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NOTEBOOK NO. A-453

Assigned to: Harris Blauer EXCERPTS

Department: Operation

Location: 3037

Date: 7-16-53

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Assignee is responsible for the safe-guarding of this notebook in accordance with security regulations.

Do not use scrap paper.

Be sure to record all personal conferences.

This notebook must be returned to Central Files - Bldg. 4500 when completed or upon termination of assignee.

Subject	Page

1/20/54 - Shut down Rala 4h bk of inversion.

RUN 54 / 54A
Dummy Run (partial hot)
RUN 55
RUN 55A

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

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

ChemRisk Document No. 2052

7. CONTD. WITH PATROL DUTIES.
8. EVAPORATING AT 15# S.P AND 25" L.L.
9. PUT 1 CARBOY OF H_2SO_4 IN M8 AND TURNED ON SWITCH TO M9 PUMP LONG ENOUGH TO CHECK M9 PUMP FOR LEAKS — STILL LEAKS AT THE FLANGES WHITCH ARE MARKED WITH CHALK.
10. DRAINED THE K_2CO_3 FROM T2 TO THE JUG CONTAINING OTHER K_2CO_3 DIDN'T MAKE UP MORE AS THERE WAS ONLY 2-5# JARS OF K_2CO_3.
1.0M HCL IS 1.02M - OK.
3.0m $NaNO_3$ IS 3.04 M - OK.

11-4-53 12-8 Lampton
① Continued sparging and recirculating W7 Tank.
② Made up 1st Rala coating removal solution and dumped 1st part into A1 remainder is in scale tank. Made up 1 batch of 4% caustic in M1
③ Continued F1 heel dissolving.
④ Cooled E-1 at 11:40 and E-2 at 9:00AM and took up P^{32} extraction. Started re extraction. E-1 — 2199 mcs E-2 — 1685 mcs.
⑤ Loaded F1 slug charger with a Hanford slug basket and took to pile.
⑥ Continued filling sulfur cans. 6 cans to go.
⑦ Continued patrol duties
⑧ Continued evaporating.
⑨ Made up a batch of K_2CO_3. — 40.4% - OK.

11-4-53 1- Ran small steam turbines 4 hrs.
8-4 2- Had a new battery installed in Pick-up Truck
R.L.N. 3- Started up the south still in 3026-D Bldg.
4- Made up 3.0 M HNO_3 and two more liters of $Pb(NO_3)_2$ both solutions are OK.
5- discarded F.I. heel dissolving and started another run for three hrs. and discarded, washed out the tanks, loaded one 8"H slug and finished coating removal, dissolving ready to start at 4:00 P.M.
6- Finished F.I. run in room -10 and delivered.
7- Pipefitters put new gaskets on two valve bonnets on H_2SO_4 line, valve on discharge side of pump checked OK, the valve from the tank to the pump has not been checked.
8- Loaded 32 9" slugs to A-1 and delivered slug Charger back to the Pile, it is ready to be brought back down at 4:00 P.M.
9- Took up two extractions of P^{32}, boiling down in Ev. #1

11-5-
12-8
Lamp

11-4-53 1. Insts. Replaced the A1 vacuum ring balance, timer motor with a used motor it is working O.K.
4-12. 2. Contd. with patrol duties.
Blevins. 3. Contd. with I^{131} dissolving.
4. Started a new run at the evaporator.
5. P^{32} — H_2O 1st wash going thru S1 at shift change filled 3 S. cans this shift.
6. RALA — 17c - 4" slugs have been loaded into A1 the charger is on the 1st level and is

11-5-
8-4
R.L.N

LOADED WITH THE LAST 4" SLUGS THERE IS 8 OF THEM.

7. THE PLATFORM ASKED FOR IN RM. 112 BLDG 5500 HAS NOT BEEN INSTALLED AS YET.

11-5-53 Lampton

① P^{32} product is sitting in P-2 until 8:50 AM.

12-8 ② Had a spill of P^{32} on the floor under P-2 pit sampler. Cleaned from 8 R/h. To 60 mr/h. Covered with paper at shift change. Sampler is still hot.

③ There is a leak in packing of drain valve of T 8 scale Tank.

④ Checked FI dissolving.

⑤ Continued filling sulfur cans.

⑥ FI product was 1858 mc's at S.T.

⑦ Continued sparging and recirculating w/ Tank.

⑧ Loaded 8-4" slugs and 64-8" slugs.
A1 — ½ coating removal and 248 slugs.
T-9 — 2nd half coating removal
M1 — Batch 9% caustic.

11-5-53 8-9 R.L.N

1- Put KMnO4 Solution in the Condensate overflow line on 9500 off Gas and sampled MC-17 for Color, & the Color came through to MC-17

2- Finished P^{32} run and delivered to Packing

3- Pipefitters repacked the drain valve on T-8 TANK 3026-D Bldg.

4- Finished loading Rack Slugs, Cleaned the Slug Hangers and Slug Knockers and stored.

5- Started Sparging F.I. at 8:00 AM took three Sparging Cuts the fourth Sparging is in Progress at 4:00, the Second Cut from 3rd Still is in Progress at 4:00 P.M. 11-6-5. 12-8 Lampi.

6. Ra La Run Status

A-1 Last Coating removal up to temp at 3:30 P.M.

T-8 HNO_3 for dissolving.

M-10 4% NaOH for A 4 scrubber

11-5-53 4-12 BLEVINS.

1. HAD INSTS. REPAIR THE BROWN ELECTRONIK TELEMETERING MARKER AS IT WAS MOVING CONTINOUSLY WHILE MARKING.
2. FOUND THE FOOT VALVE STUCK AND H_2O RUNNING INTO A HOT SINK ON THE WEST SIDE OF THE 3026D HOT LAB.
3. P^{32} RUN 294 HAS 3,563 MC'S AT S.T.
4. CONTD. WITH PATROL DUTIES AND SPARGING OF W7 SOLN.
5. EVAPORATOR – CUT THE EVAPORATION RATE SO AS NOT TO EXCEED 200 GAL/HR WHILE RALA RUN IS IN PROGRESS.
6. I^{131} – COMPLETED 5 SPARGING STILLS & STARTED THE 6TH BUT QUIT BECAUSE OF LOW ACTIVITY. 19 CUTS WERE TAKEN WITH 4 CUTS YET TO GO TO RM10 THE SPARGING STILLS ARE TO GO TO THE FLASK AND SAMPLED AS F1 AND WILL BE A SEPERATE RUN FROM THE SCRUBBER STILLS WHICH ARE TO BE HELD IN THE EVAPORATOR. 11/6/5.

THE SCRUBBER HAS BEEN DROPPED AND SAMPLED 1750 HR 8-4 Schaic

7. RALA -- 2.74 SLUGS DISSOLVING BATCH A. SP GR. 1.76

T9 – 390# HNO_3 FOR 2nd DISSOLVING.

T8 – 130# H_2O

M1 – 1 BATCH NAOH FOR M10

11-6-53 ① Finished boiling down FI sparging stills
12-8 and transfered to flash as F-1 Read -7R/hr.
Lampton ② Finished FI scrubber stills. Three cuts to go to room 10.
③ Continued sparging and circulating W7 Tank.
④ Continued patrol duties.
⑤ Had instruments repair leak in A9 Tank specific gravity instrument. Had to add some oil -- 0.827 SpG.
⑥ Had to blow A16 and A9 pots about every hour.
⑦ Rala status:
A1 — Batch C dissolving. C?
A5 — Batch NK_2CO_3
Batch A filtering from A9 to A17.
A11 — 1MB
Sample result — 1MA — 11,951 curies S.T. 40.8 slugs
1MB — in lab.
⑧ Washed down cottrell precipitator after batch A & B dissolving.

11/6/53 ① Instruments replaced A9 Sp. Gr.
8-4 ② Had power failure at 3 P.M. No damage.
Schaich ③ Finished 1st part of FI near three Rm 10. Sampled F-1 on scrubber part.
④ Added resin to column. Next step is to check for leaks. See batch A book.
⑤ 8WMA - 65 c's, 1MB - 12192 c's S.T. - 19.5 slugs

(6) Run, Status: A9 - Batch B filtering to A17
A1 - Ready to start Batch C
Crud Filter - clean
A11 - Batch C
PF-1 & PF-2 - Product
A5 - Neut Batch A

C ??
or D?

(7) Dumped acids, made up batch of 4% in M10.
(8) Continued evaporating - coagul/ne.

11-6-53 1. CONTD. EVAPORATING & PATROL DUTIES.
4-12 2. I^{131} ALL CUTS HAVE BEEN TAKEN AND IS IN
BLEVINS. STERILIZER AT S. CHANGE.
3. FINISHED RESIN TITRATION AND READY FOR NaOH ON THE REGENERATION.
4. RALA. — A1 — BATCH D. DISSOLVED & SAMPLED.
A5 — BATCH A. NEUT.
A9 — BATCH B. FILTERING TO A17.
A11 — BATCH C.
PF1 & PF2 — PRODUCT.
#54 1MC — 13006 C'S STime.
5. HAD SPILL NEAR A1 SAMPLEBLISTER 9.5 R/HR
CLEANED TO ~2.0 R/HR AND COVERED WITH LEAD.

11/7/
8-4
Schan
off wa

1- TOOK UP I^{131} Product Run # 409-1 and Sampled
11-7-53 It is still on the loading table
-8 2- Finished Resin regeneration after the titration
R.L.N. 3- Continued evaporating and Patrol Work.
4- The W-7 Pump was off at 1:30 A.M. the Water

to the bearings, and spargers were still on so started the pump again.

5 Washed down Cottrell Precipitator.

6- had to blow out A-16 Off Gas Pot several times

7- Continued washing back and blowing back Process filters and slowly filtering batch B, about 20 gallons to filter at 8:00 A.M.

Run status

A-1 Batch D Sampled

A-11 Batch C

A 9 Batch B filtering.

A-8 MT

A-5 MT

A-6 Neutralized Batch A

M-1 Batch Na_2CO_3

8- Scrubbed the hot spots in front of A-1 blister radiation down to 1 R/HR, Covered with lead, area smeared up to 1280 counts they are covered with blotter paper.

11/7/53 8-4 Schaich off water

① strainer on water line to a compressor located above RM.10 "C" bldg burst and sprayed surrounding area and Rm 10. Shut Contacted Barnett. Called G. Parker who said to shut off water and let it go.

② A9 L.L. (Hg.) lost all the Hg during the extraction cooking period. Refilled and after 30 min. searching found manometer to be leaking at bottom plug. Tightened plug and placed in service.

(3) A9 agitator belt broke. Maintenance will replace.
(4) 8WMB - 78 cc S.T.
(5) Finished Batch B extraction by leaving 15 gal. heel in A9. Started Batch C extraction by adding one bucket of H_2SO_4 thru each filter, then blowing dilution water thru each filter. 11-8-
12-8
R.L.N
(6) Run Status: A1 - Batch D
A9 - Batch C filtering to A11.
A5 - Batch B neut.
A6 - Batch A "
(7) Delivered 24.0 ml of FI-409 to Livingston
(8) Cleaned hot spots in front of A1 sampler to ~100 mr. H.P. has smeared.

11-7-53 1. DRAINED THE VACUUM TANKS IN BLDG 3034. NOTHING
4-12 CAME OUT.
BLEVINS. 2. SMEARS TAKEN ON THE 1ST LEVEL 3026-D ARE O.K. 11/8/
3. A MILLWRIGHT WORKED OVERTIME TO BUY AND INSTALL THE A9 AGITATOR BELT. PLEMENS THE STEAM PLANT FOREMAN SAID THAT THE MAN CLOCKED OUT AT 6:30 PM 8-4
Scha
4. STARTED A NEW EVAPORATOR RUN.
5. CONTD. PATROL DUTIES.
6. CONTD. I^{131} HEEL DISSOLVING RUN 409 HAD 14,702 MCS RUN 409-1 HAD 14,816 MCS I^{131} AT S.T.
7. RALA STATUS.
A1 - BATCH D. SAMPLED.
A5 - MT
A6 - MT
A11 - MT
A8 - MT

A9 - PRODUCT FILTERING TO A17 -JT ~ 7.5 gal/ ~~ex~~ diff.
M1 - 1 BATCH Na_2CO_3 FOR A5 NEUT.
PROCESS FILTERS - PRODUCT.

11-8-53 1- Ra La Run status.
12-8 A-1 Batch D.
R.L.N. A.5 Part of filtrate from batch C
A-6 MT.
A-8 MT
A-9 Batch C filtering to A-17
A-11 MT
A-17 receiving batch C from A-9.
2- Continued patrol work and evaporating C.T. special at 5:45 A.M. 1.18×10^4 the feed solution PH dropped to ~2, called metal recovery for caustic, C.T. spec. at 7:00 1977 C
3. Continued F.I. heel dissolving.
4- heat lamps at the manholes are on.

