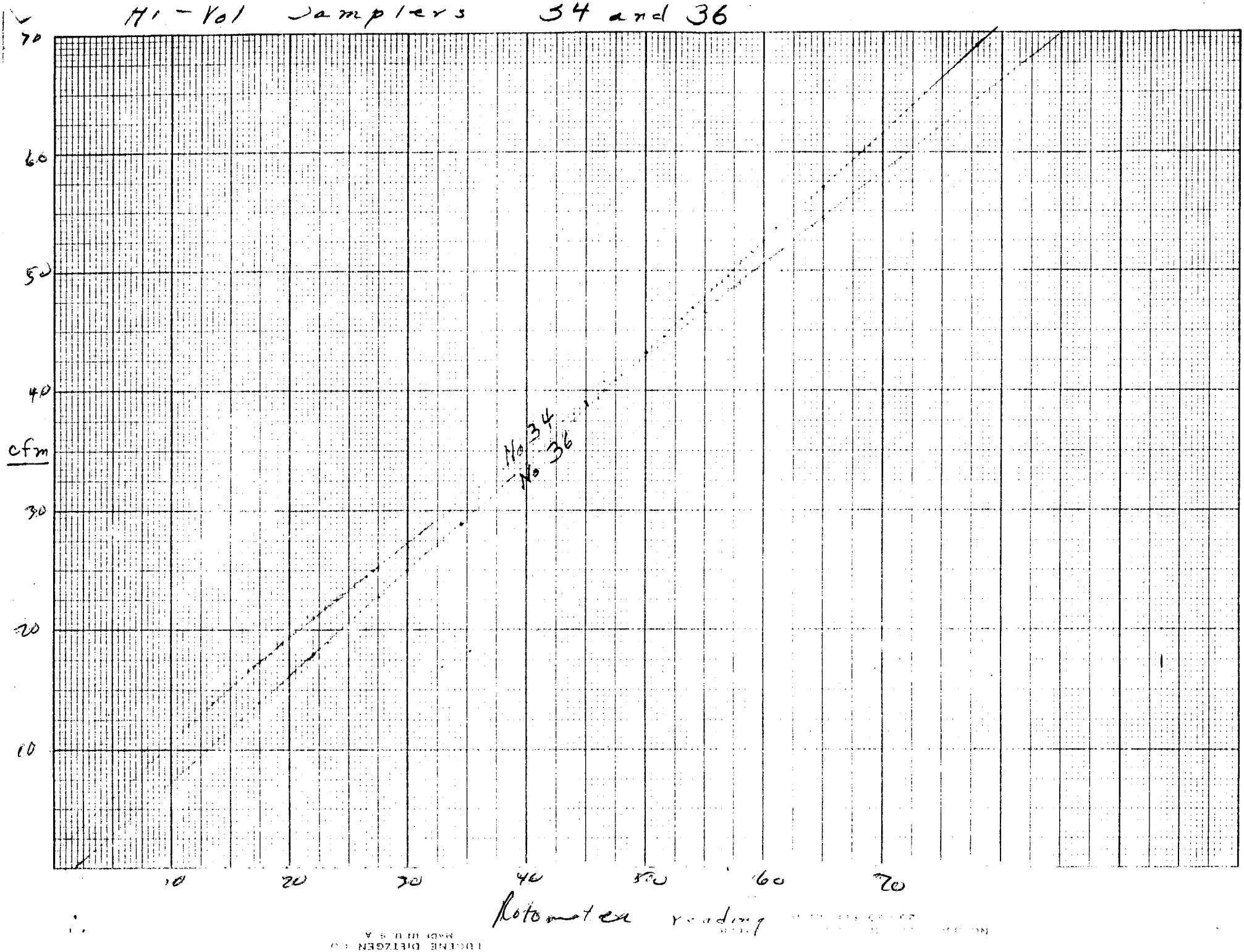
Sample	Wt.	Rate cfm	Time (min.)	Vol (ft^3)	$gr/10^3 ft^3$	Conc. mg/ft^3
P_1	249 mg	40.7	25	1020	3.8	0.245
P_2	173	43.0	25	1080	2.5	0.160

