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UNCLASSIFIED NOTEBOOK NO. A-664
EXCERPTS

Assigned to: Harris Blower

Department: Operations Div.

Location: Bldg - 3037

Date: Oct 25, 1954

This notebook is assigned to personnel performing unclassified research and development work. Because of patent requirements it must be returned to Central Files, Bldg. 4500 when completed or upon termination of assignee.

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

David R Hamrin 9/8/95
Technical Information Officer Date
ORNL Site

RUNS 59

ChemRisk Document No. 2054

3-1-55 1. Washed down Cottrell precipitator.
12-8 2. Turned on sulpher melter at 5:00 A.M.
Bailey 3. Brought down sulpher can from pile to 3032 bldg.
4. Continued tank farm and patrol duties.

3/1/55 1- P32 Extractions Cools at E-1 9:PM E
8-4 2 11:00 P.M.
R.L.N. 2- Inst's continued work on RB 7A & 7B
also M-10 LL. Manometer.
3- Ran both small steam turbines 4 hours
4- Sampled M.H #25 O.D.B. & #186.
5- The starter on the big truck needs repair and the garage was unable to do the job today so it will have to be parked on some elivated place to start it.
6- The Pile Bldg. started pumping the canal at ~ 3:30 P.M., Metal Rec. has also been pumping today.
7- M.H. sample results #25 = 78 #186 = 219
O.D.B. = 220 c/m/ml.
8- All cell-A tanks are empty.

3-1-55 1. Found H_2O running into a hot sink in Rm E 29
4-12 Bldg. 4500. and filling WC13.
Blevins. 2. Brought 1 Hanford slug to 3028 for I^{131}
it is setting under the crane in the old I^{131} carrier
3. Loaded 32 Rala slugs into A1 and left
another 16 in D. Bldg. ready to be loaded into
A1. Had a slug to hang up with the

SLUG KNOCKER AT THE TOP OF THE CHUTE
WHICH TOOK ~ 20 MIN. TO KNOCK LOOSE.
4. TOOK UP P^{32} EXTRACTIONS FROM E1 & E2
SAMPLED BOTH AND STARTED NEW EXTRACTIONS
BOILING DOWN THE EXTRACTS IN EV1
AT SHIFT CHANGE.
5. A1 HAS 32 SLUGS PLUS 204# 60% HNO_3 AND 226#
35% NaOH.
T9 — 35% NaOH.

3-2-55 1. Boiled down P^{32} in EV1.
12-8 2. Continued tank farm and patrol duties.
Bailey 3. T3 H_2SO_4 head tank manometer is out of
service.
4. Finished loading slugs to A1 dissolver
and started coating removal.
Run status:
A1 ready for 20% HNO_3
M1 NaOH - 1 batch for M10.
T8 20% HNO_3 420#
T9 20% HNO_3 420#
5. Cleaned and stored slug knocker and
slug charging machine.

3/2/55 1- Stanton on the big knock has been repaired.
8-4 2- Ran large steam turbine 4 hours.
R.L.N. 3- Metal Rec. has been washing & overflowing
their canal today.
4. Sampled manholes #25: 63 #3500 = 42
O.D.B. = 190 c/m/ml Met. Rec. canal = 1216 cm/ml.

5- Took up P^{32} extracts from E-1 & E-2 these are boiling down in E-#1 5233 M.C. total.

6- Closed the slide valve for A-16 off Gas and drained the line.

7- Inst's Repaired A-6 and T-3 LL. Instruments.

8- Ra La Status.

A-1 first dissolving just started.

M-1 Batch caustic for M-10

T-8 H_2SO_4

T-9 water

9- Loaded one H slug into E.I. diss. and started dissolving.

3-2-55 1. Found H_2O running into a hot sink in Rm. B25 4-12 Bldg. 4500 and filling WC15 tank.

Blevins. 2. The 3019 Dissolver, S1 Jacket, Automatic exit valve switched the flow to W1 at 6:00 P.M. and ~800 gals. went into W1 before this was corrected. The Ph was 2 at W1 and 3019 operators were asked to send nothing but NaOH to W1 until the Ph is adjusted and W1 emptied. — OK at shift change PH 11 and jetted to W5.

3. P^{32} — Part of product is in S2 — 2nd HNO_3 is sparging on P1. P1 dry read 10.5 X R1.

4. Contd. with I^{131} Dissolving.

5. Rala status — A1 — 390# HNO_3 + 8 # H_2O for batch B dissolving.

A17 — BATCH A (HAS BEEN CRUD FILTERED).
M10 — 78" NaOH.
6. KEPT CHECK AGAINST OVERHEATING OF SCHAICAS AGITATOR ON 1ST LEVEL IN 3026D BLDG.

