4055

BY

[redacted]

53739
Dr. Wall
Prior 53140

"little atom bombs" p.201

Boil out active gases before jetting, (p67) condenser water off.

"This document consists of 201 pages.
No. 1 of 1 copies, Series A"

[redacted]

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NOTEBOOK NO.: CL-1202

ISSUED TO: E. J. Witkowski

ISSUED BY: Arietta Wyrick

DATE: 4-2-46

cut flows in scrubbers to minimize samples p14

706-D

Run 10: see pages 12-43

Run 11: see pages 62-88

Run 12: see pages 107-136

Run 13: see pages 196-200 run not completed

[redacted]

wind from right direction during decantation. (SE) p35. NW wind - watch air act! p.111-112.

★ water in scrubber p77 rate of condenser in AY: p111. (100 on rotometer)

General Groves p.88-90

[redacted]

[redacted]

BY T-280

CL-1202

Classification Cancelled

~~Or Changed To~~

By Authority Of DOC

By EEB Date SEP 22 1971

CLASSIFICATION CANCELLED

Ted Ours 7-8-96

ADD signature Date

Single rereview of CCRP-declassified documents was authorized by DOE Office of Declassification memo of August 22, 1994.

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

David R Hamrin 7/8/96

Technical Information Officer Date

ORNL Site

4/2/46 Program For Tonight

1. Insert three Tygon lines into B3 and tape up ~~[illegible]~~ to prevent flattening.

2. Continue locating leaks in transfer lines and record so they can be fixed on day shift.

12-8

12-8 3. Clean up cell B

4-12 Item No. 1 has been taken care of by means of full exposure of everyone available. Item No 3 received some attention. JEK

4-3-46

Testing leaks.

Cleaning up cell.

2

4/3/46 Testing Program For Tonight

1. Cell A

1. Check vacuum on all cell A ✓

2. Check that all Ring Balances manometers are operating. ✓

3. Check jet A9 - A80A transfer rate — use 900 lb water.

4. Check that all jets in cell A are working and get maintenance men to unplug any jets that are plugged at panel board. Do not raise jets from A9 to ✓

Cell B

✓ Cell B

1. Check that all funnels in cell B are clean and run water with hose to each one to see that there are no leaks in funnel lines. ✓

2. Turn on water to all vessel jackets and condensers. Check for large leaks only. ✓

3. Check all cell B jets and record results on enclosed sheet ✓

→ Record all other results in [illegible] book

12-8
4/4/

Vacuum on all Cell A tanks except A8. This could not be checked since A8 vacuum manometer is plugged.
Jets A1 – A9B and A6 – A6 plugged.
All others seem to be OK.
All Ring Balances & Manometers except A8 vac and LL manometers and A9 liquid level are Ok, A9 LL registers 5" when empty.
Nine hundred pounds of water was added to A9 and jetted to A8 by A9 – A8 DA (manometer reading 67.5")
Flow rate – 18 min for 900 lbs.
Water was then jetted from A8 to A5.

12-8
4/4/46

CELL B

(1) Funnel line to B3 leaks directly over B3 tank.
Paint scale & glass removed from funnels.
No other leaks found.

(2) No leaks in jackets or condensers found.

next

Continued

(3) A considerable number of leaks found. Recorded on separate sheet.

Hosed down cell B floor to remove paint scale etc. Each man received full exposure so work in cell was suspended.

8-4
8-4
SJR + WOS
etc.

Items from 12-8 shift taken are of Pots unplugged + process line leaks repaired.

Bubbler line on M 11 tank unplugged both density + L.L. functioning properly.

A9 LL. + A8 vacuum manometer repaired.

D17 contains 2 liters of 30% HNO_3 (to remove rust spots) sparging at shift change proceed with cell B testing.

~~A5~~ W11 jet on. — Off

U.D. funnel screens installed.

Attempted to unplug A9-A8 DA jet not much luck.

4/4/46 Program for Tonight

1. Jet A9-A8 DA is still partially plugged — (rate 5 gal/min!) Try hooking up air line at strainer and blowing it out with air. Be careful not to get pressure in A9 or A8. Then check jetting rate again.

Checked 4-12

2. Check B12 current with dilute nitric in it to see if electrical connections are ok.

Checked 4-12

3. Check all funnels and funnel lines for leaks again and clean out all crap in the funnels.

OK 12-8

4. Clean out B17 thoroughly, swab out with cheesecloth if necessary. Check B7 and B8 leads in B17 and B12

OK 12-8

5. Check entire B19 setup by lowering carrier into cell and hooking plug and lifting cone into position etc. Put the F.P. viewing funnel in position, it has been repaired but not properly installed

Checked 4-12

6. Clean out crap from B22

Done 4-12

Please record all results

4-6-46 ① Maintenance checked all connections
4-12 etc of jet A9-A8DA for partial
J.E.C. plug - everything wide open. Re-
checked transfer rate - 6 gal/min.
Evidently plugged in cell.

② Dilute HNO_3 to B12 and tested
electrical set-up. Everything
seems to be okeh. With exception
of one connection - no amperage.
③ Observations on B-19 apparatus:

Ⓐ One of the guide rods holder
in chimney out of line making it
impossible to insert both rods
in cell without juggling of carrier.
Ⓑ Cone lifter was impossible
to lift until applied can of oil
at various pts. Okeh now.
Ⓒ Cone heater thermocouple well
still scrapes top of carrier when
swinging in down position. How
about a bushing atop cell.
Ⓓ Carrier "dolly" sluggish
as hell. Cluttered up track partially
accounted for sluggishness, but
wheels seem to slide about as
much as they roll.

12-8
4/5/

(6) Product Inspector Cone oriented, but don't forget the installation of lights.

(7) All other mechanisms seem to be in swell working order.

(4) Cleaned out B22 of paint, glass, dirt, and SOMEONE'S METER BADGE. (Badge is now on B10 ledge - owner may claim same).