$$\frac{mg}{ft^3} \left| \frac{15.43\ gr/g}{10^3\ mg/g} \right| 10^3 = gr/10^3\ ft^3$$

$$\frac{0.5\ mg}{m^3} \Big| \frac{3.}{35.32}$$

$$\frac{0.03\ mg}{ft^3} \Big| \frac{15.43}{1000} = 0.5$$

Hi-Vol Samplers 34 and 36

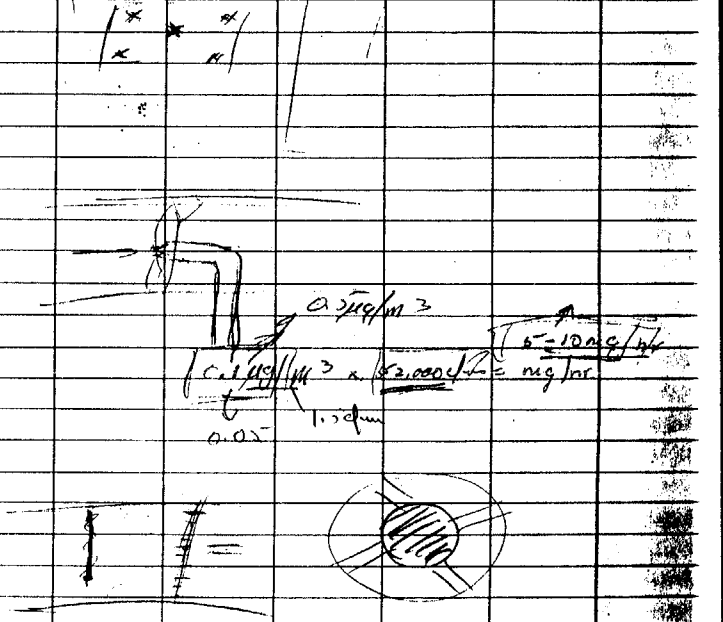


Duct Area = 53" X 38.5"

#	Time	Ft/min	Ave.	Ave. of Average	Volume /min	
1	1 min	2861				
	"	2100	2277			4.416
	"	1870				3.208
	"	2340				
	"	2200	2240			
	"	2180				
	"	1600				
	"	1757	1732	1901	26937.17 ft³/min	
	"	1840				
					1,616,220 ft/hr	
	"	1299				
	"	1480	1380			
	"	1360				
2	"	2115				
	"	1830	1875			
	"	1680				
					14.167	

Samples taken at 9206 Precipitron Discharge

Sample #	Date Sample Taken	Type Filter	U mg	ΔT min.	Q cfm	Q cu.ft.	U - Air Conc. mg/cu.ft.	U - loss g./hr.	U - air Concentration $\mu g/m^3$	Condition
G-20	10/3	Pleated	60.1	40	46.5	1860	0.0323	52.2	1724	Precipitron on
G-21	do.	do.	35.7	40	52.5	2100	0.017	27.4	907	do.
1	10/4	W#41	0.83	3	8	24	0.0346	55.9	1846	Precipitron off
2	do.	do.	0.83	2	8	16	0.0519	83.9	2770	do.
3	do.	do.	0.80	2	8	16	0.05	80.8	2668	do.
4	do.	do.	0.91	3	8	24	0.038	61.4	2028	do.
5	do.	do.	2.0	3	8	24	0.0832	134.4	4441	do.
6	do.	Pleated	60.7	30	32.5	1025	0.0591	95.5	3154	do.
7	do.	do.	90.8	30	47	1410	0.0643	103.9	3431	do.
8	do.	do.	187.6	30	51.5	1545	0.121	195.6	6458	Precipitron on.



Rm. 40 - 41 - 42 - 16 & 17 tied into ventilation system.