3-3-55 1. ELECTRICIAN REPLACED LIGHT BULBS OVER
12-8 MOTORS AT STACK AREA.
Bailey 2. METAL RECOVERY HAS BEEN PURGING THEIR CANAL THIS SHIFT. CUT OFF ABOUT 2:30 A.M.
3. CONTINUED TANK FARM AND PATROL DUTIES.
4. CONTINUED HOURLY READINGS ON I^{131} DISSOLVING
5. P^{32} BOILING DOWN IN EV3. READING 14-R².
6. 1MA — 10,081 A.T. 18.9 SLUGS.
7. 8WMA — 45 A.T.
8. RUN STATUS.
A1 — BATCH C DISSOLVING.
A5 — BATCH A NEUT.
A9 — BATCH B READY FOR EXTRACTION.
A8 — MT
A11 — MT
A17 — MT

3-3-55 1 - FINISHED P^{32} RUN AND SAMPLED. 1800 MC.ST.
8-4 2 - THE AUTOMATIC VALVE ON THE 3019 BLDG.
R.L.N. JACKET EXIT WATER FAILED AGAIN TODAY AND RAN ~1000 GAL. OF WATER TO W-1 TANK
3. METAL RECOVERY IS OVERFLOWING THEIR CANAL.
4. R2 L2 STATUS
A-1 BATCH C READY FOR SAMPLEING.
A-5 NEUTRALIZED BATCH B.

A-6 Neutralized Batch A.
A-9 MT Product is on the filter.
A-8 MT
A-11 MT
A-17 MT
T-8 255# H_2SO_4
T-9 390# HNO_3
Sample Results
1 MA 7922 C'S S.T. 8 WMA 36 C'S S.T.
1 MB 7475 C'S S.T. 8 WMB 51.7 C'S S.T.

3-3-55 1. 3019 SENT 225 GALS. NaOH TO W1 FOR NEUTRALIZATI
4-12 THEN JETTED W1 TO W5.
BLEVINS - 2. TOOK HOURLY READINGS OF I^{131} DISSOLVING. CHANGE
O_2 CYLINDER.
3. CONTD. BOILING DOWN EXTRACTS & WASTES IN EV1
AT P^{32}. ~200 ML TO GO.
4. PUT RESIN IN #200 CUB. COLUMN & DID RINSES
IT IS READY FOR START OF TITRATION.
5. JETTED BATCHES A&B WASTES FROM A6 TO W9
6. RALA STATUS.
A1 — BATCH D. DISSOLVING.
A5 — NEUT. BATCH C. AGITATOR IS ON UNTIL 12:00 M.N
A6, A8 - A9 - A11 - A17 — MT.
M10 — 20" NaOH.
M1 — 1 BATCH NaOH FOR M10.
T8 — 255# H_2SO_4
T9 — 130# H_2O.
PF1 — CLEAN
PF2 — BATCHES A, B, C PRODUCT.

1MC HAD 8828 CURIES AT A.T.
8WMC - 63.8 CURIES.

3-4-55 1. CHANGED CHARTS AT STACK AND EVAPORATOR GALLERY.
12-8 2. CONTINUED TANK FARM AND PATROL DUTIES.
BAILEY 3. CONTINUED P^{32} RUN THROUGH GLASSWARE. BOILING DOWN IN FV2. BOTH H_2O WASTES HAVE BEEN ADDED.
4. RECEIVED 651 LITERS FROM 3019 THIS SHIFT.
5. RUN STATUS:
A1 - BATCH E DISSOLVING.
A5 - NA_2CO_3
A6 - BATCH C NEUTRALIZED.
A8 - CUBICLE WASTE - SAMPLED AS A8 SPECIAL.
A9 - BATCH D - DIGESTING UNTIL 8:10 A.M.
A11 - MT
A17 - MT
M1 - MT
1MD - 80112 C - A.T.
6. CONTINUED HOURLY READINGS ON I^{131}

3-4-55 ① STARTED PUMPING W8 TO LAG. #3. SENT AN
8-4 18L SAMPLE OF SOLUTION TO STRAUB.
SCHAICH ② PURCHASED CHARTS FOR STACK AREA. ALSO PLACED ORDER FOR FLOOD LIGHT POLE #151.
③ RUN STATUS: A1 - BATCH E DISSOLVING
A5 - Na_2CO_3 + A8 SPECIAL - SAMPLED.
A6 - BATCH C NEUT.
A8 - 8WMD RESAMPLED
A9-A17 - MT
PF-2 - PROD.