11/8/53 ① Loaded one 8 "W" slug and started FI dissolving
8-4 * ② C.T. samples continued high until NaOH was
Schaich added to Evap. Tank. Continued evaporating
③ Continued Patrol work.
④ Run Status: A1 - Batch D
A5 - 2WMC-1 sampled. (130c's S.T.)
A6, A8, A11 - MT A9 filtering to A17.
* ⑤ C.T. still running high. 966 c's/min

11-8-53 ① Checked FI dissolving.
4-12 ② Continued evaporating. Special CT. 933 ca/ml 50
Lampton started sending to S.B.
③ Continued patrol work.
④ Continued sparging and circulating w/ Tank. The pump is beginning to sound quite rough.
⑤ Rala status: A1 - Batch D
A5 - ~~8cw-1~~ 8WMC - sampled
A6, A8, A11 - MT
A9 filter to A17

11-9-53 1- Continued with F.I dissolving.
12-8 2- Heat lamps are ON at all manholes except #22,
R.L.N. 149, & 150 NO lamps in these
3- Jetted water from Evap. Cell floor and refilled.
4- Brought down Pile units.
5- had trouble with battery on Pick up Truck, looks like a dead cell
6- Relay Run Status.
A-1 Batch D
A-5 8WMC-1 Sampled
A-8 8WMC-2 holding for the remainder from A-9
A-11 MT
A-9 Filtering Batch C to A-17
7. P.H. of Evaporator feed Solution dropped to ~2 Neutralized with caustic and called Metal recovery for a 100 gal. of caustic

11/9/53 ① Pumped 1" from W7 to W10. W10 before - 2'9"
8-4 W10 after 2'10". W7 before 1'6", W7 after 1'4".
Sohaich ② Riggers removed W7 pump for repair.
③ Continued evaporating.
④ Sampled WC-5 tank.
⑤ New Lagoon - 2.60, Old Lagoon 11 turns 9.
⑥ Continued FI run. 3rd sparging still going at shift change. Starting 4th sparging. Pressley wants the UNH from this run.
⑦ Pipefitters repaired A6 pop-valve.
⑧ Exchanged batteries on pickup.
⑨ Run status?? A1 - 1MD
A5, A11, A8, A17 - MT
A9 - 1st H_2O wash settling till 4:30 P.M. before decanting.
A6 - Neut. 8WMC-1 and 8WMC final.
⑩ Cleaned out algae at S.B. sampling box and containers.

11/9/53 ① Jetted 828 gal from WC 4 Tank to W9 Tank.
4-12 Left a heel in WC 4 tank of 190 gal
Lampton ② Finished 5th FI sparging and sparging stills. Boiling down in Rm 10 at shift change with 3 cuts to go.
③ Diluted UNH sol. in FI dissolver to 14.3 l. and blew to Pressley's cell. Followed with 1 liter H_2O to lower background from line.

④ Rala status. A1 - 1MD
A5, A11, A17 — MT
A8 — 8WW1 and one decant. wash.
A9 — 3rd H_2O wash settling
until 12:47 AM
A6 — Neut. 8WMC-1 + 8WMC.
8WW1 sample result — 566 curies S.J.

11/10/
8-4
Scha

11-10-53 1- Brought down a Sulfur can, this can has leaked
12-8 Sulfur out the bottom, so handle with care.
R.L.N. 2- Washed down Cottrell Precipitator and drained
off Gas filter boxes.
3- filled 1½ ton truck with Gas.
4- Finished boiling down cuts from F.I. Sparger
stills and sampled F-1, ran two scrubber stills
the third is in Progress at 8:00 AM
5- Ra La Run Status.
A-1 Batch D
A 5, 6, 11 + 17 MT — A-8 8WW-2 ready to sample.
A-9 starting first Metathesis at 8:00 A.M.
K_2CO_3 Digesting.
6. A9 A8 DB Jet Plugged so used the DA
Jet for the last two decantations from A-9
the last decant was cut off at 5½" and
the remainder of Soln. was filtered through
PF 2 to A-17 to A8 followed with a water wash
7- Jetted Neutralized Batch B from A-6 to A-9
not enough room for another batch in A-6.

11/10/
9-1
Lamp

11/10/53 8-4 ① Finished FI still run thru Rm. 10. Sampled F-1 on scrubber still run.

Schaich ② Detected leak in PF cubicle. Tightened valves and quick disconnects but did not stop leaks.

③ Continued evaporating.

④ Ran big steam turbine 4 hours.

⑤ Pse extractions off at - E-1 9:40 PM, E-2 10:40 PM. Two cans in E-1. One in E-2.

⑥ Run status: started filtering 1st meta thesis and filters plugged. Stopped Run 54 at this point and gathered all wastes in A5. (All had product 35,000 cts) Backwashed filters five times with water until A8 sample cleared-up. Tested these wastes to A5. Backwashed filters with versene and then water. Made filtration test on both filters and got 1.8 gals./min. on both. Washed out all tanks and sent to A6. Tank status: A1 - 1MD resampled (10,190 cts S.T.

A5 - Run 54 hold!
A11, A8, A9, A17 - Clean & MT
A6 - Washes to go to W16.

11/10/53 9-12 Schaich Lampton ① Finished taking cuts for FI in Rm 10. Boiling down in sterilizer. Took 7 cuts.

② Took up P32 extraction in E-1 at 1:40 PM and started re extraction. Cooling in E-2

at shift change.
③ Continued evaporating.
④ Continued patrol work.
⑤ Rula status: In adding filter aid to C.F. the addition funnel line plugged finally unplugged by backwashing and blow air and water back. Contaminated the floor. Clean and ready for resmear.
Had a high background from A16 off gas line at FTS. 1 reading 600mr/h but has dropped to 60mr/h. 11-11-
8-4
Blen
Tank status: A11, A8, A6 - MT
A5 - Run 54 hold
A9 filter to A11 via PF-1
A1 - 50% NaOH

11-11-53 1- Finished with F.I. run in room-10 and delivered
12-8 to Packing, did not sample.
R.L.N. 2- Took off extraction from E-2 and boiled down.
3- Smears in 3026-D Bldg Counted OK.
4- P^{32} extraction results E-1 2468 E-2 2194 M.C.
5- Started solution in A-5 boiling down.
6- Rala status
A-1 Batch E Sampled.
A-5 Run 54 boiling down
A-6 MT 11-11-
A8 Part of 8WMD 4-1
A-9 filtering to A17 Lamp.
A-11 heel of something probably condensate

Process Filter # 1 Plugged at 3:30 A.M. Started using PF 2 and continued filtering at a very slow rate about 10 gal. left in A-9 at 8:00 am, both filters are open.

7. The stainless steel line for 3500 area off gas reading >10 R/HR.

8. Inst's changed charts at the Evaporator, stack and one in 3026-D Bldg.

11-11-53. 1. STARTED DISSOLVING 8 SLUGS FOR I^{131}.

8-4 2. CONTD EVAPORATING.

Blevins 3. 7 & 11 AM D.B SAMPLES HOT SAMPLED MH'S #25 - 34 C/M/ML #149 - 1813 C/M/ML OLD DB - 234 C/M/ML, 3500 - 27 C/M/ML. MH #149 SAMPLE IS BEING RUN FOR I^{131} AND Ba^{140}. C.T. SPECIAL 134 C/M/ML.

4. RAN THE TWO SMALL STEAM ENGINES 4 hrs.

5. INSTS. WORKED ON THE A1 L.L. AND SPGR BUT THE SP GR IS READING LOW BY 0.06 OF A UNIT.

6. RALA STATUS. A9 - BATCH E NOT BACKWASHED
A1 - F. DISSOLVING. A11 - MT.
A5 - A, B, C, BATCHES. Crud Filters - not backwashed
A8 - 8 WMD NOT SAMPLED - STEAMING SAMPLER AT S.C.

7. P^{32} BOILING DOWN IN QUARTZ EVAPORATOR.

8. WASHED DOWN THE COTTRELL BEFORE START OF BATCH F. DISSOLVING.

11-11-53 (1) Checked F1 dissolving.

4-12 (2) Continued with P^{32} run. Product is in P-1 Lampton at shift change.

(3) The 7 PM DB was - 141 c/m/ml MH #149 - 163 c/m/ml.

④ Continued with patrol work.
⑤ Rala status: The A8 sample came unplugged and was able to sample 8 WMD. The the process filters plugged ~~with~~ after filtering about 8 gal of Batch E extraction.
Tank status: A1 -- Batch F sampled — 7019 cts.
A5 — Batch A, B, C,
A6 — 8 WMD minus heel in A11.
Batch E extract jetting A4 to A8 by by-pass. 11-1
A17 — part of Batch E extract sol. 8-
M1 - Batch carbonate Blen
M10 -- " NaOH.

11/12/53 ① FI offgas failure at shift change caused
12-8 high air activity in "D" Bldg, Lab, and East end
Schaich of "C" Bldg. Cleared up as soon as offgas restored.
② Checked FI dissolving.
③ Continued evaporating and patrol
④ 11 PM MX-149 — 57 c/s/min 3 AM - 37 c's/min
⑤ IMF - ~6600 c/s.T. — 17.8 slugs.
⑥ Jetted Batch E extraction to A11, washed back filters + tank and jetted to A11. settled in A11 for 5 hours. Decanted to A6. Jetted Run #54 from A5 to A8 and washed out A5. Added HNO_3 wash to A5 and sampled as A5 Rinse. (~590 c's.) Boiled down A8 to ~7 gal and transfered to A11 tank. Sampled 6 WME.
Run status: A1 - Batch F sampled.
A5 - " Na_2CO_3

A6 - 6WME sampled.
A11 - Combined Run #54 + #54A
A17 - Part of Filtered Batch E extraction
A9 - 1" water wash heel.
A8 - Empty

(7) Continued P^{32} thru glassware. Tygon connection on EV-2 dip leg is leaking.

(8)

11-12-53 8-4 BLEVINS.

1. FINISHED P^{32} RUN & DELIVERED TO PACKING SAMPLES READ 750 MM/HR EACH.
2. STARTED A NEW EVAPORATOR RUN MH #149 AT 11:00 AM 180 C. TECH.
3. RECD. 55 GALS UNH SOLN FROM HIGGINS AND DUMPED SAME INTO W7.
4. RALA. ——

A1 - BATCH F SAMPLED.
A5 - 6 WME & 8WME-1 NEUT.
A6 - WASTE BATCHES A THRU E SAMPLED
A8 - MT.
A9 - MT.
A11 - PRODUCT BATCHES A-E & H_2O SETTLING. - 1st WW
ALL FILTERS CLEAN.
T9 - 474 LBS OF 39.5% K_2CO_3
A17 - MT.
6 WME RESULTS 1,325 C's AT S.T. 8WME-1 - 688 C's. AT S.T.

5. I^{131} ONE CUT TO GO TO RM10 SCRUBBER HAS BEEN DROPPED AND SAMPLED 550 MM/HM.
6. MAINT. INSTALLED A SUPPORT UNDER THE W7 CIRCULATING LINE.

11-12-53 ① Finished F1 scrubber stills, boiled down
4-12 in Rm 10, Transfer to the flask and
Lampton sampled F-1 Reading 4R/hr.

② Continued evaporating and patrol work.

③ The 3pM DB - 258 ci MH #149 — 51 ci 3PM
7PM DB - 385 ci MH #149 — 639 ci
9:00 PM Old DB - - 105 ci MH #25 - 41 ci MH #3500 - 373 ci
Had been jetting to W4 a little before
7PM.

④ Rala status. The third 500 lb. H_2O wash
is settling in A11 until 2:10 AM.
The 2nd H_2O wash from A11 was
put in to A6 on top of 6WW1 and
sampled as 6WW1, 6WW2. Washed
both PF; with versene ran through
A17 + A8. Washed each filter 3 time
with 2 gal H_2O. Washed out A8 and
A17 and sent to A5. and sampled
as PFilter and tank versene + H_2O wash.

Tank Status: A1 - Batch F sampled.
A5 - - PF + Tank versene wash.
A6 - - 6WW1 + 6WW2 sampled.
A4, A8, A17 - - M1. 6WW1 - - 133 curie.
T4 - - 475 lbs. 40% K_2CO_3
A11 - - 3rd H_2O wash settling 2:10 AM

⑤ The 11 PM sample MH #149 - - 4218 cy/mg/ml.
DB 243 cy/mg/ml.