System Discharge $V_a = 2450$ fpm

$A = 14.1\ ft^2$ - gross area

free area = 14.1 × 0.80 = 11.3 ft²

hence 11.3 × 2450 = 27,600 cfm

Room 16 by passes Precipitron & consists of general exhaust vent. openings.

A - 2290

B - 3330

C - 160

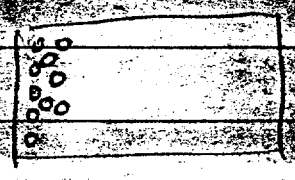
5780 cfm.

Actual air through Precipitron

Total 27,600 cfm

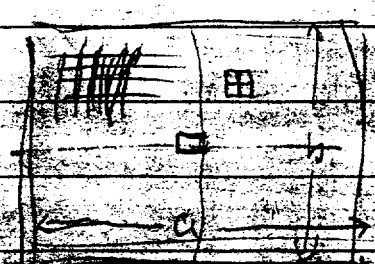
G.A. Rm. #16 5780 cfm

27,820 cfm.



= 75 =

free A a = 0.8 A



free Area V × free Area = cfm

V × Gross Area = cfm

1 3/4

1 5/8

1 5/8 × 27 × 19 =

Sample #	Date	ΔT min	Gate Δp in	V ft	V m³	cl/U ratio cfm	cl/U ratio dfm	U-Vol/min dpm/m/M³	Uranium mg	Vent Rate cfm	U-Rate loss g/hr	Remarks
1 P	11-3-52	41	54.1	2220	63	6407	12814	203	8.5	27600	6.4	Sample #1 Sample taken at exhaust duct, no scrubbing in Bm#1 used pleated filter, burning sawcoal + oily rags (Cycle #7) in Bm#2, normal operation in other rooms
2 *P	11-3-52	42	57	2390	67.7	3150	6300	93.1	4.2	27610	2.9	Sample #2 Sample taken 15 ft. from exhaust duct. Comments of Sample #1 apply to sample #2.
3 P	11-4-52	41	46.9	1925	54.6	39750	79500	1460	53	27600	43	Sample #3 Sample taken at exhaust duct, used pleated filter Bm#2. scrubbing, burning mag-ox-ite solids + rags (Cycle 8) floor sweepings in furnace #2 only. water not in operation, but all other operations normal
4 *P	11-4-52	34	47	1600	45.3	23482	46964	1040	31.1	27600	34.4	Sample #4 Sample taken 15 ft. from exhaust duct. Comments of Sample #3 apply to sample #4.
5 *P	11-4-52	60	46	2760	78	19755	39510	507	26.1	27600	16.7	Sample #5 Sample taken 15 ft. from exhaust duct. Comments of sample #3 apply to sample #5
6 F3	11-4-52	43	26.2	1090	30.7	13185	26370	810	17.4	27600	26.5	Sample #6 Felt filter used. Comment of Sample #3 apply to sample #6
7 *P	11-4-52	49	48.8	2400	67.9	26362	52724	773	34.9	27600	24.2	Sample #7 Burning in furnace #1+2. Comments of Sample #3 apply to Sample #7
8 *P	11-4-52	59	40	2370	67	18235	36470	542	24.1	27600	16.9	Sample #8 Taken 15 ft. from duct. Burning in furnace #1+2. Comments of sample #3 apply to sample #8
9 F(3)	11-4-52	67	23.2	1560	44.1	28328	56666	1290	37.5	27600	39.9	Sample #9 Felt filter used. Burning in furnace #1+2. Comments of sample #3 apply to sample #9.
10 *F	11-4-52	67	29	1945	66.1	16874	33648	610	22.3	27600	19	Sample #10 Taken 15 ft. from duct felt filter used burning in furnace #2. Comments of sample #3 apply to sample #10.
11 *P	11-5-52	47	43	2020	57.3	24446	48892	863.0	32.6	27600	26.7	Sample #11 Burning in furnace #1+2. Comments of sample #3 apply to sample #11.
12 *P	11-5-52	49	38	1860	52.7	4174	8348	158.3	5.57	27600	4.96	Sample #12 Sample 15 ft. from duct. Burning in furnace #1+2. Comments of sample #3 apply to sample #12.
13 P	11-5-52	61	43	2620	74.3	33788	67576	910.	45.1	27600	28.4	Sample #13 Comments of sample #11 apply to sample #13
14 * P	11-5-52	30	46	1350	38.2	12362	24724	647.	16.5	27600	20.2	Sample #14 Comments of sample #12 apply to sample #14
15 F(4)	11-6-52	43	24	1032	29.2	20988	41976	1430	28.0	27600	44.8	Sample #15 Used felt filter. Comments of Sample #11 apply to sample #15
16 * F	11-5-52	45	23	1035	29.3	11324	22658	773	15.1	27600	24.1	Sample #16 Used felt filter. Comments of sample #12 apply to sample #16.
17												