MANPOWER MILLIRONTGEN-ED! to ~~PEICES~~ PIECES! ! ! !

(5) B17 still has 2 liters of 20 % HNO_3 sparging - See Page 4.

12-8 4/5/46 (Item 3) Funnels cleaned & checked for leaks. None found.

(4) Heels.

B17 with B7 —— 46 cc
B17 with B7 —— < 5 cc
B17 with B8 —— 0

Heels continued

4/5/
8-

B12 with B8 —— 0
B12 with B7 —— 0

Checked setting on B12 probe:
500 cc —— 1.0 —— OK
1000 —— 1.8 OK
Upper light will not work.

B17 Probe

Attempted to check calibration setting. Found sample holder "frozen". Loosened it but still not in good working condition. Neither light worked.

Did some housekeeping outside Cell B.

Manpower used up so crud in B17 couldn't be cleaned by hand. Flushed it with water and steamed it for about two hours. It now appears to be clean as a whistle. Left several hundred c.c. water in tank. End of hose used is contaminated. Left it in decon room.

4/5/46
8-4

Painted all electrical connections on B12 with glyptol paint after ascertaining that the connections were sound. Painted the shields over the floodlights in the B19 area also.

3/5/46 Program Until Sunday.

done 1. Check operation of B2, B9 and B11, and check lines for leaks.

2. Check jet A9-B26 for operating performance and for leaks. Check lines from B26 to B27 for leaks and from B27 to B12. (B27 Now full)

ok 3. Fill up make-up and storage tanks with reagents in preparation for run.

4. (Take care of housekeeping items on inspection report) and check that cell B is in perfectly clean condition.

4/5/46 4-12 J.E.C.

① Most of shift spent in Tank Farm Area attempting to unplug W11-W-5 jet.

Orchids to Fire Dept., Emergency Maint., and Maint. from Oak Ridge (called in).

② Completed 3rd & 2nd floor housekeeping items.

③ Filled some of the make-up tanks.

4-6-
12-8
WJS

4-6-
(8-4

4-6-
4-4
J.E.C.

4-6-46
12-8
WJS.

First part of shift spent in Tank Farm area unplugging & assembling jet from W 11 - W 5. Jet was removed & line to W 11 & to W 5 flown out with steam. The plug was in the standpipe in W 11. OK now.

Check tank farm log book for maintenance work to be done on day shift.

Attempted to decontaminate floor on N.W. side of cell B next to cubicle. Removed most of the paint & brought down the contamination to almost nil in some spots but a section next to the cubicle floor is still quite hot, 150 mr.

Took care of the rest of the housekeeping items with the exception of 2.

Total manpower 2

4-6-46
(8-4)

All but final clean-up in Cell B has been taken care of. JCK

4-6-46 ① Operations Personnel
4-12
J.E.C. ② Attn. KASKIE: Above you may everything but Cell B Clean-up Complete

12

But item (2) P.10 isn't checked as having been done. Was A9-B26, B26-B27, B27-B12 checked?

Cell B cleared out.

4-7-46 (8-4) JAK

Jet A9 to B-26 is Not in working order. Jet A9 to B1 is in good shape & leaves practically no heel. B26-B27, B27 to B12 were checked. All personnel maybe overexposed due to handling a wrench (obtained from tool chest on 3rd floor) that is reading over 1r. It is on 3rd floor now. It wasn't moved for everyone most likely has their dose for today.

8-4 No

4-7-46 4-12 ML

A1 has first part of coating removal solution.

Did a little more toward filling Reagent tanks.

12 4-8 SJ W

→ When you state have H.P. man check the holes in front + behind "C" bldg several times per shift + rope off if it gets Hot. W11 line in front + off gas line behind
→ have a good chance of getting hot.

4/8/4 8-4

Hot wrench (see above) now in M1.

Check on B12 showed it to be kaput – a connector which was about half eaten away made a loose fit contact with the wire – when painted with ~~[illegible]~~ Glyptal – it was insulated – new connector improvised + installed have powers who be approved ~~[illegible]~~

8-4 pls Note

New stationary funnels for the movable funnels still are not welded in place – SW corner still loose

Voltage seems too low

First loaded slug carrier sitting on the chute, Second one in the canal.

Checking of the Glassware started.

(A) 12-8 4-8-46 SJR WJS

Run 10A dissolving in A1. All other A cell tanks are empty.

First sample taken on W11 for estimation of production of I_2 is in south Cub.

4/8/46 8-4

(B)

Batch A settling in A9 until 8:50 PM.
Batch B dissolved in A-1. Sampled.

Changed NH_3 cylinder

Shift check + shift inventory taken this shift

Maintenance work done in cell B

Poured HNO_3 down A-5 Ring Balance L.L. line. Have not had instr. man recheck it as yet to find out if any good had been done.

4/8/46 Program for Tonight:

1. Please check T8 and T9 scales zero points as soon as each one is emptied. Done

2. Continue taking W11 samples. The volume to be recorded on sample sheets is the difference between the volumes before and after getting.

To cut down the number of samples use very little water through A16 while extractions are settling and cut down on caustic as soon as dissolver solution is being cooled.

Number samples on sample sheets W11-1, W11-2 etc., check where other shift left off.

Done 3. Clean out tools and junk in cell.

started see below 4. Put in ERO to bury old B17 probe which is now in decontamination room.

5. Start dummy run in B12 and electrolyze for 10 hrs. Use following solution:-

started 5P/

850 ml 70% HNO_3
+ 670 ml 20% $Pb(NO_3)_2$ solution
+ sufficient water to make 4 liters solution.

Take a 6P and 13 WPb samples and analyze for lead and iron also take a sample 12P before starting electrolysis and have analyzed for iron.

6. Check new cone adapter on my desk for size etc.

4/8/46 Dummy electrolysis started - run until 3A/ remove
4-12 to B6, sample in B6 etc as above.
M.L.