11/13/53 ① Washed down Cottrell.
12-8 ② 6WW2 Result - 358 cls S.T.
Schärch A5 + P.F. Vers. Rinse - 2080 cls S.T.
③ Continued evaporating + patrol.
④ 3AM Results: DB - 108 , MH149 - 2744 cls/min
⑤ 6WW3 " - 3145 cls S.T.
⑥ P^{32} " - 2275 mcs. S.T.
⑦ Run Status: A11 - K_2CO_3 digesting at 100°C.
A17, A8, A9 - MT
A5 - A5 + P.F. Versene Rinse
A6 - 6WW4 sampled. 619 Curies
A1 - Batch F

11-13-53 1. TOOK A 10 ML SAMPLE FROM WC-5 AND DELIVERED TO
8-4 DON OVERHOLT.
BLEVINS. 2. HAD BOTH TRUCKS SERVICED.
3. FINISHED I^{131} RUN 411 PRODUCT SAMPLE READ 2,250 mr/h
PRODUCT VOLUME 425 ML.
4. STARTED A NEW RUN AT THE EVAP. SPECIAL C.T
SAMPLE TAKEN AT 12:15 P.M. 66 c/m/ML.
5. INSTS. MEN ARE TRYING TO CORRECT THE SP. Cur. 6 A1
AT SHIFT CHANGE.
6. RALA - STATUS.
A1 - BATCH F SAMPLED.
A5 - 6WW-1 THRU 4 PLUS FILTER AND TANK RINSES.
A11 - PRODUCT BATCHES A METATHESIS THRU E DILUTED AND SETTLING UNTIL 4:10 P.M.
A6, A8, A9, A17 - MT.
FILTERS - CLEAN.
T7 - 2.95 # K_2CO_3

7. MH #149 RESULTS 7AM -- 3117 c/m/ml 11 AM 1,533 c/m/ml.

11-13-53 ① Continued evaporating. Special at 5:30 PM -- 13¾ in
4-12 ② Continued patrol work.
Lampton ③ Rala status: A1 -- Batch F dissolved.
A11 — 2nd metathesis boiling down.
A9 - MT
A6 -- 15 gal. H_2O wash spraying.
A5 - 6WC-1 sampled (10,918 curies)
A8 -- part of 6WC-1
CF — clean

11/14/53 ① Continued evaporating & patrol.
12-8 ② Brought 6WC-1 to A8 followed by water which washes. Boiled down in A8 & A11 and then transferred A8 to A11 followed by 2 water washes. Went thru metathesis procedure in A11 since this solution was boiled down to ~ 40% K_2CO_3. Cooled and started settling at 6:00 AM. Settles till 2 P.M.
A11 - Meta. settling
A5 - R.C. 300 waste
A1 - Batch F

11-14-53 1. RECD. A NEUTRON SOURCE IN BLDG 3038 FROM
8-4 MOUND LAB. ADDRESSED TO J. GILLETTE.
BLEVINS. 2. CONTD. WITH EVAPORATING & PATROL DUTIES.
3. RALA STATUS.
A5 - R.C. 300 WASTE.
A1 - BATCH F.

A11 — PRODUCT & K_2CO_3 HEEL.
A6 — 6WC2.

11-14-53 1- Continued evaporating and Patrol work, all of
4-12 the full Cylenders are on the line at 4500
R.L.N. Bldg. this May Not be enough for the Week-end.

2. diluted IMF in A-1 to a 1.62 SPGR and resampled.

3- 200# K_2CO_3 is in Knoxville if Needed over the Week-end Notify Lab. Shift supervisor.

4- Ran a test on Crud filters, With A-17 MT and Valves at the Cubicle Closed. A 17 Vacuum 18" opened the Neseccery Valves to filter A-11 to A-17 and the Vacuum on A-17 dropped to 2" this test Was on both filters.

5- Run Status.

A-1 Batch F
A 5, 6, 11, + 17, MT
A-8 6WC-2 Boiling down for A-11
A-9 Product 9377 C's S.T.

11-15-53 ① Back washed CF-1 and CF-2.
12-4 ② Both distilled water reservoirs are
Schaich empty. Could not find open valves or leaks. South still is on but not producing.
③ Electrician replaced lights over stills, 75HF blower, and Cottrell washdown.
④ IMF-2 - 7061 cs S.T.
A9-P - 9300 cs S.T.

(5) Made up 40% K_2CO_3 in T-2. - 39.7%
(6) Don Phillips had 200# K_2CO_3 brought from Knoxville to "D" Bldg.
(7) MH-14, 150 motors running full speed. MH-149 & 150 need heat lamps.
(8) Continued evaporating & patrol
(9) Run Status: A8 - 6NC2 Boiling down
A9 - A9-P " "
A5 - 115# 60% HNO_3
A17, A11, A6 - MT

11-15-53. 1. CONTD. WITH EVAPORATING.
8-4 2. PATROL — STORES DIDN'T HAVE ANY OXYGEN BUT WE FOUND
BLEVINS. TWO CYLINDERS IN 4500 BLOC. WHICH MIGHT RUN THRU THE WEEK END. GISSEL KNOWS OF THE SHORTAGE.
3. HAD INSTS. DRAIN THE AIR LINES AND BLEED OFF THE PILOT RELAY TO A17 L.L. MANOMETER.
4. PLACED AN ORDER WITH THE ELECTRICIAN TO MAKE UP CORDS WITH SOCKETS AND FURNISH INFRARED LAMPS FOR MH'S #149 AND #150 - HE SAID THAT IF HE DIDN'T FINISH HE WOULD PASS IT ON TO THE 4-12 ELECTRICIAN.
5. QUIT SAMPLING MH #149.
6. RALA STATUS.
A1 - BATCH F
A9 - STARTED SETTLING 4:00 PM.
A17 - PART OF A9 P. FILTERATION.

11-16-
12
BL

11-15-53 1. CONTINUED EVAPORATING AND PATROL WORK.
4-12 2. JOTTED A-17 TO A-8 AND SAMPLED THIS AS
BLN.

8 W C results 7332 C's S.T. this is the solution that was filtered from A-9

3. Electrician delivered the heat lamps to the office but didn't get a chance to install in manholes.

4. Added 155# of K_2CO_3 to A-9 solution in A-9 after Jetting SWC back to A-9, while adding K_2CO_3 to A-9 A-8 LL built up to 16" ~ 38 gal. Verbal instructions passed on to 12-8 shift as what to do with this.

5. The OXYGEN SUPPLY IN 4500 Bldg. Will Probably run out before 8 A.M. if some more cylenders are not located by Don Phillips on the 12-8 shift.

11-16-53 12-8 Blevins

1. PUT HEAT LAMPS IN MH's 149 AND 150. ALSO #22.
2. JETTED THE EV. SUMP AND FLOOR THEN REFILLED TO 12"
3. DRAINED THE FILTER BOXES.
4. PATROL — THERE WAS 800# ON THE OXYGEN GAUGE BLDG. 4500 AT 6:30 AM.. NONE IN RESERVE.
5. BROUGHT CASKET 2 - 2P CONTAINERS AND 1 — PHOSPHORUS PLAQUE CONTAINER TO BLDG 3038 FROM THE PILE BLDG.
6. RALA STATUS
   A1 — BATCH F.
   A9 — PRODUCT SELLING 98.6 GALS TO 1:25 PM.
   A5 — 115# 60% HNO_3.
7. EVAPORATOR — BOILING DOWN AT S.C.
8. DRAINED THE I^{131} SCRUBBER AND REPLACED WITH H_2O

11-16-53 ① Installed new heat lamp and spot light
8-4 in FI room 10. Washed out all FI equipment
Lampton and shut off all water to cell.

② Took Lagoon reading. Lagoon #1 - 11 turns back to 10. Lagoon #2 - - 2.9'.

③ Started new run at tank farm evaporator.

④ Rala status: Made 6 washes Through A17, A8 tank until sample clear. Washed out A11 Tank to A5. Made 6 H_2O washes A11 to CF to A17 to A8 to A5. Sample was still not clear. Sampled in A5 as C.F. + Tank rinse — - 1560 curies. Crud was filter aid

Tank status: A1 — Batch F
A11, A17, A5 — MT
H_2O Washes A6 — MT
A8 — 8WC-2 sample
A9 — metathesis in progress.

⑤ Crud found in A4P sample taken ~~11/14/53~~ was found to be filter-aid. This is the material which was crudding up the run.

1- 12-8 Shift Call Ed Wyatt 1 hr. before transfer
11-16-53 From A-9 to Cubicle Phone # 56100, also Call
A-12 Bob Schalich 5-6443.
R.L.N. 2. Continued with A-11 TANK Wash to W-5 the FIRST Sample was clean but didn't sample this one for activity, Put another rinse through A-11 and sampled as tank rinse # 2.

11-17
12
BLE

3- Shut off Distilled Water to 3026-C Bldg. to try [redacted] filling the Dist. Water tanks in 3026 D Bldg. No leaks in North hot Lab.

4- Pulled Sulfur out of E-1 & E-2 extractors

5- Jetted 8WC-2 solution to W-9 125 Gal.

6- Made a check on Crud filters by opening inlet valve, A-11 to C.F. and Water to C.F. With 78# Water Press for 10 min on each filter, Nothing showed up in A-11 tank the C.F. outlet and Backwash valves were closed

7- Ran distilled Water through resin in the Column starting with step # 10 of Procedure and finishing the procedure of Introduction of Resin.

8- Sampled M.H 149 after Jetting tank Rinses to W-16, 175 C/M/ML sampled after Jetting 8WC-2 to W-9 No results back. 11:PM MH 149 56 ppm

9- Continued evaporating and Patrol Work the Cylenders at 4500 Bldg. Will have to be switched to the next bank shortly after 12:00.

10- Run Status.

A-1 Batch F	A-11 MT
A-5 MT	A-8 HNO_3 soln. for metathesis
A-6 Tank Rinse # 2	A-9 Rinse of 3 Water washes after metathesis, filtering to A-17.

11-17-53 12-8 Blevins.

1. Washed down the Cottrell.
2. Put new rubber tubing on the MH #150 sample line as the old line was leaking.
3. Started a new evaporator run.
4. Contd. patrol duties.

5. BROUGHT A SULFUR CAN TO BLDG. 3032 FROM THE FILE.
6. RALA STATUS.

A1 - BATCH F. A8 HNO_3 SOLN. FOR METATHESIS
A5 - A11 MT A9 - P-H_2O RINSE FILTERING THRU PF1 TO A17
A6 - TANK RINSE #2 A17 - ~32 GALS.

6. 8WC2 RESULTS - 18,124 C's AT.
TANK WASHES #2 RESULTS - 2.4 C's AT.

11-17-53 ① Repaired Ring Balance Sp.Gr. on A1 Tank.
8-4 ② Ran the big steam turbine at the stack
Lampton for 4 hours.
③ Continued evaporating.
④ Rala status. The first feed is going on the column at shift change. Coming down to feed tank was very slow. 8WCW-4% curies - to W5
Tank status: A1 - Batch F
A11 - H_2O
A8 - part FTP
A9 - 2 liter Ver. + 2 Liter H_2O one half of versene feed.
Hold up tank - FTP.
M.W. - MT
Eluate - 17L NaOH.
⑤ Extraction in E-2 at 10:00 PM and E-2 - 12:00 PM.

11-18-5
12-8
BLEV

11-17-53 1. Made up 1.5M NaOH 1.48 M.
4-12 " " 3.0M HNO_3 sample in the lab 3.04 M.
Rala. 2. Took up extraction from E-1 at 10:00 PM started another boiling down in Ev. 1 at 12:00.
3. Continued evaporating and patrol work.

4-Continued with Rala Run through Cubicle
status at Shift Change
A-1 Batch F
A-5 MT A-8 Cubicle Waste
A 6 MT A-9- A-9 R.F. Rinse.
A-17 MT
A-11 MT
Cubicle Feed Tank Versene Feed draining
through the Column ~ 50 ML/MIN. ADD. 3 Lit. left
M.W. Tank heel of Condensate
ISO " " " "
P.E. MT
H. Tank Waste from Column.
F.T.P. Results 1475 C's.
F.T. PH 6.2 816 C's.
A9 PF Rinse 748 C's.

11-18-53 1. P^{32} — TOOK UP EXTRACTION FROM E2 — 2,640 MC's
12-8 E1 HAD 1,748 MC's RECLEANED THE HOT SPOTS
BLEVINS. ON THE STAINLESS TABLE TOP IN 3032 SMEARED O.K.
2. CONTD. PATROL DUTIES
3. EVAPORATING AT 35" L.L. 25# S.P. 300+ G.P.H.
4. RALA STATUS.
A1 — BATCH F
A8 — CUBICLE WASTES SAMPLED. A5 A6 A 11 A17 ALL MT.
A9 — A9 RINSE SAMPLED. ISO TANK — CONDENSATE
PE — MT
FT — MT
MW — NaOH HCl, H_2O FROM COLUMN.
ELUATE TANK — READY FOR 9.0M HNO_3

11-18-53 ① Ran 4500 area and hot off-gas steam turbine
8-4 for 5½ hrs.