Sample #	Date	Δt min	Qave cfm.	V ft³	V m³	Mean v/m	Mean c/m	u-A.C. Conc. mil/m³	Vent-Rate cfm.	K-Rate Loss ft³/hr.		Remarks
17 P	11-6-52	32	46	1472	41.6	16536	33072	718.0	27600	25.2	Sample #17	Sample taken at duct, wool pleated filter. Rm #42. Screening + burning carbart + solids (cable 60) from Rm #17 in furnace #142. Few chips in solids. Repair work in Rm #17. All other operations normal.
18* P	11-6-52	32	49	1569	44.4	5486	10972	249.	27600	7.7		
19 P	11-6-52	25	43	1076	30.50	12919	25838	846.	27600	26.4	Sample #18	Sample 15 ft. from duct. Comments of sample #17 apply to sample #18.
20* P	11-6-52	60	38	2280	64.6	19080	38160	591.0	27600	18.4	Sample #19	Comments of sample #17 apply to sample #19
21 F	11-6-52	19	24	456	12.9	11528	23056	1790	27600	55.7	Sample #20	Comments of sample #18 . . . . . #20
22 P	11-6-52	43	33	1426	40.2	78308	156616	3900	27600	122.	Sample #21	Wash felt filter. Comment of sample #17 apply to sample #21.
23* P	11-6-52	45	42.	1890	53.4	23413	46826	876.9	27600	24.5	Sample #22	Comments of sample #17 apply to sample #22.
24 P	11-7-52	58	49	2842	80.5	9421	16842	209.2	24600	5.8	Sample #23	. . . . . #18 . . . . . #23
25* P	11-7-52	58	52	3016	86.4	9500	14000	222.1	24600	6.2	Sample #24	Sample taken at duct, wool pleated filter. Rm #42. Home cleaning & no burning. Rm #17. Repair work & no crushing. All other operations normal.
26 P	11-7-52	60	49	2940	83.2	5724	11448	137.6	24600	3.8	Sample #25	Taken 15ft. from duct. Comments of sample #24 apply to sample #25.
27* P	11-7-52	60	49	2940	83.2	6201	12402	149.	24600	4.2	Sample #26	Comments of sample #24 apply to sample #26.
											Sample #27	. . . . . #25 . . . . . #27

INTER-COMPANY CORRESPONDENCE

(INSERT NAME) COMPANY CARBIDE AND CARBON CHEMICALS COMPANY LOCATION Post Office Box P OAK RIDGE, TENN.

TO C. E. West
LOCATION 9212

ATTENTION
COPY TO E. B. Long
File

DATE November 11, 1952

ANSWERING LETTER DATE

SUBJECT Analyses of Dust Samples (Normal Material)

Sample No.	Date	Type Fitter	Uranium Total Milligram	c/min. Calculated	c/min. Electro-plated
P1 1	11-3	Pleated	8.475	6,407	6,000
P2 2	11-3	Pleated	4.166	3,150	2,240
P1 3	11-4	Pleated	53.00	39,750	20,210
P2 4	11-4	Pleated	31.06	23,482	13,870
P3 5	11-4	Pleated	26.13	19,755	11,400
P4 6	11-4	Felt	17.44	13,185	8,716
P5 7	11-4	Pleated	34.87	26,362	19,490
P6 8	11-4	Pleated	24.12	18,235	11,550
P7 9	11-4	Felt	37.47	28,328	7,501
P8 10	11-4	Felt	22.26	16,824	3,296