Probe - (see item 4 above) sitting at burial ground - no hole - 8-4 pls. check.

Status

10-A In A11 settling - awaiting analysis.
10-B in A9 settling Hot till 2 15/A cold till 7 15/A
10-C in A1 - dissolving

(C)

16.
4-9-46
12-8
SOR
WJS

Air count activity rose continually during slug loading. We set up two large fans to try to keep the air counts down.

Air activity inside the building is very high. At 6^30 A.M. H.P. reported readings of 4600 c/m on third level and 5276 c/m on first floor. Direct air monitor on 3rd level is reading only 2000 c/m, however. So, H.P. is checking his readings after cutting sample in three pieces and taking individual counts and adding the total. They found from experience that by taking a reading on the whole paper on which the air sample was collected and then multiplying by three, they got an approximately correct answer as to the counts per minute. At 3400 c/m we are to wear gas masks and at 10,000 c/m bldg should be evacuated.

4-9-
(8-4
JAI

Run Status – A1 – 18 C diluted and sampled – [326 slugs] (#)
dumped in on top of 10 C. After 10 C goes to A9, start coating removal on slugs dumped into A1.

(D) → ∴ on day shift?

A9 – 83.5% sulfuric being added to 10 C prior to digestion and settling

A8 – 5 WMS – sample circulating

Product solution from dummy run is in B6. Pb plate was removed from B12 and put in B3. Samples were taken on both solutions for Pb + Fe analyses.

Air counts are down to ~~1100~~ 1108 c/m. (~~approx~~) on 3rd level and 860 c/m on 1st level. Even though we took slug chute off for only the minimum time necessary, air count climbed steadily, but never got about 3400 c/m. Recheck of high readings reported gave counts of about 3000 c/m.

4-9-46
(8-4)
JCK

Run status - A9 is settling. Decant at 5:20 PM. That is all!

4/9/46 Operating Bulletin

1. Please help up W11 sample record (kept on tank farm sheets)

2. The carboys of H_2SO_4 appear to be OK in strength and color and it appears that the first H_2SO_4 dumped into the tanks may have been put into a heel of water in the tanks thus giving us 83% H_2SO_4.

Also — please discontinue the use of rubber hose for siphoning H_2SO_4 into tanks. This, we suspect, may be giving us the beautiful purple colored acid.

3. Note change in loading schedule, 200 slugs will be loaded for batch J, instead of batch H as originally scheduled. (#)

Program For Tonight

1. Check B19 thermocouple operation without putting in core. If you can try straightening

out plug hooks.

2. Check B1, B3 and B6 samples.

3. Test B12 as follows:

a) Run into B12 4 liters of 3M HNO_3, take sample (in B12) for iron.

Done

b) Sparge with B7 pipette for 4 hours and sample every hour for iron.

4. Housekeeping:

a) Try to clean up hot floor on N and E side of cell B.

b) Clean up hot spots around 3rd floor sink (see H.P. report)

c) Move hot rubber mats from decontamination room entrance to low storage

Done

d) Clean up table at cell B entrance and store in fenced off area on E side cell B or some other more convenient place.

Done

20
4/9/46
4-12
ML & JEC

① 3rd level air count zoomed upwards to the extent of 20,000 cts./min. @ 6:00 p.m. as a result of one of two things, viz. transfer of nitric solution from A1-A9, or sudden change of wind direction from a southern to an easterly direction. High counts persisted for ~ 1 hr. at which time it dropped instantaneously to ~ 700 cts/min.

② Attention Lime Row:

Due to an insufficient number of slugs being dissolved in first dissolvings, the amt. HNO_3 in Batch D was dropped to 440 lbs. with a corresponding increase in N_2SO_4. Batch E was similarly treated. The N_2SO_4 was changed in Run Book correspondingly, but will probably have to be increased due to the low percentage N_2SO_4. Batch 7 will be dissolved with the customary 390 #'s HNO_3.

③ Apropos of the log book - Item 3 page 19 —.

Ⓐ Initial sample — 5.2 mg. Fe TOTAL.

Ⓑ Intermediate sample — 7.2 Mg

Ⓒ Final sample — 5.2 mg.

④ Relative to Item I —:
Keep A-16 Scrubber running at 150 at all times except when settling cold. This includes jetting from A-1-A9. Theory behind high Ct. as offered by EJW & WAR: When jetting or settling hot activity pulled to fan house from scrubber and back to Bldg by wind change if scrubber water is turned down.

A5 ring balance Kaput - now has a batch of Carbo-phosphate.

air count seems to be highest in ~~[illegible]~~ NE corner of bldg - wind direction so keep Windows closed on N + E sides

Pipette is lodging on horseshoe & bulb is on ladder.

Solution in B12 with current on to check iron pick up. Sample (from B12 with pipette) at 1A/ and at 3A/ then transfer to B6 & sample - no need for 3 W Pb as it had no lead to start with call samples B12-4 + B12-5 + B6-1

Analyze as Fe.

Status

10-C in A11 settling until 2A/ or so (62 C)

10-D in A9 settling cold till 4 40/A

(E) 10-E in A1 dissolved + sampled

4-10-46 Leave water on A16 at 150 at all times.

12-8 (Air counts are going up steadily. At 7 00 A.M

SOR + there were 5,000 C/m in the H.P. office and 22,000

WJS C/m in the fan house.

Fe samples

B12-4 5.6 mg. total

this sample was checked B12-5 74.8 mg

B6-1

Had truck battery charged

Light bulbs replaced in fan house

Cell B activity going up 80 mr. at inner doorway.

Run Status:

A9 - Batch E - settling hot until 9 55 A.M

(F) A1 - Batch F - dissolving

A11 - Batch D - settling until 10 40 A.M.