Lampton ② The leak in the oil cooler of big steam Turbine has been repaired.

④ The amplifier for A1 and A4 tank was repaired.

⑤ Washed out F1 to Pressley's cell transfer line with HNO_3. It is not reading above background now.

⑥ Made up solutions for Rula. 4M HNO_3 (18L) OK 1M HCl — OK, 2.5M NaAc — sparging not sampled.

⑦ Made 4 H_2O washes (4 gal through each C.F.) All to CF to A1 to A2 to A5. This includes one HNO_3 wash. Made 5 H_2O washes (4 gal. through each P.F. and 4 over A4 splash plate) (This includes one nitric wash)
B.T. to PF's to A4 to A2 by by-pass to A5. Until all samples were clear. Made filter test of PF-1 and backwashed again. filter test of PF-2 going at shift change.

⑧ Rula status. A1 - Batch F
A5 - washes of filters and tanks No 3. sampled
A4, A2, A1, A6 - MI
M.W. - 3M $NaNO_3$ column elution
Isc. - MJ
Hold up - MJ
P.E. - Production

11-1
4-
R.L

6 Samples. Resin cubicle waste — 13 curies
MW Hole — 17 "
2 Samples of PF taken for packing.

(6) Continued evaporating.

(7) ~~Finished F32~~ Run took up product and sampled. Boiling down in EV 1.

11-18-53 R.L.N.

1. Samples in the lab on 0.25 M versene and 2.5 M Na. Acetate.

2. Checked A-1 SP. GR with Baeck & HNO_3 1.41 Hydrometer 1.36

3 Finished $NaNO_3$ through the Column and sampled. 59 C's, backwashed the resin from the column and Jetted all waste from Cubicle tanks to A-8 and out to W.H. Cleaned up around Cubicle area.

4. Ran a flow rate on P.F #1, backwashed with 3 Water washes took out through BY Pass to A-8, followed with 4 liters of versene through P.F #1 to A-8 followed this with 4 more Water washes.

5. A-1. All Jet would Not Pick up ON the first try. heated A-1 up to boiling and cooled Jetted OK, this was after adding 20 cal of water to A-1 to dilute to 1.35 SP. GR this was no sample # 2

6. Continued evaporating and Patrol work

7. Picked up #300 cubicle sample containers from Packing and brought back to 3026-D.

8- Continued with P^{32} run filtering through S-1 to EP 2 at Shift Change.

9 Rala Status.

A-1 Batch G Dissolving

A 5, 6, 8, 11, 17, MT.

M-1 Batch Na_2CO_3

A-9 Batch F Ready to filter at 11:55 P.M.

P.E Tank #300 first part of the run, all others MT.

10- diluted P.E Tank up to 12 liters with H_2O

11- Tank Wash # 3 results = 200 C's.

11-1

8-

Lan

11-19.53 1. 1MF Resample #2 - 7961 C's at S.T.

12-8 2. Contd. with Patrol Duties.

Blevins 3. Found a small leak into Hot Sink in Rm. H-23 4500 Bldg. Valve wouldn't close Completely

4. Rala Status.

A1 - 1MG Sampled - 6,126 C's at S.T. only 1 Sample Run

A6 MT A11 - MT. A17 MT.

A5 - 1 Batch Na_2CO_3 for Batch F. Neutralization.

A9 - 66.5" Batch F at start of Filtering A9-A17 12:00 MN. A9 had 91 Gals. Quit Filtering at 5:10AM A9 Vol 50.3 Gals. During the last 45 Min of Filtering only $\frac{1}{2}$ Gal went thru Filter

Started Settling at 5:10 AM until 11:45 AM.

A8 - 8WMF Sampled 42 Gals. This is what filtered from A9 to A17.

PE Tank #300 - 12.5 Liters Run 54.

All other Cubicle Tanks are M.T.

11-19-

9-12

R.L.

5. Washed Down the Cottrell at 6:20 AM.

6. 0.25 M. Na. VERSENATE LAB RESULTS 0.258 M.
2.5 M. Na ACETATE " " 2.71 M.
BOTH HAVE BEEN BOTTLED DOWN AND SAMPLED
7. EVAPORATOR – 30* S.P. 40" L.L. ~300 GPH MOST OF SHIFT THEN CUT DOWN THE EVAPORATION RATE BECAUSE OF RALA DISSOLVING.
8. P^{32} — 250 ML .05 N HNO_3 SPARGING IN EV 2 ..

11-19-53 ① Continued evaporating
8-4 ② Finished P^{32} run took up product and sampled.
Lampton ③ Rala status:
A1 – Batch H diluted and cooling but is not sampled.
A5 – Na_2CO_3 + 8WMF-1 neut.
A8, A17, A16 — MT
A11 — 8WMF-2 settling until 6:07 PM.
A9 — Batch G settling until 4:20 PM hot and then To 8:20 cold.
M1 – Batch 4% NaOH. P.E. tank — Run 54 product sample result:
PE 1 — approx 1500 curies
8WMF 1 — 19.1 curies
8WMF-2 — 296 curies
0.25 M Na ver. — in lab.
2.5 M NaAc — in lab.
④ Add H_2O to P.E. tank to bring up to approx 12 liters.
⑤ Changed the sample tubing on R Pond sampler.

11-19-53 1. RAN ANOTHER SP. GR CHECK ON A-1 INSTRUMENT
4-12 HNO_3 used 1.362 A-1 INST. 1.40
R.L.N. 2. CONTINUED EVAPORATING AND PATROL, RAISED THE

840 1 gm

evaporation rate up to 300 Gal./hr. and sampled the C.T. 139 C/M/ml, another sample in the Lab.

3. Backwashed the column with water for 50 min. and added the resin, and started the titration, water after the 3.04 N HNO_3 is passing through resin at shift change.

4. 2.5 M Na. Acetate and 0.25 M Versene are OK

5 Run status

A-1 Batch I dissolving. M-1 Batch Na_2CO_3

A-5 MT

A-6 Neutralized Batch F.

A-9 Settling Batch H hot until 1 30 A.M.

A-8 MT

A-11 Batch G settling til. 3 10 A.M.

P.E. Tank First Part of Product:

MW " HNO_3 from the titration, holding for the water wash.

6 WMF Results, 70 C's S.T.

8 WM G — 1499 Cs

P^{32} PRODUCT RESULTS — 4,420 MCs.

11/
8
Sc

11-20-53
12-8
BLEVINS.

1. CONTD. EVAPORATING ~300 C/P/H TOOK A SPECIAL C.T SAMPLE AT 2:00 AM 84 C/M/ML. WASHING DISS. AT S.C.

2. CONTD. WITH PATROL DUTIES.

3. FINISHED WITH TITRATION AND REGENERATION OF RESIN. 3.53 LITERS OF RESIN.

4. RALA STATUS.

#300 P.E. TANK — 1ST PART OF RUN 12.0 L.

#300 M.W. " — WASTES FROM TITRATION & REGENERATION

A1 — READY FOR HNO_3 OF DISSOLVING BATCH J.

A5 - BATCH G NEUTRALIZED & SAMPLED.
A6 - 48 BOTH MT
A11 - BATCH H SETTLING UNTIL 12:35 PM.
A9 - READY FOR 255# H_2SO_4. BATCH I EXT.
SAMPLE RESULTS 6WMG - 356 C's 1 MI - 4,880 C's
8WMH SAMPLE IN LAB.
5. A CELL SUMP CELL IS FILLING RAPIDLY.

11/20/53 ① Sample WC-5 and sent to Overholt.
8-4 ② Repaired HNO_3 head tank line to scale tank.
Schaich ③ Painters cocooned product carrier.
Product truck is parked East of "D" Bldg.
④ Instruments repaired A6 L.L. & Sp.G. Also intercom system.
⑤ 8WMH - 6920 c's A.T., 6WMH - 186 c's A.T.
⑥ 11 A.M. D.B. - 851 c's/min
3 PM D.B. - 1066 " M.H. 149 - 20,400 c's
⑦ Started test on new crud filter. Added 700 gms. filter aid and filtered 17# H_2O. Solution came thru foggy. Started boiling down 4 liters of this solution in 3rd level hood. Continued washing filter with 4 liter shots of water watching for fog. After 10 shots still just a trace of fog.
⑧ Run Status: A1 - Batch I dissolving
A5 - Na_2CO_3 A9 - Batch I settling till 4:05 PM
A6 - 6WMH
A11, A11, A8 - MT.
⑨ Continued evaporating. Sp.C.T. at 3 PM 45 cc/min/ml.

11-20-53 1- 1MJ Results 939 c's A-T. 8WMI 1249 S.T.
4-12 2- Continued evaporating and patrol
R.L.N. 3- Ran a test on Crud filter with Barium Nitrate Precipitated with K_2CO_3 No PPt. was noticed in the filtrate.
4- Punched out the centers of all the resin cubicle Sampler washers and stored in cabinet on first level.
5- Rala Status
A-1 1MJ hold.
A-5 Batch Na_2CO_3
A-6 6WMI sample in the lab.
A-8, All MT
A-9 extraction washes filtering to A-17 at shift change wash # 2.
6. A-17 Receiving extraction washes
6- Decanted A-11 to a 3" heel, Sparged and Jetted A-11 → A-9 followed this with a 10 Gal. water wash from A-11 to A-9, Started A-9 filtering through PF 1 to A-17 to be followed with the extraction washes through A-9 to A-17 Jetted to A-8 and sample as 8WW.
7. did Not use any dilution water for batch J dissolving SP.GR 1.53

11/2
8-
Scha

11-21-
R.L.
4-12

11-21-53 ① 6WMI result - 76 c's S.T. 8WW - 109 c's S.T.
12-8 ② Continued evaporating and patrol.
Lampton ③ Rala status.
A1 — Batch J hold.
A5 $NaCO_3$ + 8WW

Rala status: (Contd)

A6 — 6WML sampled.

A11 — MT

A8 — Acid to neut. 8WCW

A9 — 1st metathesis filtering via PF-1 to A17

P.E. Tank — Product 54 Run hold.

④ Put both 4500 ml K_2CO_3 back through PF-1 PF-2 has not been used

⑤ Solution from crud filter test boiled to dryness and sitting in hood 3rd level D bldg.

11/21/53 8-4 Schaich

① MH 22 finger pump shaft sheared. Motor power off but intregator still operating.

② Continued evaporating.

③ Run status: A1 - Batch J

A2, A6, A17, A11 - MT

A5 - 8WCW

A9 - MT

FT - FTP

P.E. - Run #54

11-21-53 R.L.N. 4-12

1- Continued evaporating and Patrol

2. 8WCW results 7850 A.T.

F.T.P. 2263 "

F.T. pH 49 "

3. Jetted Cell A SUMP to N-5 and sampled

4. Jetted 8WCW from A-11 to A-9 and Resampled

5- Rala Status

A-1 Batch J

A-5 Water from Cell A-Sump Sampled. 8 C's
A-6, 11, 17 MT
A-9 8WCW re-sampled 12,152 C's A.T.
A-8 Res. Cubicle Waste Sampled
P.E. Tank First Part of the run boiling down to ~4 liters
Feed Tank - Feed Tank Rinse Sampled
M.W. MWHCl Not Sampled
H Tank - receiving 9 M HNO_3 from Column

11-22-53 ① Continued evaporating and patrol
12-8 ② Resin cubicle waste — 275.5 c's A.T.
Lampton MWHClE — 5.10 c's AT
Feed Tank Rinse — ~~1.68~~ 1.69 c's A.T.
Cell A Sump — 5.26 c's A.T.
③ Rala status:
A1 — Batch J
F.T. — F.T. Rinse
P.E. — Product boiling down
A8 — Resin cubicle waste + MWHClE.
A9 — 8WCW Hold
A11, A17, A5, A6 - MT
Main Waste — MW $NaNO_3$E sampled.

11/22/53 ① Butted down 9M HNO_3 - Result 8.98M.
8-4 ② H.P. steam header valve on PB-7B is shot schaich in open position.
③ Finished regeneration of resin in Re-300. Washed out cubicle tanks, A8, and A7. Sent wastes to WHs.

