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# OAK RIDGE Y-12 PLANT INFORMATION CONTROL FORM

#2980

## DOCUMENT DESCRIPTION (Completed By Requesting Division)

| Document No. | Author's Telephone No. | Acct. No. | Date of Request |
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Unclassified Title: AIR-BORNE URANIUM CONCENTRATION RECORDS (# 2090-1H-4/4)

Author(s): Requestor: Steve Wiley

TYPE: ☐ Formal Report ☐ Informal Report ☐ Progress/Status Report ☐ Co-Op Report ☐ Thesis/Term Paper

☐ Oral Presentation (identify meeting, sponsor, location, date)

☐ Journal Article (Identify Journal)

☒ Other (Specify) To be released to ChemRisk, Phase II

Document will be published in proceedings ☑ No ☐ Yes

Document will be distributed at meeting ☑ No ☐ Yes

Document has patent or invention significance ☐ No ☐ Yes (Identify)

Document has been previously released ☑ No ☐ Yes (Reference)

## DIVISION REVIEW AND APPROVAL (Completed By Requesting Division)

TECHNICAL CLASSIFICATION REVIEW (Divisional Classification Representative)

Title(s): Unclassified Abstract: —

DOCUMENT: Level Unclassified Category —

R.F. Quigg — Signature — 2 Mar 95 — Date

Y-12 Plant Classification Office

DOCUMENT REQUEST APPROVED (Division or Department)

[signature] — Signature — 2/24/95 — Date

Signature — Date

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

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☐ External Distribution

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| Distribution: | UCN-7721B | DOE F-1332.15 | Document |
|---|---|---|---|
| Y-12 Central Files | Y-12 RC | Y-12 RC | Y-12 RC |
| TIO File | L.L. McCauley | | |
| | S.W. Wiley | | |
| | R.M. Keyser | | |

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### APPROVAL AND RELEASE

Date Received: Date Initiated: 2/27/95

☑ CLASSIFICATIONS

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☐ Date

APPROVED FOR: ☐ Declassification ☐ Release subject to use of the following admonitory markings and conditions:

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Conditions/Remarks

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

| DESCRIPTION OF RECORDS | FROM | THROUGH | CODE NUMBER |
|---|---|---|---|
| Solvent Air Analyses, Urine Excretion Data Summary, Participation Lists, Water- Poplar Creek Flows, X-Checks. | 1955 | 1957 | ~~[illegible]~~ Y-12 2090-IH-4 |

APPROVED FOR PUBLIC RELEASE
M. L. Bond 3/6/95
Technical Information Office Date

Enclosed in box is a list of all folders included in the box.

S through Z

DOE Hold 1324.7

BOX NUMBER 4 OF 5

LOCATION IN RECORDS CENTER

| | SECTION | TIER | DR. |
|---|---|---|---|
| Indef. | 20 | 9 | 18 |

CLASS OF FILE

RECORD [X] NON-RECORD [ ]

RECORDS VERIFIED BY: Bill Everett

DATE 2/14/58

TRANSFER OF RECORDS

T-2078

T-2013 (3-52)

AIR-BORNE URANIUM CONCENTRATION RECORD

ROOM CODE 3 DATE 2-19-53 SAMPLE NUMBER _____ SAMPLER IDENTITY #I

LOCATION 21 START 9:42 VOLUME OF AIR 17.9 ft$^3$ C-1 1.9

BOX NUMBER E-I FINISH 1052 TOTAL MINUTES 10 C-2 _____

AIR FLOW METER 7.5 AVERAGE FLOW 1.79 MATERIAL TYPE 700 $\Delta t$ _____

PROCESS CONDITIONS Blank Sample with nothing in the furnace,

OBSERVER _____ COMPOUND Samson Reading 350 AIR-BORNE CONCENTRATION _____ Alpha/min/M$^3$

(over)

T-2013 (3-52)

AIR-BORNE URANIUM CONCENTRATION RECORD

ROOM CODE 3 DATE 2-19-53 SAMPLE NUMBER _____ SAMPLER IDENTITY #2

LOCATION 21 START 9:42 VOLUME OF AIR 17.3 C-1 26.5

BOX NUMBER I-1 FINISH 09:52 TOTAL MINUTES 10 C-2 _____

AIR FLOW METER 7.0 AVERAGE FLOW 1.73 MATERIAL TYPE 705 $\Delta t$ _____

PROCESS CONDITIONS Nothing in furnace

OBSERVER _____ COMPOUND Sample Count 650 AIR-BORNE CONCENTRATION _____ Alpha/min/M$^3$

T-2013 (3-52)