4/10

8-

4/10

B3 + B

4/10/46
8-4

Run A-16 scrubber so that vacuum indicated by manometer shows 33-35, for top of scrubber + 25-27 on bottom. This will put the A16 rotameter bob out of sight but this rotameter calibration is suspected of being inaccurate: Air cannot quite high today

Run status:

Batch E in A 8 (has to be sampled)

Batch F - in A-9

A-1 MT

4/10/46 [8-4]

Program For Tonight

1. Check that B17 is dry and done set zero point on new probe

2. Straighten out B19 carrier lifting done lifting hook.

3. Check operation of B19 thermocouples done Turn on heat (without cone) to see if temperatures are recorded

(B3 + B6 OK) 4. Check B1, B3 and B6 samplers.

5. Try to clean up hot floors around N and E side of cell B.

over

6. Continue rinsing B21 – B17 hastelloy line with HCl-ether-water solution until soln. is clear – repeat each shift

Operating Bulletin

1. Do not blow down vent at start of getting. It is suspected that this causes high air count. After getting has been completed vent about 1.5 seconds after pressure goes down to zero and close vent one minute after that.
2. Please see that the strength of HNO_3 and H_2SO_4 is recorded in run book before using. This is very important since we have had some weak acids very recently.

4-10-46

4-12

Straightened plug lifting hook.

Checked B-19 heater, T.C.

B-21 to B-17 line washed with HCl ether solution still green after one wash flushed back & forth. 2nd flush green also.

B-26 to B-27 checked

B-17 tank zeroed

(G) dissolving started during 8-4 or 4-12? (NO!)

IMG - 437 C's in A-1

A-9 10-F settling until 1:10AM

A-11 10-E (low) can be decanted to A-5 as soon as steam header turned on to decant A-9

26
4-11-46
12-8
SJS + WJS

B 6 + B 3 samples OK.

Ran HCl ether solution back + forth from B21 + B17. Solution still shows a green coloration. Solution in B 21.

• Air samples were taken before, during + after decantation. Wind direction S, SW, SE

Before Time	place	C/C/m	After Time	place	C/C/m
1 00 Am	3rd l cent	52	1 40 A	3rd l center	232
1 00 Am	3rd l N side	32	1 44 A	outside N window	216
1 00 Am	fan house	4,900	1 42 A	Fan house	212,160
			2 50 A	Fan house	99,800
			2 54 A	outside N window	134
			5 15 A	3rd level center	500
			5 20 A	Fan house	128,360
			6 45 A	3rd level center	168

Run status –

(H) A1 – 10 H diluted and sampled
A9 – 10 G – Settling until 11 15 A.M.
A5 – 10 F being neutralized. (in A6 now)

Stay out of fan house.

There was a tremendous rise in air counts in fan house right after decantation of 10 F from A9 to A8. Readings were taken in fan house before and after this decantation which started at 1 10 A.M.

4/11/46
7-4

Distilled water (1L) run from B26 → B25
B27 → B12 and measured. 1L in B12, all
line & connections checked for leaks and OK

Used emergency line for A16 system
during decant of Batch 6.
air counts:
Tanhouse 6000 c/m
1st floor 108

Gasket blown on W11 - W5 jet in tank
farm - dissolving of Batch I held up
accordingly, since scrubber water was
turned down to absolute minimum.

Transfered 500 cc H_2O from B6 to B21
via B11.
Volume checked in B1 - OK.
Filtered to B21T.
Transfered to B17 and measured volume
in B17 - O.K.
Movable funnels checked for alignment with
B19 - OK
500 cc's from B17 transferred to B19 via
B8, upper discharge funnel, and movable funnel
Volume observed 195 cc.

Repeated using B7 + B22 - Volume in final

step 185 cc.

Program For Tonight

1. Please cooperate with H.P. man in taking air samples from duct and small fan exhaust. H.P. has been requested to take both samples simultaneously every hour and in middle of jettings.

INSTRUCTIONS FOR SWING SHIFT?

4/11/46

4-12

#

2. Start loading slugs as soon as batch I is dissolved. — 200 slugs.

3. Note change in schedule, batch "L" has been added to run.

4. Please try to clean up the building especially around cubicles and cell B. What's the story on the hot floors around N and E side of cell B.

5. Check that all metal wastes are settled in A11 regardless of loss. If it's under 50 c's, however, no sample in A6 is necessary

and you can decant directly to A5. The value of this procedure was demonstrated when 8WME was reported 9.2 c's and turned out to be 92 c's. It was saved however because it was decanted to A5 and picked up with high waste loss from batch E.

6. Rinse out all tygons to and from glass equipment and B24. Also rinse out B3. Check lines and valves for leaks.

4-12
4/11/46

~~8WMG – 43½ C's~~ See next page

1. MT'd & rinsed B3

2. Rinsed glass equipment with distilled H_2O as follows:

21R → 21T → B17 → 20T → 21T

B24 ← 21T ← 21R

½ → B17 → B21T → B19 (½), B3 (½)

B20T → B24 (Part)

B20T → B20R → B20T → B19 (½), B3 (½)

Did not use drawoff lines to B24 at all. Found no leaks. If graveyard thinks we missed any lines better finish the job. We're short handed & are loading slugs.

APPARENTLY DISSOLVED THIS SHIFT

8WMG Sample re-run — 21.4 C's

(I) 1MI Sample — 310 C's

(H) Loaded 195 slugs. Both carriers read >50 mr/hr & were placed in Decon Rm.

Status of Run

(J) A1 — Fresh slugs in. HNO_3 already added. 334# of NaOH in T8 scale tank ready to add to A1. (Run 10-J)

A9 — 10-I Digesting until 12:30 AM.

A8 — MT

A11 — 10-H Settling until A9 is decanted.

A5 — Neutralizing metal waste.

4-12-46
12-8
SJR WSS

Scrubbed hot areas on floors around cubicles with 50% NaOH followed by H_2SO_4. Partial decontamination was all that could be attained.

Air counts at the off gas line located at base of stack + duct varied considerably. Off gas air sample jammed the counter while the duct sample only counted 6,000 c/m. These were taken during A5-A6 waste transfer.