H. F. Ballenger
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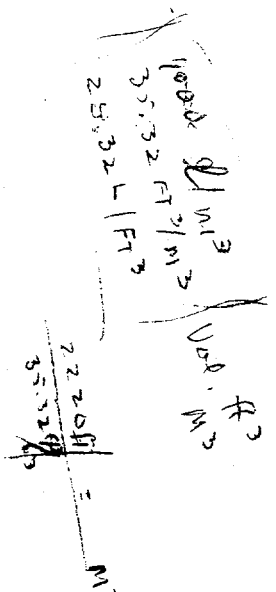
Analytical Section
Health Physics Department

HFB:mgc



INTER-COMPANY CORRESPONDENCE

(INSERT NAME) COMPANY CARBIDE AND CARBON CHEMICALS COMPANY LOCATION Post Office Box P OAK RIDGE, TENN.

TO W. H. Baumann
LOCATION 9711-1

DATE November 15, 1952

ANSWERING LETTER DATE

ATTENTION

COPY TO M. B. Long
File

SUBJECT Analyses of Dust Samples (Normal Material)

Lab. No.	Sample No.	Date	Type Fitter	Uranium Total Milligram	c/min Calculated	c/min. Electro-plated.
331	P1 11	11-5	Pleated	32.6	24,446	13,200
332	P2 12	11-5	Pleated	5.57	4,174	3,590
333	P3 13	11-5	Pleated	45.1	33,788	27,200
334	P4 14	11-5	Pleated	16.5	12,362	9,630
335	P5 15	11-5	Felt	28.0	20,988	12,200
336	P6 16	11-5	Felt	15.1	11,329	8,740
340	P1 17	11-6	Pleated	22.1	16,536	12,360
341	P2 18	11-6	Pleated	7.31	5,486	4,640
342	P3 19	11-6	Pleated	17.2	12,919	12,650
343	P4 20	11-6	Pleated	25.4	19,080	12,210
344	P5 21	11-6	Felt	15.4	11,528	9,460
345	P6 22	11-6	Pleated	104.4	78,308	35,870
346	P7 23	11-6	Pleated	31.2	23,413	14,910
347	P1 24	11-7	Pleated	12.6	9,421	5,220
348	P2 25	11-7	Pleated	12.7	9,500	5,520
349	P3 26	11-7	Pleated	7.62	5,724	1,543
350	P4 27	11-7	Pleated	8.27	6,201	4,170

H. F. Ballenger

H. F. Ballenger
Analytical Section
Health Physics Department

HFB:mgc

INTER-COMPANY CORRESPONDENCE

(INSERT NAME) COMPANY CARBIDE AND CARBON CHEMICALS COMPANY LOCATION Post Office Box P OAK RIDGE, TENN.

TO G. W. George Oliphant
LOCATION J. Wm Ramsey - Y12RC
ATTENTION Howard Martin
COPY TO N. Watt Cameron
E. D. Struxness
File

DATE February 26, 1953
ANSWERING LETTER DATE
SUBJECT [redacted] Precipitron - 9206

The Health Physics Department participated in the program for the evaluation of the precipitron performance by measuring the concentration of dust entering and leaving the unit.

Dust laden air is aspirated at a known rate through a 2 inch diameter filter medium which collects the particulate matter. The filter element is supported in a suitable holder and immersed in the air stream. Simultaneous samples are taken in the plenums ($\sim 8\frac{1}{2}$' X $8\frac{1}{2}$') before and after the electrostatic collection unit. Due to the loading effect, samplers are operated for several minutes during testing. Insufficient material collects on the paper to allow accurate weighing of total dust; therefore, filters are analyzed for total uranium. Piping layout precludes accurate sampling of the suspended dust in the air stream for total weight determinations which are the basis for calculating the weight efficiency of collection. Dust loadings are too high to measure efficiency by means of discoloration tests.