AIR-BORNE URANIUM CONCENTRATION RECORD

ROOM CODE _____ DATE 2-19-53 SAMPLE NUMBER _____ SAMPLER IDENTITY _____

LOCATION _____ START 1157 VOLUME OF AIR 6.30 ft$^3$ C-1 _____

BOX NUMBER E-7 FINISH 1200 TOTAL MINUTES 3 C-2 _____

AIR FLOW METER _____ AVERAGE FLOW 2.10 MATERIAL TYPE 700 $\Delta t$ _____

PROCESS CONDITIONS H&V #70

OBSERVER _____ URANIUM COMPOUND _____ AIR-BORNE CONCENTRATION _____ Alpha/min/M$^3$

687 48 micrograms (total)

T-2013 (3-52)

AIR-BORNE URANIUM CONCENTRATION RECORD

ROOM CODE _____ DATE _____ SAMPLE NUMBER _____ SAMPLER IDENTITY 2

LOCATION _____ START 11:57 VOLUME OF AIR 6.30 ft$^3$ C-1 _____

BOX NUMBER I-7 FINISH 12:00 TOTAL MINUTES 3 C-2 _____

AIR FLOW METER _____ AVERAGE FLOW 2.10 MATERIAL TYPE 700 $\Delta t$ _____

PROCESS CONDITIONS H&V #70

OBSERVER _____ URANIUM COMPOUND _____ AIR-BORNE CONCENTRATION _____ Alpha/min/M$^3$

692 25 micrograms (total)

T-2013 (3-52)

AIR-BORNE URANIUM CONCENTRATION RECORD

ROOM CODE _____ DATE _____ SAMPLE NUMBER _____ SAMPLER IDENTITY 2

LOCATION 3 START 11:12 VOLUME OF AIR 2.98 ~~ft~~ $^3$ C-1 _____

BOX NUMBER I-3 FINISH 11:13-25 TOTAL MINUTES ~~1.25~~ 1.416 C-2 _____

AIR FLOW METER _____ AVERAGE FLOW 2.10 MATERIAL TYPE 700 $\Delta t$ _____

PROCESS CONDITIONS H&V #70

OBSERVER _____ URANIUM COMPOUND _____ AIR-BORNE CONCENTRATION _____ Alpha/min/M$^3$

#1 142 micrograms (total)

T-2013 (3-52)

AIR-BORNE URANIUM CONCENTRATION RECORD

ROOM CODE 5 DATE 2-19-53 SAMPLE NUMBER _____ SAMPLER IDENTITY #7

LOCATION 21 START 1135 VOLUME OF AIR 3.32 ft$^3$ C-1 _____

BOX NUMBER E-5 FINISH 1136.35 TOTAL MINUTES 1.58 C-2 _____

AIR FLOW METER _____ AVERAGE FLOW 2.10 MATERIAL TYPE 700 $\Delta t$ _____

PROCESS CONDITIONS Inserted 24", H&V #70

OBSERVER _____ URANIUM COMPOUND _____ AIR-BORNE CONCENTRATION _____ Alpha/min/M$^3$

686 68 micrograms total

T-2013 (3-52)

AIR-BORNE URANIUM CONCENTRATION RECORD

ROOM CODE _____ DATE 2-19-53 SAMPLE NUMBER _____ SAMPLER IDENTITY _____

LOCATION 9206 START 1:29 VOLUME OF AIR 420 ft$^3$ C-1 _____

BOX NUMBER I-9 FINISH 1:31 TOTAL MINUTES 2 C-2 _____

AIR FLOW METER _____ AVERAGE FLOW 2.10 MATERIAL TYPE 7005 $\Delta t$ _____

PROCESS CONDITIONS H&V #70

OBSERVER _____ URANIUM COMPOUND _____ AIR-BORNE CONCENTRATION _____ Alpha/min/M$^3$

.93 29 micrograms (total)

T-2013 (3-52)

AIR-BORNE URANIUM CONCENTRATION RECORD

ROOM CODE _____ DATE 2-19-53 SAMPLE NUMBER _____ SAMPLER IDENTITY I

LOCATION 9206 START 1:29 VOLUME OF AIR 420 ft$^3$ C-1 _____

BOX NUMBER E-9 FINISH 1:31 TOTAL MINUTES 2 C-2 _____

AIR FLOW METER _____ AVERAGE FLOW 2.10 MATERIAL TYPE 7005 $\Delta t$ _____

PROCESS CONDITIONS H&V #70

OBSERVER _____ URANIUM COMPOUND _____ AIR-BORNE CONCENTRATION _____ Alpha/min/M$^3$

1.88 43 micrograms (total)