Status of run:

A-1 dissolving "J" sp. gr. hangs at about 1.74 (shot up diluted)

A-9 10 I settling wld until 8 20 AM.

A-8 MT

A-11 10H settling until A9 is decanted.

A-5 Batch of $CO_3^{=}$ $PO_4^{\equiv}$

4/12/46
8-4

Status

10 H - in A6 ready to be ~~A~~ + w9'd

10 I - in A11 - settling until 5 P/

10 J - in A9 settling until 6 55/P

(K) 10 K - diluted + sampled.

all windows in the Bldg kept closed +

two large fans used as exhaust fans on 3rd level — all precipitron samples in the bldg below 1000 cts — sample from ~~s~~ A16 off gas line 90 mr/hr at sample contains.

Operating Bulletins

4/12/46 1- At 1:30 A.M. this morning the radiation at the S end of PB-1 went up to 150 M.R./hr. due to contamination in A1 sparger line. This rise in activity was clearly recorded on Micromax at PB-7. The chart was signed by H.P. man 3 times during the shift but since he was new in the building, he obviously did not realize what had occurred and did not report the incident. Nothing was done to correct the condition until 8:30 AM and in the meantime several over-exposures may have occurred. I would like to again repeat that it is also the duty of the operations supervisor to periodically check the Micromaxes on PB-7 so that conditions such as this can be quickly located and corrected.

4-12

4-12

4-12

4/1

2. Please do not allow too many batches to accumulate in cell A. It is doubtful that transferring several batches at one time would help lower air contamination as has been suggested and rushing operations may lead to serious operating errors.

Program for Tonight

4-12 ✓ 1. Check B17 sample tube on near probe.

✓ 2. Check enclosed weekly housekeeping inspection list

4-12 ✓ 3. Decontaminate slug carriers.

4-12

4/12/46 1MK 382 C's
65.7 slugs.

8WMJ 65.9 C's

Steam sparged A1 for several minutes in attempt to decontaminate line. Air sparged to help prevent further backup.

Checked B17. Better take (next)

Continued

another look at it. The opening in tube holder is too small and the tape binds when the probe is lifted.

Decontaminated slug carriers & placed them in storage. Both were surveyed & tagged since each is still >12.5 mr/hr. Also worked on housekeeping —

STATUS OF RUN

(L) A1 — 10L Dissolving
A9 — 10K settling hot until 12[16] A
A8 — MT
A11 — 10J settling until 1[10] A
A5 — Carbophosphate
A6 — MT

JRJ

4/13/46
[12-8]

Sample 6WMT ~ 34 c's analysis time

Decantam room cleaned up

Barrel of caustic dissolved up for M10

A-1 MT - Didn't start dissolving heels because of no information as to whether any more slugs would be dissolved up as "insurance"

1ML - 392 c's

L in A9 - settling hot until 10:25
K in A8 - Ready for A11
J in A6 - Ready for W9
Wind from the right direction during decantations i.e. SE

Air counts

	Fanhouse	3rd Floor
2-2 30 Am	5400	84
5 30 - 6 D	5630	480

36 4/13/46

8-4 Kaskie + Rom, Pressley + Formaker — Per WAR

M.L. one supervisor from each shift is to work day shift on Monday — flip, odd man, cut cards — or agree or something. Run will be "glasswared" starting at 8A Monday — we hope, and it is desired that each shift contribute a supervisor to do the "glasswaring".

(original draft of section of process manual on cubicles is in back of log book if anyone desires to read it before Mon.)

Tested B17 probe sampler — works O.K. — Trouble is that not all the tubes the chemists have are standard size. New Probe slightly contaminated already — gloves read 600 Mr and were used only to adjust holder in the center of the probe.

Status

10 K — in A5 — neutralized

10 L — in A8 to be sampled

(M) 10 M — in A1 to be diluted

4/13/4

4-12

START PAG

P. 1

P.

4/14/

12-

4/13/46
4-12

WAR

8WML - 188. C's at Analysis time
12-8 6WML 10.6 C's at shipping time
1 MM - 323 C's " " ".

66.4 slugs.

STATUS

A1 — Hold 10M
START PAGE 15. A9 — Heels for metathesis
P. 13c A8 — H_2O washes from A9. 8WW Sampled.
A11 — High Waste heels. Hold per E.J.W.
P. 13 A5 — Neutralized waste.
Finish 30 min agitation period before disposing. Get 8WW analysis first.

4/14/46
12-8

8WW - 3.5 C's - added to metal waste in A-5.

B6 probe not working properly. Probably emergency instrument maintenance should be called in to put the probe in working order for when product reaches B6.

Second metathesis settling until 8:15 AM.

Packing gland on pump M5 (HNO_3) leaks quite a bit.

14
4/12/46
8-4

Run Status:

(A) Run 10 Electrolyzing at 15 Amps. until 5:55 P.M., ~~[illegible]~~

(B) Batch M + parts of other batches from A-11 & A-8 undergoing an extraction in A-9.

(C) Batch N dissolving. (N) 1

Please follow this program until 8:00 AM Monday

(1) ~~[illegible]~~ Run electrolysis for ten hours 3 @ 15 and 7 @ 25 ~ until 1:00 AM.

(2) Transfer to B6. Rinse B6 before

All of Solution in A-11 Covenant Re used, so are holding part for another extraction. See Item 6 per Work.

putting solution from B12 to B6 via B8.

③ Take 6P sample exercising the usual caution.

④ Evaporate to dryness in B6. Take up in 2000 cc of water and evaporate to 350 cc. Use LL manometer. Have slight pressure on B9 and B11 during evap.

⑤ Feed until 8:00 AM when glassware will start.

⑥ Do not start standard metallurgic in A9 until 6P analysis is in. If 6P is 2300 or more continue extraction in A9 until no more UNH is available. If this is

done pick up remainder of A11 solution on extraction N.