The efficiency values in Table 1 are obtained by measuring the uranium

INTER-COMPANY CORRESPONDENCE

Carbide and Carbon Chemicals Company, P. O. Box P., Oak Ridge, Tennessee

TO: Mr. J. Clyde Bowles Y-12RC
Building 9739

DATE: April 10, 1953

SUBJECT: Contamination Control Building 9206 - Work Order Number 510959

CC: Mr. G. W. Mitchel
Mr. J. M. Herndon
Mr. E. G. Struxness
Mr. W. H. Baumann
Mr. W. F. Cameron
Mr. E. Zurcher
Mr. W. L. Morgan
Mr. H. L. Martin
Mr. W. E. Dunlap
File

A meeting was called by the writer to discuss a preliminary design for the installation of a water fog and spray system proposed to replace the present Preciptron in exhaust from Rooms 40, 41, and 42, Building 9206. It was felt by some present at our last meeting (March 31) that a water spray installed in the existing Precipitron housing would possibly improve discharge air conditions to a point that would meet Health Physics requirements.

After a careful review of the requirements of a fog-spray system and a design of a test fog system it was decided that (1) the installation would probably be too costly. This is primarily due to the relatively large number of spray nozzles needed and the large quantity of water required to be recirculated to be effective in removing airborne material in 20,000 cfm of air and (2) liquid filtering equipment capacity would likely be beyond any unit available in the area.

It was decided to hold up further consideration of contamination removal from the exhaust air at the Precipitron and to consider separating the exhaust air from the ventilation air, Room 42 only, and installing equipment to test this exhaust only. The following steps and procedures were agreed upon:

1. A type "N" Roto-Clone will be installed on the west side of Building 9206. This unit is to be relocated from Building 9211. Mr. Cameron will inform Engineering when release on this piece of equipment is obtained.

2. The exhausts from the furnaces and incinerator, Room 42, will be separated from the general ventilation system and connected to the above Roto-Clone with new duct.

3. Burning operations in Room 40 and Room 41 will be carefully controlled by Operations to prohibit oily fumes and large quantities of smoke from entering the general exhaust system and causing inefficient operation of the existing Precipitron. This proposed procedure will allow us to check the operation of the Precipitron under conditions more suited to this type of equipment.

4. After the Roto-Clone is installed Health Physics will check conditions at both the Precipitron and Roto-Clone discharges.

5. It is expected that the Roto-Clone alone will remove only the larger particles. Additional tests can be made and additional units can be added to obtain a higher efficiency of collection after the installation of the

Roto-Clone unit. Agglomeration facilities, (Steam or water fog), filters, duct to existing stack, and contamination solution filters can be added at a later date if found necessary.

6. Mr. Baumann of Health Physics agreed to furnish us a definite figure as to the concentration of normal U allowable in the exhausts from the Precipitron and proposed Roto-Clone.

7. No additional engineering will be done until after the release of the Roto-Clone unit from Building 9211.

The following men attended this meeting and approved the above approach to the problem: Messrs. Cameron, Baumann, Martin, Dunlap, and Little.

J. C. Little

JCL:wcm

= indicates Hg

RECORDS TRANSFERRED TO RECORDS CENTER ON FEBRUARY 13, 1958

Code # 2090-IH-4 Box No. 2

20-9-16

M.

1. Meetings - Divisional Safety
2. Meetings - Design Criteria 9998 - Scheduling Meeting #3
3. Meetings - H.P. Planning Meeting Report
4. Meetings - Liquid Metals Safety Committee
5. Meetings - Liquid Metals Safety Committee (1952)
6. Meetings - Planning Meeting Notes - Bldg. 9212 (1953)
7. Meetings - Planning Meeting Notes - Bldg. 9212 (1951)
8. Meetings - Reactor Component Safety Meeting (1953)
9. Meetings - Safety Committee Report ORNL Research and Development Div. Y-12 Area
10. Mercury Air A. Report 9202
11. Mercury Reports - (1951) (Closed)
12. Methlcholorform Report
13. Monthly Solvent Report Bldg. 9204-4 (1954)
14. Monthly Solvent Report Bldg. 9201-2 (1954)

N.