C.F. - clean
Iso - Resin Titration sampled
Eluate & Holdup - $NaNO_3$
M.W. - H_2O
M1 - MT

④ Opened fuming nitric.
⑤ Cyclone separator valve will not open or close. Do not know which position it is in.
⑥

3-4-55 1. I^{131} BOILED DOWN THE EVAPORATOR CONTENTS TO
4-12 10% JETTED TO FLASK WHERE THE VOL. WAS
BLEVINS. BUILT TO 2 LITERS THEN SAMPLED. LAB NOTIFIED TO RUN FOR TOTAL REDUCING AGENTS AND ACTIVITY.

2. TAGGED THE CELL A SUMP JET VALVE "DO NOT JET."

3. THE SPECIAL SAMPLES TAKEN ON THE 8-4 SHIFT GAVE — 8WMD2 — 1,070 CURIES S.T A5-59
SPECIAL — 396 CURIES S.T.

4. CONTD. PUMPING FROM W8 TO LAGOON #3.

5. FINISHED RESIN REGENERATION IN 200 CUBICLE.

6. RALA STATUS.
A1 — M.T.
A5, A6, A11 — M.T.
A9 — BATCH E EXTRACTION FILTERING TO A17.
A17 — REC. EXTRACTION WASTES FROM A9.
A8 — PART OF BATCH E EXTRACTION WASTE WHICH WAS JETTED FROM A17.

PF2 — PRODUCT. M1 — Na_2CO_3 FOR BATCH E NEUT.
#200 CUBICLE TANKS ARE M.T. EXCEPT FOR CONDENSATE.

7. JETTED BATCHES C AND D WASTES FROM A6 TO W9.
8. TOOK PARKER'S TONGS TO 3026-C FROM 3037.

3-5-55 1. CONTINUED PUMPING FROM W8 to LAGOON 3.
12-8 SAMPLING ON the hour AND P.H.
Bailey 2. CONTINUED TANK FARM AND PATROL duties.
3. Pile bldg. regenerating their demineralizer over shift change to W1.
4. 1ME-4860 At S.T. 8WMF-143 At-S.T.
5. RUN STATUS:
A1-A5-A11-MT
A6 — 6WME - Neutralized.
A8 - 1st PART OF 8WC.
A9 - FILTERING to A17.
A17 - LAST PART OF Meta. WASTE.

3-5-55 (1) Finished pumping W8 to Lagoon #3.
8-4 (2) M.H. samples showed Metal Rec. to be Schaich at fault. Purging canal.
(3) Run Status: A1, A5, A8, A9 - MT
A6 - Neut Batch E - Held for high wastes
A11 - 8WC - ~ 3000 c's
FT - FTpH - 6.05 - ~ 4000 c's
M.W. - R.C. wastes
Water Wash going thru column

FTP - ~ 20,600 c/s, 8WCW - ~~[illegible]~~. 1,340 C
(4) Finished up I^{131} run and took up as two products. Samples read 4R.
(5) Cont. T.F. & P.

3-5-55 1. RALA STATUS
4-12 PRODUCT EVAP. — HAS 1ST 6.5 LITERS OF PRODUCT
BLEVINS H. TANK — REC. PRODUCT FROM COLUMN.
ELUATE TANK — 6.0 M HNO_3.
F. TANK — F.T. RINSE (HOLD)
A6 — BATCH E NEUT, 8WCW, RC. WASTES & HCLE
A11 — 8WC
SAMPLE RESULTS.
8WC — 4,270 CURIES
F.T. RINSE — 45.0 CURIES.
A8 RC WASTES — 72.0 CURIES
MW HCLE — 1.26 CURIES.

3/6/55 1- Continued tank farm and Patrol.
12-8 2- Metal Rec. is Pumping thru Canal.
R.L.N. 3- Ra La Status
P.E. TANK first fuming Nitric filtering to M.W. TANK.
H- TANK MT
Feed TANK F.T. RINSE.
A-6 Neutralized Batch E, 8WCW and R.C. Waste.
A-11 8WC.
A-8 Na NO_3 sample in the lab.

4. The Lead Pig the Lab Stores their used Samples in is full the samples will have to dumped some place else. 3/7 12 R.L
5. M.H. # 14 Sampler will only run in the middle position.

3/6/55 8-4 Schaich
① Washed down Cottrell. Still acting contantrevous.
② Jetted A cell sump.
③ FI Products total - 71 curies.
④ Instruments repaired M.H.-150. M.H.-14 low flow.
⑤ Big truck starter shot. Park on hill.
⑥ Run status: A1, A9, A17 - MT
A8 - 1st part SWFN
A6 - Next Batch E - hold
A11 - SWC Hold
P.E. - Prod.
M.W. - WFN
FT - Rinse sampled
⑦ Put a rubber stopper in hot drain at Bldg 3564 pad.