(7) If 6P is below 2300 curies start metathesis after Batch M.

WR

4/14/46
4-12

RUN STATUS

A1 - DISSOLVING, BATCH N.
A9 - M settling until 2:06 AM
A8 - MT
A11 HIGH W. HEELS
A5 } MT
A6 }
B12 4450 ml. electrolyzing until 1:00 AM

B6 has been rinsed out.

4-15
(12-
JCA

4-15
8-

4-15-46 300-350 ml in B-6. High
(12-8) air count (9800 cs/min) prevented
JAK this shift from doing its normal
operations. A-9 was decanted at
5:45 instead of 2.04 AM. The air
count went up at approximately
the same time as the air sparger
on B-6 was turned on. The sparger
was turned off for ½ hr with
no change in the reading on the
chart. Maybe the this means that
there is no connection between the
operation and the air count & again
it may for the damage may have
been caused by this sparging but
the wind prevented its leaving the
bldg for it was blowing from the stack
into the bldg.

A-8 has been sampled.

AM The solution was removed from B-12
& that is all that was done to
this vessel.

A-1 – Batch N still "cooking".

4-15-46 Run 10 in B17 awaiting analysis
8-4

4/15/46
4-12 Run 10 in B19 evap. until 1 45 A.

A1 MT
A8 MT
A9 - Settling but until 1 49 A 10 N
A11 - Settling 10 M

4-16-46
(12-8)
JBK

A9 & A11 have been decanted to A8 + A6 respectively and samples taken of each. Sky shine G.E. Chamber was check for operation by putting the product in chimney for 10 minutes, The 1st actual skyshine reading began at 0225. The product this time will remain in the chimney for 1 hr. No Victreen r meters are available They could not be located & they could not be located in a few of the instrument shops.

25% H_2SO_4 30# IN S.S. BUCKET ON SCALES

4/16/96 ① Disposed of Fuming Nitric Waste.
8-4
J.E.C. ② Removed PbO_2 from B12—.

③ A9 – ready to start Metathesis

④ Ran 10 "skyshined" + loaded on truck

taken

duct
tual
duct
for
ailable
/dit
ment

Scales

Program For Tonight

1. Carry on run in Cell A through to settling of second (last) metathesis wash. Let it settle through 8 A.M.

Decant material from A11 to A5 and neutralize. Throw SWW from A8 on top of A11. it. (if analysis show low waste)

4-12 done → 2. Throw out 3W Pb, now in B3,

3. Please clean up building. Clean up mess around top of cell B chimney. Store hose from E platform in low storage area. Clean out all absorbent paper lying on floors all over building. Etc Etc.

4/16/46

4-12. 1. Housekeeping

A8 – 1st Met. wash. Acid added

A9 – M-N. 2nd wash started at 11 35.

A11 10N SWW

A6 Neutralized waste ready for W-9 ing

4/17

12-

4/17

8-

4/17/46
12-8 Last metathesis wash settling until 8 AM,

Housekeeping done as per list left with E.J.W.

4/17/46 ① Run Status:
8-L

Ⓐ Metathesis Cake wash settling until 4:27 P.M. in A9.

Ⓑ A-11 — 8WMM Level + 8WW.

Ⓒ A-6 - Neutralized Metal waste.

Ⓓ A-8 - 8WCW

② Painted Tools on 3rd level to be returned to Tool Chest when dry.

③ Various Calibration Charts, if needed are now on drawing desk in L.R.M.'s den. Do not replace them as they are in the process of being re-inked and re-drawn.

Program For Tonight

1. Carry the run through decantation of last metathesis wash and sample 8 WCW. Dissolve metathesis cake in 500 cc of 70% HNO_3 and let sit in A9 until further notice.

2. Housekeeping

a) Move lead brick from top of hot lab to lead storage spot E side cell B.

b) Move mud pump hoses from E platform to bldg. 717Q.

c) Move neat pile of junk from E side of fenced in area on E side of bldg to corral.

d) Decontaminate hot hose in make-up room.

4-17-46
4-12
SJR, WJS

Metathesis cake in HNO_3 soln. in A9.

Housekeeping items

Kaskie & Newton will not be in on the 12-8 shift

4/18
12-
4/18
4-18-
4-1
SJR.

4/18/46
12-8

Metal waste in A6 sent to W9

Hose in make up room OK.

4/18/46 Program For Tonight

1. When wind blows in our favor (not N or NE), try decontaminating duct by using new steam noggles in duct. Try it with large fan on and take readings before and after steaming for about 1 hr.

If this doesn't work, try steaming it with large fan off. Check louvers in cell to see if steam backs up into cell and watch air count in building.

4-18-46
4-12
SJR. WJS

Wind was favorable part of the time.

Took sample via vacuum cylinders before 320 cpm after 2 hrs. steaming 128 cpm. Drilled hole in northern most end plate of the duct for air samples.

4/19/46 Wind was either from north or else
12-8 shifting all not so decontamination of
dust not attempted.

Housekeeping.

Program For The Weekend

1. Check operation of overall viewers, they have all been repaired.
2. Hang up all tools on 2 and 3rd floor, alter board if necessary
3. Clean all equipment in decontamination room and store in proper places, please use no nitric on tools if at all possible.
4. Clean up carbonate mess in make-up room.
5. Clean out soda ash in trash box before it gets wet and cakes up.
6. Stack lead sheets on east side of cells in neat pile

Notice

All supervisors may take off Easter Sunday. Operators who wish to take off may do so at a sacrifice of 8 hours pay as long as each shift has at least two men; one for tank farm and one for building.

Please check equipment on each shift over weekend and check PB-7 periodically to make sure that

nothing serious happens while your mind is overburdened with other work

4-19-46
4-12
SJRWJS

Housekeeping items 1, 2, 4, 5, 6.