3 (3-52)

AIR-BORNE URANIUM CONCENTRATION RECORD

CODE 3 DATE 2-19-53 SAMPLE NUMBER _____ SAMPLER IDENTITY 2

ION 9206 START 11:23 VOLUME OF AIR .04 C-1 _____

MBER I-4 FINISH _____ TOTAL MINUTES .1 C-2 _____

OW _____ AVERAGE FLOW 1.73 MATERIAL TYPE 700 Δt _____

S CONDITIONS ~~24 Inches.~~ - Sample for particle size - M.P. Sifter

ER _____ URANIUM COMPOUND _____ AIR-BORNE CONCENTRATION _____ Alpha/min/M$^3$

(3-52)

AIR-BORNE URANIUM CONCENTRATION RECORD

ODE 3 DATE 2-19-53 SAMPLE NUMBER _____ SAMPLER IDENTITY 1

ION 9206 START 1123 VOLUME OF AIR .04 ft$^3$ C-1 _____

MBER E-4 FINISH 1123.1 TOTAL MINUTES _____ C-2 _____

OW _____ AVERAGE FLOW 1.73 MATERIAL TYPE 700 Δt _____

S CONDITIONS Inserted 48" (Sample for particle size.), M.P.

ER _____ URANIUM COMPOUND _____ AIR-BORNE CONCENTRATION _____ Alpha/min/M$^3$

T-2013 (3-52)

AIR-BORNE URANIUM CONCENTRATION RECORD

ROOM CODE Precipitron DATE 2-19-53 SAMPLE NUMBER _____ SAMPLER IDENTITY 1

LOCATION 9226 START 1112 VOLUME OF AIR 2,982 ft$^3$ C-1 _____

BOX NUMBER E-3 FINISH 1113-25 TOTAL MINUTES ~~1.25~~ 1.416 C-2 _____

AIR FLOW METER _____ AVERAGE FLOW 2.10 MATERIAL TYPE 705 $\Delta t$ _____

PROCESS CONDITIONS Inserted 48" in duct; H.&V.

OBSERVER _____ URANIUM COMPOUND _____ AIR-BORNE CONCENTRATION _____ Alpha/min/M$^3$

683 #3 52 micrograms (total)

T-2013 (3-52)

AIR-BORNE URANIUM CONCENTRATION RECORD

ROOM CODE _____ DATE _____ SAMPLE NUMBER _____ SAMPLER IDENTITY 2

LOCATION HAV START 11:34 VOLUME OF AIR 3,32 C-1 _____

BOX NUMBER I-5 FINISH 11:35-35 TOTAL MINUTES 1,582 C-2 _____

AIR FLOW METER _____ AVERAGE FLOW 2.10 MATERIAL TYPE 705 $\Delta t$ _____

PROCESS CONDITIONS H.&V #70

OBSERVER _____ URANIUM COMPOUND _____ AIR-BORNE CONCENTRATION _____ Alpha/min/M$^3$

691 33 micrograms (total)

T-2013 (3-52)

Not Reported

AIR-BORNE URANIUM CONCENTRATION RECORD

ROOM CODE _____ DATE 2-19-53 SAMPLE NUMBER _____ SAMPLER IDENTITY /

LOCATION _____ START 1154.0 VOLUME OF AIR .346 ft³ C-1 4.9

BOX NUMBER E-6 FINISH 1154.12 sec TOTAL MINUTES .20 C-2 _____

AIR FLOW METER _____ AVERAGE FLOW 1.73 MATERIAL TYPE 700 Δt _____

PROCESS CONDITIONS M.P. - Check for Coloration

OBSERVER _____ URANIUM COMPOUND _____ AIR-BORNE CONCENTRATION _____ Alpha/min/M³

over

T-2013 (3-52)

AIR-BORNE URANIUM CONCENTRATION RECORD

ROOM CODE _____ DATE 2-19-53 SAMPLE NUMBER _____ SAMPLER IDENTITY _____

LOCATION _____ START 1205.0 VOLUME OF AIR .173 ft³ C-1 0.8

BOX NUMBER E-8 FINISH 1205.6 sec TOTAL MINUTES .10 min. C-2 _____

AIR FLOW METER _____ AVERAGE FLOW 1.73 MATERIAL TYPE 705 Δt _____

PROCESS CONDITIONS M.P. filter

OBSERVER _____ URANIUM COMPOUND _____ AIR-BORNE CONCENTRATION _____ Alpha/min/M³

over

T-2013 (3-52)