Not

11-2:
4-1
BLE

④ MW $NaNO_3$ - 4c's AT.
⑤ Continued evaporating and patrol.
⑥ Run Status: PE - PE-1 2700c's AT.
RC-300 tanks - Clean
A9 - Met. Rec. Ext. filtering
A17 - Met. Rec. Ext Waste
A1 - Heel dissolving
A5, A6, A11, A4 - MT

Note → Call E. Wyatt after 1st ~~Metathesis~~ water wash after Metathesis goes thru filter.

11-22-53 1. SAMPLED MH#149 AT 4:30 PM 9,711 C/m/mL.
4-12 2. EVAPORATING AT 35# S.P. AND 36" L.L. ~350 G/P/H
BLEVINS. 3. CONTD. PATROL DUTIES.
4. RALA STATUS.

A1 - HEEL DISSOLVING. PE - PE-1 2700 C's AT
A6, A11 - MT. RC-300 TANKS - CLEAN.
A9 - LAST 33# H_2O EXT. WASH FILTERING TO A17 VIA PF2.
A17 - PART OF EXT. FILTERED WASTE
A8 - PART OF EXT. FILTERED WASTE WHICH WAS JETTED FROM A17 BECAUSE OF VOLUME IN A17.
P. FILTERS - PF1 BACKWASHED WITH H_2O PF2 - REC. EXT.
A5 - 1 BATCH OF Na_2CO_3 FOR RECOVERY EXTRACTION NEUT.
M1 - HEEL OF Na_2CO_3 - SPARGING AND SHOULD BE COMBINED WITH Na_2CO_3 IN A5.
T2 - K_2CO_3 HEATING FOR METATHESIS.

11-23-53 ① Drained filter boxes
12-8 ② started new run at evaporator.
Lampton ③ Continued with patrol work.
④ Brought pile units to bldg. 3038.
⑤ Changed the water in Evaporator cell.
⑥ Bala status:

A8 Rec. Extract waste — 1160.5 cs A.T.
8WC Res — sampled.
A1 — heel dissolving.
A5 — Na_2CO_3 and A8 Rec Extract waste.
A11, A6 — MT. M1 — Heel Na_2CO_3
A8 — 8WC + 18L HNO_3.
A9 — 2nd Metathesis
P.E. — ~~R~~ Product.

⑦ In filtering 1st Metathesis used both filters would not filter on PF1 and very little on PF-2 Put ½ of K_2CO_3 back thru each filter for second Metathesis also ½ the H_2C. Digesting in A4 at shift change.

11-23
A-1
BLEV

11/23/53 ① FI off gas drainage pit was full of water.
8-4 Repaired sump pump and thoroughly
Schaich drained off gas system. Loaded 6 FT slugs and started dissolving.
② Continued evaporating.
③ Sampled MH 25, 14, 3500, + one L.L. Results in tank farm log.
④ MH 22 sampler back in operation.

11-24
12-
Lam

⑤ Run status: Feed Tank - FTP going thru col.
A3 - Versene Feed
A1 - Heel Dissolving
A11 - Sewers - 3600 cc A.T.
A4 - Evap & MT
A12, A6, A5 - MT

⑥ Lagoon #1 11 turns #10, #2 - 246

11-23-53 1. Sampled MH #149 at 8:45 PM 1467 c/m/ml.
4-12 C.T. Special at 4:10 PM 76 c/m/ml.
Blevins. 2. Cont'd. with Patrol Duties.
3. Started a new run at the evaporator.
4. FTP sample results 312 Cs A.T.
FT Ph " " 1175 A.T.
5. Boiled the P.E. down to 3.5 liters using Sp Gr of 1.36 then took 4 samples of 6 squirts each for Frank Williams. Delivered to 3038 and stored behind the barricade.
6. Started emptying tanks as per Instruction Sheet which is in 3026 Bldg.
7. Started H_2O running into the valve pit at S.W. Corner of 3026 C. Bldg. This will probably raise the activity thru the D.E.
8. Sampled the A-PF Rinse.
9. Cont'd. with I^{131} Dissolving.

11-24-53 ① Washed down the collrell precipitator.
12-8 ② Checked the FT dissolving.
Lampton ③ Brought a sulfur can to bldg. 3032

(5) stored vac. cleaner and work bench.
(6) Have 4 cases H_2SO_4 but no 70% HNO_3 at "D" Bldg. (Mistake ??)
(7) Loaded the following slugs for Dummy Run:

12 - 4" "W" slugs
15 - 8" "W" "
104 - 4" "X" "
} Cold

26 - 4" "X" Hot

(8) Finished FI scrubber stills and sampled F-1. Washed out tanks, added scrubber, and prepared carrier.
(9) Scrubbed and smeared 2nd level. Several hot smears. Top of cubicle, hand rail all around 3rd level, and floor still hot from the sink around to A8 sample blister.
(10) Took up E-1 extraction + started reextraction E-2 cooling at shift change
(11) Relamped outside of "C" Bldg.
(12) The "X" slug charging machine is on 1st level. It has not been checked or washed off.
(13) Dummy Run status: A1 - 1st Coating Removal cooling at shift change.
T-9 - 440# HNO_3 solution. Needs 220# H_2O to make 660# 6%. $Hg(NO_3)_2$ in 4 liter beaker.

1-6-54 (1) Took up P^{32} extraction from E-2, sampled, and
12-8 started reextraction.
Lampton (2) Loaded 8 X slugs for FI dissolving, made coating removal and started dissolving

③ Cleaned up hot spots on 2nd level 3026 D. on guard rail and floor. Resmeared and cleaned up again.

④ Cleaned slug charger and stored over north hot lab

⑤ High 3AM D Box — 306 ci. Sampled M.H. #25 — 32ci M.H. #3500 — 101 ci. MH #149 — 2120 and Old DB — 321 ci

⑥ Continued evaporating and patrol.

⑦ Dummy Run Status:

A1 — Finishing H2O wash on 1st bonding removal

T8 & T9 — 460 lbs. 50% NaOH need 230 lbs more to make 1150 lbs.

sampled — 1c in lab.

1-6-54 F-4 R.L.N.

1. Sample in the lab ON M.H 149 11:00 AM D.B. 320 ci
2. millwrights & lead burners started repair Cubicle 300 sample cummiens.
3. Shut down the evap. for 1 hr. to repair steam leak.
4. Finished F.I Run in Room-10 and delivered Conc. with the dissolving.
5. Insts repaired A-5 Ringbalance Inst. and Started Checking and repair of the other Cells Insts
6. Millwrights tightened bolts for 4500 cmed electric fan also tightened stud bolts in the dampers.
7. fittems repaired a section of pipe in the M-7 to M-10 transfer line

8. Added Resin to the 300 cubicle column
9. Weighed out the filter aid and spread out some more to dry.
10. Dummy Run Status
A-1 Batch A- dissolving
N-1 Batch Na_2CO_3
All others MT except weigh tank on 3rd level 130# of dilution water for A-1
11. Sample results for the 20% HNO_3 Rinse through A-1 had 659 gms. total.
12. The Concrete for W-6 to 12500N Pump base has been poured.

1/6/54 ① Instruments repaired AS chart motor.
4-12 ② Sampled M.H.s. Results: 3500 - 0 cb/min
Schoich #25 - 13 O.D.B. - 202, 150 - 198 cb/min
③ Continued evaporating & patrol. Lowered Ev. L.L. to 30" and raised press.
④ Finished FI sparging stills and all cuts in Rm 10. Sampled and dropped scrubber. 1st scrubber still ready to heat.
⑤ Took up carrier free P^{32} run and sampled.
⑥ P^{32} run just about boiled down in Ev-2.
⑦ Sampled MH-149 at 11 PM.
⑧ H.P. smeared vise stand. Counts up to 475.
⑨ IMA - 52.4 c's A.T.
⑩ Crud filtered Batch A without filter aid at ~3 gal/min. Used 10" vacuum by cracking A17 solution addition funnel valve.
⑪ Run Status: A1 - Batch B dissolving

A9 - Batch A extraction started.
A2 - Na_2CO_3
A11, A17, A8, A6 - MT
CF-1 - Not cleaned.

1-7-~~59~~ 12-8 Lampton
① Finished F1 scrubber stills, boiled down and sampled F-1 — read 7 R/hr.
② Continued with P^{32} run. Product is ready to boil down in gold evaporator.
③ Continued evaporating and patrol.
④ Sample of MH 149 in lab.
⑤ Dummy Run status: A1 — Batch C dissolving.
A5 — 8WMA neut.
A6, A8, A17, A11 — MT.
CF-1 — Clean
A9 — Batch B extraction
⑥ 1MB — 52.9 curies
8WMA — 0.36 curies.
⑦ The ~~59~~ Sp G. instrument on A9 and A8 seems to be off.

1-7-~~59~~ 8-9 K.L.N.
1- Took up P^{32} Run and Sampled 1200 MR/HR
2. Finished F1 Run in Room 10 and delivered loaded 8 Slugs and started dissolving.
3- Removed lead brick from over Valve Pit to check for leaks, 3016-C Pit found one small leak at the flange which was tightened and the flanges are being covered with G.K Compound.
4. Millwrights continued work on 300 Cubicle

sample carriers one has been completed.
5- Maint Replaced belts on Iso. area fan.
6 Inst. Continued work on Cell A Instruments.
7- Dummy Run status.
A-1 Batch D Dissolving.
A-5 Neutralized Batch B
A-6 " " A
A-9 Batch C extraction.
8 WMB results 0.6 c's
1 MC " 32.6 c's
8. Sample in the lab on manholes 25 and 149
9- Brought some cell A sample cones from Glass shop to 3026-D.

1/7/54 ① Washed out valve pit west of "C" Bldg. for
4-12 3 hours started at 7:30 P.M. Sampled MH-149 at 11 PM.
Schaich ② Checked FI dissolving.
③ Helped Ulrich jet some solution at 6:30 P.M.
④ Continued evaporating and patrol.
⑤ 7 PM D.B. - 339 c's. Sampled M.H.s but didn't get them in until 11 PM.
⑥ Finished Resin Titration and sampled. Resin Vol - 6.1 liters. Regeneration in process at shift change.
⑦ 300 A sampler would not operate in Iso position. Solution ended up in sampler foot.
⑧ Feed tank to Col. valve was leaking thru during resin titration. Washed it thru once but still leaks.
⑨ Pile Bldg. regenerated tonight but nothing

showed up in WL tank. R. Hulen says it went back into their canal. M.H.L.L showed a drop at ~8 PM but no rise.

(10) Run status: A-1 - Batch D dissolving
A5 - Neut Batch C
PF-1 - Prod.
CF. - clean.

1-8-54 (1) Finished resin regeneration.
12-8 (2) Washed through column twice until nothing
Lampton went into feed tank.
(3) Checked FI dissolving.
(4) Washed down cottrell precipitator
(5) Continued evaporating and patrol
(6) The north still in 3026 D bldg was 1/4 full at 12:00 M. It is now 1/2 full.
(7) Dummy run status:
A1, A17, A11, 1 — MT.
A5 — Batch carbonate.
A6 — neut Batch C
A8 — 8WMD — sampled.
A9 — MT
PF-1 — product
CF — clean.
(8) Sample results: 8WMC — 3.7 cu ST.
1MD — 24.79 cu ST.
(9) Filtration rate CF-2 — 9 gal/min
" " PF-1 — 2 gal/min.

1-8-54 1. Millwright finished with repair of 300 Cubicle
R.L.N. Carriers
4-4 2. Maint tightened belts on Iso. Area fan.
3. Lead burners finished covering Pit West of 3026 C Bldg.
4. Rala Dummy Run status
A-1 MT A-11 MT
A-5 MT A-17 Part of 8WCH
A-8 Part of [redacted] 8WC
A-9 Last Water Wash filtering to A-17
5. Started up the South Still in 3026 D.
6. Re-tightened the disconnects for Crud & Process filters.
7. had the Air filter on Pick-up truck Cleaned
8. Gave Crud filter #2 another backwashing.
9. Official results for 8WMC is .26 C's and 8WMD is .33 curies.
10. Maint repaired steam trace line at Carbonate make up tank drain line, repaired the brace under the Ws to Feed tank jet line, put a new window ~~bet~~ in make up room 3026 bldg + repaired broken steam trap behind H10 tank 3026D bldg.

1/8/54 ① During the sparging & circulating of F.T.P
4-12 sample, solution backed into sampler funnel
Sahaich and contaminated funnel rack up to 10R. Washed out funnel and rack. 200mr over F.T. funnel.
② Helped Ulrich jet some solution.
③ Continued evaporating & patrol.
④ Small truck is leaking gas. Probably

the flexible line from the fuel pump.

(5) D.R. Results: FTF - 10 g/s S.T.
8WCW - 0.8 c's "
FTpH - 27.5 " "
A9 Rinse - 5.7 " "

(6) Finished 2nd FI scrubber still. 3rd Sc. still ready to heat up at shift change.