4-20-46

Settling basin high
See tank farm log book

4-21-46
12-8

Operation Normal

4-22-46
4-12
SJR+WJS

Rearranged some material in low storage area

4-23-46
12-8
JCC.

⊙ Three Micramax on P.B.7 reported (by H.E.) to 105 Dust. as being on "fritz". a little oil seemingly did the trick. Pl. have Day Dust. man further check these instruments.

4-23-46
4-12
SJR+WJS

Note to day shift: File cabinet was left open (bottom drawer).

4/24/46
Jac.

Pretty quiet tite

your

J E Collier --

Do you need help on the drafting ???

WAR.

8-4 Removal could fill cell IV. It is in decontamination room.

Suggested course of action for leaving and manning shift, to avoid complete boredom

a) Collar HP and entire shift and go over the operation of all HP instrument making sure all men understand and can use

1) Cutie Pie
2) Electroscope
3) Walkie Talkie
4) Zeus
5) Precipitron
6) Portable Probe
7) Fixed Probe

b) [illegible] operation of all instruments on PIS 7 [illegible]

52

8-4

4-25

Checked filter disks and marked them.

Suggestion for avoiding hoodoo if interested -- Janitors cannot wash windows it is a maintenance job and they won't do it right now. Suggest that windows which can be washed from one of the regular floors might profitably be washed.

WR

4/25/46

AMR Had HP give lecture on use of instruments as suggested yesterday — also cleaned 1st floor and office windows

4/26/46 12-8 JEC ① Continued window washing agree — finished 2nd floor. 4-12

② Atn W.A.R.: Thanks, but no assistance is needed on re-graphing assignment. Will be ready for production #11. 4/28/46 4-28

Program For Weekend.

1. Clean off scotch tape and dirt off glass on PB-7 microscope.
2. Check paper stickers on all instruments; replace those that look bad with new ones.

P.S. All windows except the one that must be washed on roof and a few that have been overloaded, have been cleaned. Do not wash those where ladder is necessary.

P.P.S. Wooden walk to farm house is crummy

Notice:

all supervisors may take off Sunday.

4-27
12-8

Normal operations.

4-27
8-4 Present.

4-12 4-21 Present

4/28/46 · 12-8 — Present

4-28-46 4-12 [illegible]

4-29-46
12-8

4-30-46
12-8 all here.

NOTE: PAGES 55 & 56 REMOVED & DESTROYED 5/1/46 J.E.C.

5/1/46

Program for Tonight

In progress 4-12 ✓ 1. Decontaminate cone, carrier etc in decontamination room and store in proper place.

4-12 ✓ 2. Make up 35% caustic in tank M11.

4-12 ✓ 3. Put 200 lb HNO_3 in A1 and dissolve heels until 8 AM tomorrow.

4-12 ✓ 4. Rinse out all cell A tanks and get rid of material in A11 and A9 to W11, neutralize with carbophosphate prior to dumping.

MT, but none installed. ✓ Check that there is sufficient ammonia available in tank that is hooked up, if necessary install new tank, Keep it turned off.

5/1/46 4-12 J.E.C.

① 200 #'s HNO_3 added to A-1 to ~~destroy~~ dissolve heels, if there are any. To be kept at temperature until 8:00 A.M.

② All extraneous waste from A9, A8 & A11 neutralized. ~~and~~ ~~to W9~~. To be A6'd & W9'd. done 8-4

③ The above mentioned vessels have been water rinsed.

④ M1 was found to contain a maximum quantity of 20% ___?___. Assumed it was caustic and made up to 35% and jetted to M11. Day shift please have this solution analyzed.

Wrong assumption

⑤ Product carrier, cone, & adaptor hosed and steamed entire shift. The highest readings now are:

A) Tip of plug — 65 mr.
B) Inside cone — 675 "
C) Back side of carrier — 25 mr.

⑥ Putting caustic through A4 at rate of 3 gal/min. This slower rate should enable completion

5 Heel dissolving. In case it is insufficient put H_2O through at maximum flow.

(7) Packing in M3 seems shot as motor leaks like a sieve.

Dor * 12-8 (8) 12-8 — You lucky boys — Ammonia cylinder needs changing.

5-2-46
12-8

Water through A-4

Nitric in A-1

5-2-46
8-4
SJR+WJS

M-1 empty
M-11 contains 35% NaOH according to sp. gr. at 64°C. Check sp. gr. when temp. drops to normal + adjust concentration of NaOH.

5/2/46 [illegible]

✓ 1. Check all cell A jets except the jets A9-B26A and A9-B263. No water needed. Report all plugged jets so we can get necessary maintenance work done tomorrow

✓ 2. See WJS's note on 35% caustic in M11.

✓ 3. Check operation of all cell A instruments and report any repairs needed.

4. Check A16 and A4 vacuum systems.

60
5/2/46
4-12
8 ec.

① ATTENTION PRESS!! —
WACT WILL CALL KING BEFORE 8 00 A.M. REGARDING DAY JOB.

② CAUSTIC IN MII DILUTED TO 35%. —

③ IT IS NOW KNOWN THAT W.A. RODGER IS CAPABLE OF PRODUCING OTHER THINGS BESIDE BA ATOMS. —

WHAT? — A GIRL
WHEN? — 8 00 P.M. 5/2/46

MOTHER & DAUGHTER (NORMAL IN ALL RESPECTS) DOING FINE.

5-3-46
12-8

Program For the Weekend.

✓ 1. Check that all storage and make-up tanks contain sufficient quantities of solutions for run startup.

Sunday 8-4 shift

Check 105 Bldg. supervisor to see that slugs are pushed at 2 PM.

Sunday 4-12 shift

✓ 1. Make thorough equipment check, drain off-gas lines, empty cell A duct, check water level in cell A sump. Fill out equipment testing sheet and inventory.

✓ 2. Blow down PB-1 and PB-2 headers for about 20 minutes each.

✓ 3. Check that all cell A vessels are empty.

✓ 4. Check early in shift to see that maintenance truck will be available for slug moving.