3-6-55 4-12 Bailey
1. Continued TANK FARM AND PATROL duties.
2. RUN STATUS: A1, A9, A17 - MT.
A8 - M.W.F.N. SAMPLED.
A6 - BATCH E. NEUTRALIZED.
A11 - SWC
P.E. - Product + 3 liters H2O
M.W. - M.T.
F.T. - RINSE SAMPLED.

3/7/55 1- Rad Ld Status
12-8 A-1 MT
R.L.N. A-5
A-6 Neutralized Batch E & Cubicle Waste
A-8 8HFN 2095 C's S.T. & M.H. Rinse
A-9 MT
A-11 8 MG
A-17 MT

P.E. has the Product in 6 liters of Water holding for manipulation repairs the cable that engages the cone is broken.

F.T. Feed Tank Rinse. Iso., & H tanks MT.

2- Sampled M.H. # 25 = 22 # 149 = 0 O.D.B. = 332 C/M/M/.

3- After boiling the 6 liters of Water down in the P.E. Tank to 1.3° L.L. on ~300M/ 5.7 liters of Water was added back to the P.E. Tank and the L.L. Inst. Reads 6 liters L.L.

4- Gloves, Shoe covers, & caps to be used for Product removal is on first level. Was unable to locate the knife.

5- Brought down Sodium & Potassuim samples and Parked our ¾ ton Pick up at Bldg. 3030 Iso. 1 ton truck has a flat.

6- Drained both filter boxes. Cottrell reading ~ 1 R/HR at contact operating at 42 KV

7- Brought down Pile units.

8- Continued T.F. & Patrol.

9- N.H. # 150 Integrator is Not Working.

3-7-55 ① Sent big truck to garage. Should be ready
8-4 Tues. Small truck to go at that time.
Schaich ② Repaired M.H. 22 check valve on sampler.
③ Maint. repaired manipulator cable, which had pulled loose, at 12 Noon.
④ Product drying at shift change ~ 300ml to go. P.E. Rinse was taken by jetting two liters to M.W. and diluting to 10 Liters. True P.E. Rinse Vol - 85 Liters
⑤ Product truck ready to go. Added alcohol to water drum.

3-7-55 1. Finished drying product, placed in carrier
H-12 removed from cubicle, decont. down to
BAiley smear 2 mr/hr. as bus and loaded on truck. Did not get tarp on truck.
2. P.E. rinse 304 Curies. Jetted to M.W. Did not get samples for packing.
3. Continued tank farm and patrol duties.

3-8

3/8/55 1- Brought down a Sulfur can and turned BLE
12-8 the heater on the melter.
R.L.W. 2- Washed down the Cottrell precipitator the Bell alarm did not work. the Chart turns and light came on ok.
3. used exposure time trying to get enough sample from M.H. tank for ISO. Packing. the bottle is in Decon. Room Reading ~ 1 R/HR over the top the samples have been

diluted with 200 ml of water.

4- Started the washes through Cell-A tanks after Jetting all waste exce P.E. Rinse + F.T. Rinse to A-6 and su to W-9. A-11 L.L. INST. IS Plugged. the Second Water Wash is being heated in a trying to open the INST. line. the first Wash is Ready for A-5 from A-8.

5- A-9 P.F. Rinse has 176 c's S.T.

6 Cleaned the first level and had it [redacted] Sneared. results are Not Back.

7- Metal Rec. Sparged and Overflowed their Canal early in the shift. they say it is Now Shut off.

8- Continued with tank farm and Patrol.

9- finished putting the temp. ON the Produc Cannier and truck also adjusted the flow through the Jacket to ~35 ml/min

3-8-55 8-4 BLEVINS.

1. DELIVERED THE RALA SAMPLE FROM 3026-D TO 3038 AS A PRODUCT FOR F. WILLIAMS.
2. BOUGHT 1 CASE OF 70% HNO_3 FOR I^{131}
3. THE RALA TRUCK LEFT AT 8:52 A.M.
4. STARTED JETTING FROM W5 TO W8 AT 2:00PM BUT HAD TO SHUT DOWN AT 3:00PM DUE TO A LEAK IN THE LINE AT THE VALVE TO W6 1" WAS JETTED TO W8. LABORERS ARE DIGGING THE HOT DIRT FROM UNDER THE LEAKING LINE.
5. SAMPLED MANHOLES THE HOTTEST WERE #186 – 545 c/m/ml OLD DB-311.