(7) Run status: 9MHNO3 running thru Col.
H tank - Prod.
W " - HCl E. sampled
A8 - R.C. wastes "
A9 - A9 Rinse "
F.T. - F.T. Rinse "
A11 - 8WCW "
A6 - Neut Batches C & D.

1-9-54 1. Followed instructions left by Schaich and also
12-8 Run book, Took Samples P.E.1 & m.w. $NaNO_3$
T.J.O. 2. Boiled sol. in P.E. down to @ 6.4", left water on Jacket.
3. A-8 contains @ 22 liters of waste from 300 Cubicle, Did Not disturb Feed Tank., A9 & A11 have had a 10 gal. Rinse.
4. Cleaned all Cell "A" Carriers & stored,
5. Wayne Phillips ran scrubber still & sampled F-1.

1-9-54 ~~Finished 13' Run #42 [illegible]~~
8-4 Ran Room 10 had trouble getting
R.O. product from sterlizer to storage pot.

1-9-
4-
R.O.+
1-11-
12-
R.L
1-1
8-
Bl

1-9-54 Delivered I^{131} # 427 & packing and sampled
4-12 product.
R.D. + H.B.

1-11-54 1- Dummy Run still in P.E. Tank, Sample results
12-8 P.E. #1 95 c's A-8 Res. Cubicle 7.27 c's
R.L.N. HCl E 0.65 " A 9 Rinse 5.7 c's
M.W. $NaNO_3$ 3.9 c's Feed Tank Rinse 0.023

2- Started a Pre-run Check of Cell A and Cubicle equipment

3- Continued evaporating and Patrol Work, Changed the Water on Evap. Cell floor.

4- had HP Check the Ground around the W-1 & 2 devinsion box and the Route the overflow Water ran, reading 1 HR to 20 MR/HR

5- Cleaned the tools that were in Decon. room and Stored, the valvostatic in the S.S. drum is ready to be checked by HP for Salvage.

6- Washed out the F.I. tanks, added new scrubber soln. made up coating removal and took Slug Changes to the Pile.

7- F.I. Product results Run # 426 6570 MC.S.T. Max # 427 7355 MC.S.T.

8- Made up 1.0 M HCL 1.033 20% $Pb(NO_3)_2$ 20.2% 1.5 M NaOH is high on first sample 40% K_2CO_3 40.2%

9- brought down the Pile units.

1-11-54 1. Put Soln. Containing a total of 188 gms of U.
8-4 into W7 — G. Cathers Chem Tech.
Blevins. 2. I^{131} Loaded 8 Slugs and started Diss-
-olving

3. BOUGHT PHOSPHORUS ACID FOR I^{131} AND BOUGHT SUPPLIES FOR THE EVAP.
4. HAD THE PICKUP TRUCK SERVICED AND FUEL PUMP ~~CARBURETOR~~ REBUILT.
5. GATHERED GLOVES FOR DECONTAMINATION.
6. LAGOON READINGS NEW - 3.20 OLD - 11 TURNS TO 10
7. BOILED DOWN THE PRODUCT, IN PRODUCT EVAP. TO ~450ML AND ADDED H_2O TO GIVE A VOL. OF 1.0 LITER THEN TOOK SAMPLES AND GAVE TO L. F. WILLIAMS.
8. TOOK A DRUM OF RESIN FROM BLDG. 3034 TO D. BLDG.
9. PAINTERS PAINTED NEW WOODWORK IN D. BLDG.
10. TOOK FILTER AID FROM 3032 TO D. BLDG. & SPREAD OUT TO DRY — PUT THE CLASSIFIED FILTER AID, WHICH WAS WEIGHED OUT, INTO PLASTIC BAG.
11. PUT ~5.0 GALS H_2O INTO BLOW TANK, BACKWASHED P.F.1 TO A4 THEN SENT TO A17 VIA BYPASS THEN REPEATED WASH GOING THRU PF2. 1-12 12- R.L.
12. MADE UP Na. NITRATE SAMPLE IN LAB. BOTTED DOWN 1.5 M NaOH - NOW O.K.
13. LEAD BURNERS FILLED IN HOLES IN 3RD LEVEL PAD.
14. HIGH D.B. SAMPLES ARE RESULT OF RIMSHAW JETTING WASHES INTO MH52 FROM EVERGREEN. HE PROMISED TO CUT OFF THE JET AT 3:00 PM.

1-11-54 ① Checked FI dissolving.
4-12 ② Washed resin from 300 cubicle To W16.
Lampton ③ Drained 300 Feed Tank and washed out.
④ Decontaminated A cell and 300 cubicle samplers and stored.
⑤ Removed hot boards from carboys on the

east platform of 3026D.

⑤ Cleaned up vise and had it smeared. The 3 valves by the vise have been smeared the rest of fittings for salvage are in the decant. barrel.

⑥ Started resin regeneration. Finished HCl, H_2O wash on 2nd cycle at shift change.

⑦ Continued with pre run check.

⑧ $NaNO_3$ and 1.5 NaOH OK.

⑨ Continued evaporating and patrol.

⑩ Rimshaws men are jetting W19+20 valve pit water to Manhole 52.

1-12-54 12-8 R.L.N.

1- Ran a Ba PPt. Test on New P.E. tank filter using 10.0 GMS of $Ba(NO_3)_2$ dissolved in water and precipitated with fuming nitric, didn't notice any PPt. in the filtrate, sample in 3038 Lab.

2- Continued with F.I. dissolving.

3- Washed down Cottrell Precipitator.

4- Resin regeneration is Ready for 3 M $NaNO_3$ Step # 5 Cycle # 2

5- brought down a Sulfur Can.

6- The Pipe vise in 3026-D is smearing less 200 C/min. the valves and other things are still hot, sparging in versene in Decon. room.

7- Sample in the lab on 0.5 M Na Acetate and the 40 % K_2CO_3 that is in the Jug ~ 13 liters.

8- the Jet from W-19 Pit to M.H. # 52 is still on

9- Inst's repaired Brown Inst. at the evaporator it was draging the points across the chart.

1-12-54 (1) .5M Na acetate is O.K. Butted down and
8-4 sampled 40% K_2CO_3. It is O.K.
Schaich (2) Millwrights replaced belt on 75 H.P.
motor. Ran large turbine 4 hours.
(3) Utility men lagged H.P. steam line on PR7
(4) Ran 5 - 4 gal washes thru each filter.
(5) 2nd level hoist in 3026-D is kaput.
(6) Continued evaporating
(7) Sent large truck to garage to replace
clutch.
(8) Ta filter test results: < 0.1 mg/ml of dead Ba.
or < 0.098 gms Ba total loss out of 10.0 gms. $Ba(NO_3)_2$
Another test showed the above results high by
a factor of 10.
(9) Repaired "T" water valve handle to large
steam turbine.
(10) Water line to WC-13 froze up. Maint. repaired
but still could not get pump to pick up.
(11) Sent A cell flowsheet to shop to have
enclosed in plexiglass.
(12) Continued Resin Regeneration. Stopped
at dist. H_2O cycle.
(13) Continued pre-run check. M.W. sampler
would not operate.
(14) Finished FE sparging stills, dropped
scrubber, and O cuts to go to Rm 10. Washed
out dissolver and started HNO_3 wash
cooking. Prepared carrier to go to Pite.
(15) Replaced filter between sterilizer and

1-1
9-
La
1-13
12
R.

product pot.

(16) Boiled D.R. product down to 500 ml, added 5 liters fuming HNO_3, filtered, took up in 750 ml H_2O, and took 4 samples for F. Williams. Jetted P.E. to M.W. to A-1 but no wash has gone thru. ± 2hr.

(17) D-2 E-1 off at 8PM + E-2 at 12PM Trying new extraction time.

(18) 3.0M $NaNO_3$ + 3.5M HCl sparging but not sampled.

1-12-54 ① Took up P^{32} extraction at E-1. Started
4-12 cooling at 3:15 PM.
Lampton ② Finished FI scrubber stills. Boiling down in Rm. 10 at shift change.
③ Loaded 8X slugs for FI, made coating removal and started dissolving.
④ Took dip samples DB and pond samplers are frozen.
⑤ Continued evaporating and patrol work.

1-13-54 1- Took up extraction from E-2 and boiled down
12-8 E-1 extract had 2999 MC S.T. E-2 2518
R.L.N. 2. Finished boiling F.I. in room-10 took a 200 ML sample from the evaporator and brought to Packing, it is in Product Carrier tagged, sampled F-1 and continued dissolving.
3. The Prime Water for MC-13 has a broken valve stem
4. butted down 3.0M $NaNO_3$ and re-sampled

INSTS. TO REPAIR THE WET BULB ROTOMETER VALVE. IT IS WORKING O.K. NOW.

6. FINISHED I^{131} AND DELIVERED TO PACKING.

7. RAN A CHECK ON 300 SAMPLERS COULD ONLY GET A SAMPLE FROM THE ISO. AND M.Waste. TANKS OCCASIONALLY. THE P.E. AND F.T. SAMPLERS WORKED O.K.

8. SAMPLED THE FOLLOWING MANHOLES

25 — 51 c/m/mL EAST OF 3500 — 1201 c/m/mL

149 — 56 " OLD D.B — 71 "

9. THE 3.M $NaNO_3$ IS O.K. 3.04 M.

10. TOOK A SAMPLE OF WC-5 FOR DON OVERHOLT.

11. STARTED A NEW EVAPORATOR RUN.

12. DRAINED A16 OFF GAS SYSTEM BY CLOSING THE MANIFOLD VALVE AND BLOWING POT.

13. THE I^{131} SLUG CHARGER IS LOADED WITH 1 HANFORD SLUG AND IS ON THE BIG TRUCK ALONG WITH THE RALA SLUG CHARGER

1/15/54 7-12 Lampton

① Made up coating removal sampling equipment in front of A1 sampler.

② Something is going into the following tanks. WC-1 could not find, W12 — Rimshaws bldg. from rain, W18 — the sump pump behind 3026 C. WC9 — The sump pump is still going.

③ On patrol at the 4500 oxygen cylinder one of the pig tails is leaking on the left manifold.

④ Loaded one Hanford slug for F.I. Had shute slug jam but was able to clear. It is in dissolver minus basket and string.

RUN 55

⑤ Loaded 7 loads or 102 slugs for Rala.
⑥ Continued evaporating.

1-16-54 1- Loaded the remainder of slugs 197 total
12-8 and finished first coating removal, trying
R.L.N. to get a 3 gal sample from A-1 at 8:00 A.M.
the coating removal was rough got 10"+ press-
on the dissolver for a few seconds, lost about
1" of solution out of A-1 but no air count
was noticed.

2- Washed out the F.I. tanks + Room-10 and started
coating removals second one in progress at 8:00 A.M.

3- Washed and scrubbed the slug charger and
slug knocker three times, the charger reads
80 MR/HR the knocker 600 MR it is in versene
in decon. room.

4- Manhole results at 5:00 AM # 25 = 23 OPR. = 67
3500 = 1404 199 = 4 C.T. Spec. = 15

1/16/54 ① Found H_2O running into hot sink Bldg 3030.
8-4 ② Found 10 bottles of 70% HNO_3 at 4500 and
Schaich delivered to FI cell. There are 3 bottles at 3550.
③ Instruments cleaned out A4 manometer.
④ Removed approx. 3 gals. of solution from coating removal and stored in dec. rm.
⑤ Started FI dissolving at 10 A.M. Made up Rm 10 solutions.
⑥ Electrician repaired tank farm light control.
⑦ Found water running into hot sink

corridor "D" - 3rd lab south. (D-15?)

(8) Sampled MH.s 25 - 15
3500 - 1190
149 - 74
150 - 1
O.D.B. - 29

Dip 14 - 87
4500 - 16
185 - 6
186 - 40

(9) Continued evaporating + patrol.

(10) Run status: A1 - Ready for 50% NaOH
T8 - T9 - 1100# 50% NaOH
M4 - One batch NaOH
M10 - 4% NaOH

(11) Checked 3550 Bldg for leak into W12 but it stopped.

1/16/59 (1) Checked FI dissolving.
4-12 (2) Call Met. Rec. and instructed them to
Lampton stop sending caustic to W5 tank until we called for it.

(3) Continued evaporating. Cut back evaporation rate at start of D bldg. dissolving.

(4) Continued patrol. The manometer (Hg) for the N_2 cylinders is reading 3.8". This is higher than instructions give. Ed King said it is a closed system and would not hurt any thing.

(5) There is a slight leak into W12 tank. Made a hot sink check in 3550 bldg. Could not find any thing going. Leak started at 3:30 PM.