1. Nevada
2. Nitric Acid - Vapor Report
3. Notes - Solvent Committee Meetings
4. NYO - AEC

P.

1. Phillips (Degreasers and etc.
2. Pyro-Grinding
3. Personnel Exposure - Solvent
4. Plant Shift Supervisors - Notification of Unusual Conditions
5. Precipitron
6. Progress Report on Sodium Potassium Burns
7. Protective Clothing
8. Procedure - Health Physics SPP - "Calibration of Portable Radiation Survey Inst."
9. Proceudre - Personnel Decontamination
10. Quarterly Exposure Histories

S.

1. Solvent Decontamination Memo's
2. Solvent - Air Concentration in Stacks 9204-4
3. Solvent - Flasks - Bldg. 9929-3
4. Solvent - Health Physics Activities in Bldg. 9204-4 (Quarterly Rpt.) (1954)
5. Solvent - Miscellaneous Air Analysis Reports
6. Solvent - Special Air Contamination - OREX (1953)
7. Solvent - Spills - Reproduction Area
8. Solvent - Special Study - P-Plant, Bldg. 9201-2
9. Solvent - Urine Analysis - OREX - Quarterly Report (1954)
10. Solvent Urine - Participation Lists 2nd. Quarter 1955
11. Solvent Urine - Participation Lists 3rd. Quarter 1955
12. Solvent Urine - Participation List. 4th. Quarter 1955
13. Solvent Urine - Participation List. 1st. Quarter 1956
14. Solvent Urine - Participation List. 2nd. Quarter 1956
15. Solvent Urine - Participation List. 3rd. Quarter 1956
16. Solvent Urine - Participation List. 4th. Quarter 1956

RECORDS TRANSFERRED TO RECORDS CENTER ON FEBRUARY 13, 1958

Box No. 2

S.

17. Solvent - Urine Program - Alloy Division (1953) ADP
18. Solvent - Urine Program - Maintenance Personnel ADP (1954)
19. Solvent - Urine Program - OREX (1953) ADP
20. Solvent - Weekly Report - Bldg. 9204-4 (1953)
21. Solvent - Urine Analysis
22. Solvent - Weekly Reports (1953)
23. Solvent - Monthly Report 9204-4
24. Solvent - Monthly Report 9201-5
25. Solvent - Monthly Report 9201-2
26. Solvent - Weekly Report (1954)
27. Solvent - Weekly Report (1954) (9204-4)
28. Solvent - Urine Analysis - Dept. 2301 - Quarterly Reports (1954)
29. Solvent - Urine Analysis - Dept. 2026 - Quarterly Report (1954)
30. Solvent - Urine Analysis - Dept. 2015 - Quarterly (1954)
31. Stack Sampling - Bldg. 9995
32. Stack Sampling - Daffodil Area Bldg. 9212
33. Stack Sampling - Sunflower Area Bldg. 9212
34. Stack Sampling - Sunflower Area Bldg. 9212
35. Stack Sampling - C and D Wind - Bldg. 9212
36. Staplex Company

T.

1. Thorium
2. Transmittals - Forms (1953)

U. W.X.

1. Urinalysis Reports - Solvent - 1954-55-56
2. Urinary Hg
3. United States Public Health Service
4. Urinary Uranium Analyses - Dept. 2014,2015,2037,2077,2158,2701
5. Uranium Contamination Particle Size Reports
6. Uranium Contamination - Stack Sampling (Precipitron) Bldg. 9206 (notes)
7. Uranium - Dry Box Study
8. Uranium - Stack Sampling Bldg. 9211 H. P. Analytical Results
9. Uranium - Stack Samples - 9211
10. Weather Data - Oak Ridge Area
11. Welding Study
12. William M. Stieh and Company, Inc.
13. Wilson Products, Inc.
14. X-10 - Dr. Felton