Not Reported

AIR-BORNE URANIUM CONCENTRATION RECORD

ROOM CODE T-5 DATE _____ SAMPLE NUMBER _____ SAMPLER IDENTITY 2

LOCATION _____ START 11:54 VOLUME OF AIR .346 ft$^3$ C-1 0.7

BOX NUMBER I-6 FINISH 11:54-6 TOTAL MINUTES 20 C-2 _____

AIR FLOW METER DOP AVERAGE FLOW 1.73 MATERIAL TYPE 700 $\Delta t$ _____

PROCESS CONDITIONS Millipore, coloration check

OBSERVER _____ URANIUM COMPOUND _____ AIR-BORNE CONCENTRATION _____ Alpha/min/M$^3$

over

T-2013 (3-52)

AIR-BORNE URANIUM CONCENTRATION RECORD

ROOM CODE B DATE 2-19-53 SAMPLE NUMBER _____ SAMPLER IDENTITY _____

LOCATION T-5 START 12:04 VOLUME OF AIR .173 ft$^3$ C-1 0.4

BOX NUMBER 1-8 FINISH 12:04-6 TOTAL MINUTES .10 C-2 _____

AIR FLOW METER MP AVERAGE FLOW 1.73 MATERIAL TYPE 700 $\Delta t$ _____

PROCESS CONDITIONS M.P. filter

OBSERVER _____ URANIUM COMPOUND _____ AIR-BORNE CONCENTRATION _____ Alpha/min/M$^3$

T-2013 (3-52)

AIR-BORNE URANIUM CONCENTRATION RECORD

ROOM CODE 3 DATE 2/27/53 SAMPLE NUMBER 58-1259 SAMPLER IDENTITY H.V. #36

LOCATION 21 START 1259 VOLUME OF AIR _____ C-1 _____

BOX NUMBER P-2 FINISH 1324 TOTAL MINUTES 25 C-2 _____

AIR FLOW METER 65-35 (50) AVERAGE FLOW _____ MATERIAL TYPE 700 Δt _____

PROCESS CONDITIONS Inlet side of precipitron while burning oily rag & press filter paper in furnace #3 Rm #42 Other operations normal

OBSERVER Howard Anderson URANIUM COMPOUND _____ AIR-BORNE CONCENTRATION _____ Alpha/min/M³

0.173 grams gained

T-2013 (3-52)

AIR-BORNE URANIUM CONCENTRATION RECORD

ROOM CODE 3 DATE 2-19-53 SAMPLE NUMBER _____ SAMPLER IDENTITY #2

LOCATION 21 START 906 VOLUME OF AIR 1.38 ft³ C-1 _____

BOX NUMBER I-2 FINISH 9.06-40 sec TOTAL MINUTES 1.48 sec. C-2 _____

AIR FLOW METER _____ AVERAGE FLOW 1.73 MATERIAL TYPE 700 Δt _____

PROCESS CONDITIONS M.P.F.

OK

OBSERVER _____ URANIUM COMPOUND 350 AIR-BORNE CONCENTRATION _____ Alpha/min/M³

689 73 micrograms (total)

T-2013 (3-52)

AIR-BORNE URANIUM CONCENTRATION RECORD

ROOM CODE 3 DATE 2-19-53 SAMPLE NUMBER _____ SAMPLER IDENTITY 1

LOCATION 21 START 1106 VOLUME OF AIR 1,38 ft$^3$ C-1 _____

BOX NUMBER E-2 FINISH 1106.8 TOTAL [redacted] 48 sec. C-2 _____

AIR FLOW METER _____ AVERAGE FLOW 1,73 MATERIAL TYPE _____ $\Delta t$ _____

PROCESS CONDITIONS M.P.F media

OBSERVER _____ URANIUM COMPOUND _____ AIR-BORNE CONCENTRATION _____ Alpha/min/M$^3$

684 7.1 micrograms (total)

T-2013 (3-52)

#1

AIR-BORNE URANIUM CONCENTRATION RECORD

ROOM CODE 3 DATE 9/27/53 SAMPLE NUMBER 58-1325 SAMPLER IDENTITY H.V. #36

LOCATION 21 START 1325 VOLUME OF AIR _____ C-1 _____

BOX NUMBER P-1 FINISH 1350 TOTAL MINUTES 25 C-2 _____

AIR FLOW METER 65-30 (47.5) AVERAGE FLOW _____ MATERIAL TYPE 700 $\Delta t$ _____

PROCESS CONDITIONS Outlet side of precipitator while burning daily rags + press filter paper in furnace #3 Rm. #42.

OBSERVER Howard F. Nelson URANIUM COMPOUND _____ AIR-BORNE CONCENTRATION _____ Alpha/min/M$^3$

0.249 grams gained