(6) The slug knocker is down to 100 mr/hr.

⑦ Rala status: A1 — Batch A diss.
M10 — 44" 9% NaOH
M1 — Batch NaOH

⑧ Sample results C1 — 0.38 ~~slugs~~. slugs.

1-17-53. 12-8 Blevins.

1. I 131. DISSOLVER IS READY FOR 4th SPARGING. 3rd STILL IS REACTING, ~4 CUTS TO GO TO RM10, BOILING DOWN IN RM10.

2. CF1 PLUGGED AT START OF FILTRATION ~27 GALS. FILTERED IN 3 hrs BY BLOWING BACK FREQUENTLY WE TRAPPED THE CRUD ON CF1 AND FINISHED FILTERING THRU CF2, WHICH FILTERED O.K. UNTIL LAST 2 GALS. PUT HALF OF THE 15% HNO_3 AND H_2O WASHES THRU EACH FILTER.

3. RALA STATUS. 1MA ~~11,007~~ 10,926 CURIES - ~~18.46~~ 20.82 SLUGS.
A1 — BATCH B DISSOLVED AND SAMPLED.
A17 — REC. FILTERED BATCH A.
A9 — BATCH A FILTERING TO A17.
CF1 - BACKWASHED CF2 - READY FOR BACKWASH.
PF1 - CLEAN PF2 - REC - BATCH A.
M1 — 1 BATCH Na_2CO_3 FOR A5.
T9 - 390# HNO_3 M10 - 80" OF 4% NaOH.

4. THE BATTERY WENT DEAD ON THE PICKUP TRUCK HAD TO PUSH IT TO GET IT STARTED.

1-17-54 8-4 ① Finished FI sparging stills, boiled down and sampled F-1 for sparger stills. Sampled schnick scrubber but did not drop.
② Repaired stopcock to Rm 10 vac pot.

③ Sent 14 liters UNH to Pressley followed by 4 liter water wash.

④ Instruments repaired AS chart motor. Gears are shot.

⑤ Rala Results: 1MB - 10,900 cts S.T 20.8 slugs
1MC - 10,650 " "
8WMA - 51 " "

⑥ Added Resin to column and started titration.

⑦ Continued evaporating & patrol.

⑧ Run status: A6 - Neut Batch A
A1 - Batch D dissolving
A11 - Batch C
A8 - 8WMB
PF-2 - Prod.
C.F. - clean
M1 - NaOH
A17 - MT

Note Do not start batch E dissolving. Leave jacket water on A-1 and small flow thru A4 scrubber.

1-17-54 ① Continued evaporating and patrol
9-12 ② Finished resin titration and regenerated
Lampton resin. Had a small amount back-up in feed Tank. Add H_2O to F.T. and sucked column dry also resin addition funnel. Backwashed and Tested - OK now.

② Washed down cottrell after batch D dissolving.

③ Rala sample results: 1WD — 10,122 curies.
8WMB — 51.8 curies.
8WMC — in lab - 58 c

④ Rala status:
A1 — undissolved slugs
cooling H₂O on jacket A9 on.
A5 — Batch Carbonate.
A17, A6 — MT
A8 — 8WMC
A9 — Batch D
Iso tank — Resin Irrivation
MW — Resin regeneration.

1-18-53 1. DRAINED THE FILTER BOXES.
12-8 2. CONTD. WITH PATROL & EVAPORATION, DRAINED
Blevins . AND REFILLED THE EVAP. SUMP & FLOOR.
3. BROUGHT THE PILE UNIT CASKET TO 3038.
4. TURNED JACKET H_2O ON TO A1 AND SMALL FLOW THRU A4 ROTOMETER.
5. A1 — UNDISSOLVED SLUGS.
A5 — MT
A6 — 8WMC NEUTRALIZED.
A8 — 8WMD SAMPLED 80.0Z CURIES.
A9 — PRODUCT 1ST METATHESIS SETTLING COLD UNTIL 7:54AM
A17 — A17 RINSE.
A11 — MT.

6. I^{131} — HAVE TAKEN 6 CUTS IN RM 10 SO FAR THERE IS ~ 500 ML IN THE STERILIZER AND IS EVAPORATING AT ∑. CHANGE.

7. DURING THE JETTING OF A8 TO A5 USING BOTH JETS THE PAC. IN A5 WASN'T GOOD ENOUGH TO USE BOTH JETS - SO WE CUT OFF THE A8 TO A5 B JET CAUSING A BACK UP INTO THE JET LINE - THEN WE TURNED ON A SMALL AMT. OF STEAM TO THAT LINE TO DRIVE ACTIVITY BACK INTO THE CELL AND A VALVE (TO THE STEAM GAUGE) BROKE THROWING ACTIVITY OUT INTO THE BLDG.
THE BLDG. HAS BEEN SCRUBBED ALL FLOORS
NO RESULTS BACK YET.

1-18-54 ① Took up FI products. Scrubber is
8-4 12-8 still in Cell.
Schaich ② Continued evaporating. Replaced battery in pick up.
[8-4]
③ All floors, railings, desks, etc were still hot. (up to 125,000 c/s/min) Re-scrubbed 3rd level completely. Ready to smear.
④ Removed hot piping from A6-A5 jets and lagging. Scrubbed all pipes P.B. trough, etc. still spots at PB-1 greater than 10R.
⑤ Maintenance replaced piping at P.B.-1.
⑥ TWCW - 402 c/s F.T.P. - 20,488 c/s S.T.
⑦ Run status: A1 - Slugs
A11 - TWCW A6 - Neut C+D, A4 - R.C. Waste
M.W. - NaOH + H_2O elution.

7:54 AM

1-18-54 1. Rala Status

9-2 R.L.N. [4-12]

1. 9 M HNO_3 Going Through Colun to H tank
2. P.E. Tank first half of Product boiling down
3. Elutie tank the remainder of 9 M HNO_3 to Go Through the Column.
4. A-1 Batch E dissolving
5. All other Cell A tanks are MT
6. FT PH results 12,882 C's
7. A-8 Resin Cubicle waste 195 C's
8. MUNCIE 11 C's

2. Scrubbed second and first level of 3026-D and had the third level smeared it still has spots up to 13,000 counts second level has been smeared
3. Manhole # 22 Sampler motor is out of order
4. Continued evaporating and Patrol.

19

1-18-54 12-8 Blevins. [12-8]

1. Contd. evaporation & Patrol.
2. Searched, without success for a leak into WC13. Found faucet on at hot sink in west end of D. Bldg. Lab.
3. Brought a S. Can to 3032 from the Pile.
4. Rala Status.
   - A1 – Batch F. Dissolving.
   - A5 – 1 Batch Na_2CO_3.
   - A6 – MT
   - A8 – 22 Liters Elution Waste.
   - A9 – MT.
   - A11 – Batch E Filtering to A17.
5. The Rupture Disc. on P.E. Up Jacket is Blown.

6. 1ME RESULTS 6,927 CS. 16.29 SLUGS.

1-19-54 8.4 ① Instruments repaired A5 Sp.G, cleaned out contaminated A4 Diff. manometer, and Schaich #6 chart gears.

② Lead burners shielded PB-1 hot lines.

③ Removed tarp from Prod. truck, added alcohol to drum and filled with H_2O

④ Shutdown 4500 area ventilation fans for 2 hrs.

⑤ Made up the following solutions:

1.0M NaOH
1.5M "
1.0 M HCl
9.0M HNO_3 (19L)
} sampled

3.0M-HNO_3
9.0M-HNO_3
} → sparging

⑥ Run status: Prod. Drying - ≈ 33,000 cls.
A1 - Batch G - dissolving
A9 - Batch F - extraction
A6 - Batch E - Neut.
C.F. - clean
M1 - Na_2CO_3
P.E. - P.E. Rinse

⑦ Samplers sparging in barrel.

⑧ Continued evaporating

⑨ Results: MWFN - 545 cls ST.
P.E.-2 - 35,914 cls "
1ME - 6,919 cls "
1MF - 7300 cls "
P.E. Rinse - ≈ 3200 cls "

1-19-54 1- One of the Clam Shell heaters has burned
4-12 out on the air heater for Charging Head.
R.L.N. 2- Loaded the Product on the truck at 9:00 P.M.
and called the driver, Carrier came out of
Cubicle reading 40 R/HR before the Paper was
removed, Carrier was loaded reading 30 MR
at the top 1500 MR at the Ring, Smeared
up to 4 MR/HR 33,265 C's Shipped, truck
left the plant at 11:20 P.M.
3. The first level of 3026-D has been Scrubbed
but Not Smeared Some Spots Were reading up
to 500 MR before Scrubbing.
4- Rd La run status run 55A
A-1 Slugs ready to start dissolving
A-5 Batch Na_2CO_3
A-6 Neutralized Batch E 305 C's
A-8 BWHF 114 C's ready to Neutralize
A-9 MT
A-11 Batch G ready to Cmud filter 6765 C's
A-17 MT
M-1 Caustic Jetting to M-10 to be diluted
down to 9%
P.E. Rinse in Cubicle Waiting for run 55A
Cmud filters Clean.
5. 9 M HNO_3 12 liters 9.21 M
" " 40 " 55 7.16 M
3 M HNO_3 3.05 M
1 M NaOH 1.0 M
1.5 M NaOH 1.48 M
1.0 M HCl 1.0

6. The Instrument for checking the Rala product would Not work, it was found to have a broken wire and be repaired except for putting back together the parts one on top of cabinet in final level unable to finish this Job.
7. Took extractions up from E-1 + E-2 8 15 PM + 10 30 PM. boiling down in Ev # 1 at Shift Change
8. Continued evaporating and Patrol Work -
9. RE Rinse results 2649 c's

1-20-54 1. Removed the Column Resin.
12-8 2. Bought Ring Balance Charts for PB 1 Instruments
Blevins. 3. P^{32} Boiled Down in Quartz Evap. E1 had 2,926 Mc's E2 had 2,634 mc's. Total 5,560 Mc's
4. Butted Down the two Jugs of 9.0M HNO_3 and 1 Jug of 3.0M HNO_3.
40 Liters 9.0M HNO_3 — 9.06 M
18 " " " " — 9.07 M. Not Labeled.
18 " 3.0 " " — 3.01 M.
Threw out the .05 Na. Acetate Because it had a lot of ppte. Didn't make up Any More
5. Contd. Patrol and Evaporation.
6. Washed Down the Cottrell Before Starting Batch H Dissolving.
7. Rala Run 55A Status.
A1 — Batch H Dissolved Sample at 8:10 AM.
A5 — Batch Na_2CO_3
A6 — MT.
A8 — MT.
A7 — Batch G. Ready to Filter thru PF at 7:57 AM

A11 - MT.
A17 — M.T.
M1 — 1 BATCH NaOH FOR M10.
PE TANK — P.E. RINSE
CRUD FILTERS — CLEAN.

1-20-54 8-4 Schaich

① Scrubbed 2nd & 3rd level and hot spot on 1st level. 1st & 2nd level O.K. except where roped off. 3rd level has been smeared. Railings & P.B.s hot.
② Dumped acids & replenished "D" Bldg supplies.
③ Repaired WC-9 sump pump. Pumping to S.B. at shift change.
④ Sent a hot can of hot mops to P.B. Ovr.
⑤ Cleaned up R.C. carriers, A cell carrier. Crane hook to 150 mr. Carrier adapter and rod have been cleaned but not checked.
⑥ Finished F.I. scrubber stills and sampled. F-1.
⑦ 8WMG - 4 [illegible] S.T.
⑧ WC-1 sump jet is off.
⑨ Run Status: A1 - Batch I dissolving water on jacket.
A5 - Neut Batch G
A9 - Batch H extraction
⑩ Shut down Rala 4 hours due to inversion
⑪ 3m $NaNO_2$ & .5m NaAc sparging

1-20-54 1- Backwashed both crudfilters
4-12 2- " the column again doubling
R.L.N. the times.
3- Cleaned part of the stuff out of Decon room the carrier hooks and slug knocked one still hot, also a couple of wrenches.
4- Measured out the resin into 2 4 liter cylenders on third level 3026-D, the resin addition Procedure is in the front of Batch J book
5- butted up the .5 M Na Acetate and down the 3.0 M $NaNO_3$ both are OK.
6- P32 Run Settling in P-2 til 12:35 A.M.
7- WC-9 tank filled up 200 gallons this shift the valve from sump to the tank is closed tight and the one to S.B. is open, didn't check 3503 Bldg.
8 Rala status
A-1 Batch I ready for A-11
A-5 Neutralized Batch H 50 C's S.T. ready for A-6
A-6 " " " G holding for batch H.
A 3, 11, 9, & 17 MT
M-1 MT M-10 4% caustic.
9- Continued evaporating and Patrol.
10- Scrubbed the railings on second level they have Not been smeared.
11.

1-21-54 1. Searched Bldg. 3503 for leak into WC9 — None.
12-8 2. Contd. evaporating and Patrol.
Blevins 3. The Cottrell Humidity chart wasn't rolling

CORRECTLY – HAD STOPPED SO IT WAS RESET AT 7:00 AM.

4. P^{32} – FINISHED THE RUN AND BOTTLED BUT DIDN'T DELIVER TO PACKING. THE DRAIN VALVE TO S3 HEAD TANK NEEDS A CLAMP TO PREVENT THE VALVE FROM PULLING OUT AND LEAKING — — WHICH HAPPENED FOR A FEW DROPS.

5. SAMPLED MH'S

#25 —	47	C/M/ML	#3500 —	440	C/M/ML
149 —	59	"	OLD D.B. —	37	"
22 —	90	"	WC-9-PIT —	186	"

6. MADE UP 40% K_2Co_3 40.85%. 7.5L IN T2.

7. RALA STATUS 55A.

A1 – 1MJ DISSOLVING

A5 – Na_2Co_3 FOR BATCH I

A6 – MT

A8 – MT

A9 – BATCH I FILTERING TO A17.

A11 – MT.

A17 – RECEIVING BATCH I

1MI HAD 6,152 CS 17.51 SLUGS.

8. CLEANED Pb 7A (NOT 7E) AND PB1. NO SMEARS WERE TAKEN BY H.P. THIS SHIFT.

9.

1-21-59 8-4 Lampton

① Finished FI run in room 10 and left product in sterilizer because of no product carrier.

② Added resin to column and titrated. Regeneration is now in progress. The amount of resin was low. Another sample

of the 3M HNO_3 is in the lab for a check.

③ Panel board # 1, 2, and 7B ready to be smeared. The 2nd + 3rd level hand rail are ready to smear. The 3rd level floor is ready to smear.

④ Took up P^{32} product.

⑤ Continued evaporating at 90°C and 40 lbs.

⑥ Rala status: A1 -- MT
A5 - Batch carbonate.
A6 - neut batch I 8WMI
A11, - A8, - A17 — MT
A9 — Batch J digesting.
Iso tank — resin titration solutions
eluate to H tank — resin regeneration
CF: — clean
PF, -- product
PE tank — PE Rinse.

1-21-54 1- Rala status
4-12 A-1 MT
R.L.N. A-5 Na_2CO_3
A-6 Neutralized batch I
A-8 8WMJ sample in the Lab
A 9 First Metathesis
A-11 & 17 MT
2- PE Rinse Run # 55 has been boiled down to 5" in P.E Tank
3. Finished the resin regeneration and washed

out the feed tank the waste is in the M.W. tank.

4- Electrician repaired the crane in Decon. Bldg.

5- Washed out the loading cubicle with Versene and water reading 20 R/HR at the top and the bottom of lead covers 7 4 R/HR.

6. Stored the slug knockers on third level reading 20-40 MR after wrapping with blotter paper

1-22-54 ① 8WMJ - 48 c's S.T. - Neut. + jetted to W9.
12-8 ② Sprayed Loading cubicle with two tanks Schaich of Versene and hosed down. Reads 1500mr over top with shutter closed and manipulator down. Spots on bottom of lead cover > 10c.
③ Continued evaporating + patrol.
④ Run status: A1, A5, A6, A17 - MT
A11 - 8WCW
A8 - R.C. Waste
A9 - MT
F.T. - Versene ready to pH.
⑤ Cleaned all hot spots in "D" Bldg.

1-22-54 ① Continued evaporating.
8-4 ② Remove FI product from room 10 and took Lampton to packing.
③ Had pickup and ton ½ Trucks gased.
④ The 2nd and 3rd level hand railing has been smeared at 3026 D but no results yet.

⑤ Sample results of Rala:

FTP — 40,682 ci

FT pH — 4291 ci pH-6.2

A4 PF Rinse — 183 ci

A8 Resin Cubicle waste — 35 ci

MW HCl E in -1a5.

⑥ Rala Status:

A11, A1, A5, A6, A8, A9, A17 — M.T.

9M HNO_3 P Elution — Eluate to Hold. (going)

Feed Tank — FT Rinse

PE — 1st ½ of 9M boiling down.

MW — MW HCl E sampled.

⑦ Had a backup in the F Tank sample chest funnel brought it down from 3R/h to 150mr.

1-22-57 1- Cleaned the hot spots on third level and P.B #1 had the area around P.B. 1 resmeared

9-12 R.L.N. 2. Inst's Changed chart on Wet & dry bulb Inst. at the stack.

3- Cleaned all sample carriers

4- Samples in the Lab on Manholes 25, 3500, 25, and old D-B.

5- Rala Status

P.E. Tank filtering Fuming Nitric to M.H.

Feed Tank Rinse in the feed tank

A-8 MH $NaNO_3$ from cubicle

A-5 MW HCl E

6- Continued evaporating and Patrol

1-23-54 ① Sampled PE-2 and put ~ 2 ml in
12-8 Ba product bottle behind barricade. P.E.-2
Schaich analysis showed ~ 4000 c's. Boiled down
PE-2 to 1 liter, added 6 liter fuming
HNO_3, sparged, and filtered. Sampled
PE-2 #2 and MWFN #2 (This includes
MWFN #1) Tagged off P.E. tank valves,
left water on P.E. jacket, shut off
RCOG, and left water on A16.
② Continued evaporating & patrol.
③ Washed out PE-2 and A9 tank.

1-23-54 ① Added 70% HNO_3 + 9M HNO_3 to PE-2
8-4 to make 17 liters of 9M HNO_3. Sampled
Blauer as PE Rinse #1. This is sitting in Prod.
Evap with cooling H_2O jacket on A16 scrubber
water cut back to 25 [illegible], R.C.O.G. off.
A20 condenser off.
② Jetted M.W. E.H. from M.W. → A5 → A9.
Followed by 5 gallon water rinse from M.W.
to A5 to A9. HOLD THIS IN A9
3. Jetted M.W. [illegible] from A5 to W16

1-23/54 ① P.E. Rinse #1 had ~ 30,000 c's of
4-12 product. This rinse was boiled down to 1 liter
Blauer and a fuming HNO_3 precipitation was made on it
[illegible] was processed through the PE-2
② Samples taken were PE-2 #3 + MWFN #3
3. Results PE2 #3 ~ 37,000 MWFN #3 ~ 3450 [illegible]

3. Air condenser cr off, R.C.O.G. is off A16 flow is cut back to 25, water is on Pavd. Evap. jacket, steam as cut off P.B. 7B all valves to and from P.E. tank are tagged out

1-25-54 ① Drain filter boxes.
12-8 ② Washed out FI equipment and to slug
Lampton charger to the pile.
③ Brought pile units to bldg 3038. except for an Iridium source which need another carrier.
④ Finished A cell and C.F. H_2O washes and the hot 20% NaOH wash of CFs. Started H_2O wash after NaOH.
⑤ Added 10% HNO_3 solution to 200 cubicle iso tank and sparged 1 hr. and sampled Result -- 42,000 cs/m/ml. Filled H tank and sampled result in lab.
⑥ Continued evaporating. Special C.T 1:30 AM - 2426 cs/m/ml. 3:50 AM - 627 c/m/ml. SPM DB - 227 c
⑦ Continued patrol work.

1-25-54 1- Old Lagoon 10 turns back to 9 New 5.9'
8-7 2- Ran a filter rate test on both Crud and
R.L.N. Process filters P.F. #1 was slow, backwashed with two Nitric acid washes and followed with water through by-pass to A-M and out.
3- Loaded 6 F.I. Slugs ran two Coating removals and started dissolving.

4- The waste trailer is parked at W-7 Pad and has the valves and top covered with paper the probe lights checked out OK

5- 700 GMS of classified filter aid measured out 2600 ML 2600 ML of Decilate filter aid weighs 1100 GMS.

6- Put 10% HNO_3 acid in P.E. M.W. + F.T. 200 cubicle sparging at shift change.

7- Started WC-1 valve pit jetting to S.R. it is shut off at shift change.

8- Manhole 14 + 139 are back in operation.

1-25-54 4-12 Blevins.

1. Took hot can, paper and a jug of H_2O to the lagoon #2 also put absorbent paper in the cab of the waste truck.

2. The EV to W6 steam blow out line was reading 3700 mr/hr near the steam header in evap. gallery - blew the line out with steam and it came down to 300 mr/hr then put lead over the line

3. Put a 50 gal H_2O rinse in A11 thru CF1 to A17 to A9 thru. PF1 to A17 Filtration check gave 4.16 gal./min thru CF1.
   4.5 " " " PF1.

4. Contd. with 200 cubicle tanks decontamination HNO_3 in iso. tank is ready to sample

5. Finished Versene and Ammonium citrate washes on the gloves. At decon. bldg. sampled both washes + put gloves into the dryer.

6. CONTD. WITH I^{131} DISSOLVING.
7. CONTD. EVAPORATING AND PATROL DUTIES.

1-26-59 ① Washed down cottrell precipitator
12-8 ② Checked FI dissolving
Lampton ③ Loaded waste trailer from W8 tank.
Green light — 2 hrs 35 min Blue — 2 hrs. 43 min.
④ Brought sulfur cam to bldg. 3032
⑤ Continued with evaporating.
⑥ Continued with decontamination of the 200 cubicle. Jetting H2O wash from P.E. tank To M.W. at shift change.

1-26-59 1- P^{32} extractions Cool at E-1 7:00 E-2 9:00 PM
8-4 2- FINISHED F.I Sparging Stills one cut to go to
R.L.N. room-10 sanded and dropped Scrubber-
3- dumped waste from trailer into lagoon # 2 and brought back to M-7 Pad.
4- Transfered the Coating removal Solution from the Jug IN decon room to the pot it is to be shipped in, it is showing <100 counts there is some crap IN the Jug IN decon. room With Fuming Nitric reading 4 R/HR.
5 9500 area Cell ventilation fan was shut down for 2 hrs. for repairs at 9500 area.
6. Ran the large steam turbine and the hot air turbine 4 hrs. Millwrights Changing grease IN the bearings of the hot air Electric fan down at 3:30 P.M.
7- Turned on Sprayers ON M-3 & M-9 tank.

8- Reading inside the 200 Cubicle over the feed tank [redacted] 32 RHR

1-26-54 1. P^{32} took up extractions from E1 and E2
4-12 Boiling down in Quartz evap. at S. Chance.
Blevins. 2. West bearing on the electric off gas turbine got hot and we switched to the steam off gas turbine at 9:40PM.
3. Filled the waste trailer green light on after 2 hrs 44 min. Blue — 2 hrs. 52 min.
4. Contd. evap. and patrol duties.
5. Finished the glove washes and sampled.
6. Finished scrubber stills and boil down of the I[131] transfered to flask & sampled FL — 5,000 mm/hr,
7. Contd. decontamination of 200 cubicle tanks. Status at S-Chance is written out and the paper is on desk in front of 7E panel board.

1-27-54 ① Washed out FL cell and took FL
12-8 slug charger to pile.
Lampton ② Finished Boiling down P^{32} extractions.
③ Continued evaporating and patrol
④ Continued with decontamination of RC 200 cubicle. Moved solutions around but was unable to sample. Attempted to sample M.W. Tank and was unable to pull the sample sabe out of the chest. Could not find what is making it

hung up-

(5) Received Rala product carrier at 12:00 PM. Decontaminated and cocooned the carrier Loaded cone in the loading cubicle. It is now under charging head. Boiling down in PE tank at shift change.

1-27-54 1- P32 run is being taken up out of EV #1 at 4:00 PM

2- finished F.F. run in room-10, loaded 6 slugs ran two coating removal and started dissolving

3- finished boiling down Run # 55A, transfered to cone, dried and loaded on the truck but can't get the water to flow through the canniew for cooling.

4- Unloaded the waste trailer into lagoon # 2 and brought back to M-1 Pad.

5- Millwright repaired Electric Off Gas fan and started it back up.

6- Sampled W-16 tank and delivered sample to lab to be run for Ra La.

7- Ra La Product has ~27,000 c's the most it could be checked.

8- W16 sample — 5,229 c's S.T.

1-27-54 4-12 Blevins. 1. UNPLUGGED THE RALA PRODUCT CARRIER, WATER LINE AND ADJUSTED FLOW AT 30 ML/MIN. TRUCK LEFT AT 5:00 P.M. GAVE A GRADUATE TO THE DRIVER.

2. P32 GOING FROM 52 TO EV 2 AND BOILING