✓ 5. Make all necessary preparations for 12-8 shift slug loading. Have slug carrier in canal at 105 Bldg at before 12 Mid.

and truck outside 105 bldg.

✓ Have all PB-1 and PB-2 charts up to date before shift change.

✓ Have 1st portion of coating removal solution in A1 and A1 ready to take slugs.

Rimshaw → D. C. King will not be in until Tuesday 12-8 shift to help you with 2nd slug loading.

5/3/46 4-12 J.E.C. ① Scrubber Caustic made up in M10 & 1 Batch CO_3 - PO_4 in M1. Filled other Solution tanks.

② Day Shift Monday please analyze ~40% K_2CO_3 in T-2.

5/4/46 4-12 We Was Here

5/5/46 8-4 Contacted 105 Supervision with regard to pushing slugs at 2PM. Found them already aquainted with the info.

64 5/5/46 4-12 Everything is in [redacted] shape. She's all "u[redacted]

Glass was looked at - B21 filtration rate is now 600cc/min.

1st Full carrier on the chute - 2nd carrier in the canal.

5-6-46
12-8
SJR WJS

321 slugs loaded + coats removed
A 1 metal soln. 22" at 7 3/4 am
Sp. Gr. is starting to come up.

5/6/46
8-4
AMR

K_2CO_3 analyzed : 39.1%
$Pb(NO_3)_2$ " 20.4%
1MA 489 c's
65.9 slugs

5/6

AS ring balance evidently wasn't working properly because the Na_2CO_3 - Na_3PO_4 froze out of soln with the cooling water on the piket of AS. Heated soln up to 40°C and L.A pen now working properly. Sp gr pen not working probably be[redacted] blown out of ring.

[redacted] Run Status:

Batch A – Settling ~~hot~~ Cool in A9 until 8 PM.

Batch B – in A1 – Not sampled

5/6/46 ① 4-12 shift please check that slugs are pushed at 6 PM and that truck will be available for 12-8 shift for slug loading.

still [8-4]

② The line from T8 to A9 is partially plugged, I would like to suggest that you make an attempt to unplug it with an air hose, preferably during next extraction digestion period. Make sure there is sufficient vacuum on A9 when you try this

[redacted]

[redacted]

(3) Please note that the new directions for making 4% caustic in M10 call for measuring of the 35% caustic in M10 and not M11. The glass on M11 appears to be partially plugged

(4) "Off" signal light for S.S. fan on power panel board is out. E.R.O. in

5/6/46 11-A settling in A11 till at least 2 30/A

4-12 11-B settling Hot till 1 20/ cold till 6 20/A (in A9)

11-C dissolving

5-7-46 Made up 35% NaOH in M11.

12-8 Finished dropping slugs at

SJR & WJS 7 40 A.M. Ready for coating removal of slugs in A1. Batch 11 C is digesting in A9 until 8 28 A.M. A5 contains one batch of CO_3-PO_4. Batch B settling in A11 until 12 15 p.m.

5/7/46

8-4 Housekeeping as per EJW-WAR

Run stations

A-1 Batch D sampled ???

A-9 Batch C

~~A-5~~

Batch B either in A5 or W9

[redacted]

[redacted]

5/7/46 Afternoon Bulletin

① We are going to attempt to boil out actual gases from metal solutions in A1 prior to getting to A9 in the hope that these gases will not go through A16.

The following procedure should be followed on batches D and E:-

a) Carry dissolving through in the usual manner but dilute and cool solution to only 60° for sampling

b) Take the usual sample

c) reheat solution to boiling and boil for ½ hour after temperature levels off with condenser A2 water off

d) cool and resample, mark sample "after boiling"

The amount of iodine lost in boiling will be analyzed.

2. Empty caustic drums as fast as possible. There is an acute shortage of caustic and in order to get more we must empty the drums and get them refilled at TEC.

[redacted]

3. Please clean out caustic barrels and drums before setting out empties on platform. The barrels that were found on platform this A.M. were filthy with caustic solution and undissolved flakes. This is an extreme hazard to the garbage men. Rinse out barrels with weak acid if necessary after thoroughly scraping out all flakes.

not 50 gal drums

4. Please check air monitoring instruments frequently. If there is any indications of possible high air count when wind starts to shift to north or northeast evacuate building of all personnel except ones needed to carry on the run and arrange to have them wear gas masks until condition clears up

5/7
4
5-8-
12-
STR+
5-8-
8-

5/7/46 RUN STATUS —:
4-12

BATCH E — SAMPLED, IN A-1 AWAITING AG.
BATCH D — SETTLING COLD IN AG UNTIL 3 1/2 AM.
BATCH C — HEEL IN A-11;
~~SUPERNATANT IN A6~~
~~AWAITING ANALYSIS~~.
Rest of it in A5

5-8-46
12-8
STR & WJS

A1 - Batch 11F - diluted and sampled
A9 - Batch 11E - settling hot until 8 26 A.M.
A11 - Batch 11D - settling until approx. 9 00 A.M.
A5 - contains one batch of CO_3-PO_4.

5-8-46
8-4

A-1 Batch G dissolving at shift change
A-9 Batch F settling hot until 6 35
A-11 Batch E settling until 7 38
A-5 One batch CO_3-PO_4
A8 MT
Batch D - down in W-9

4-12 shift - check that caustic is M11 is 35%.

· 8WME - 42.7

Program for Tonight

5/8/46

1. Continue boiling dissolver solution as described on page #67 except that solution should be boiled for 45 minutes instead of 1/2 hour.

2. 12-8 shift please check that slugs are pushed at bldg 105 immediately after midnight. Check that truck and slug carrier are at 105 bldg at 8 AM.

5-8-46
4-12 IMG - 307 c's
66.3 slugs.
IMG - in A-1 sampled boiled and resampled.

Batch F in A-9 decanting
(jet plugged)

5-9-46
12-8
SJR & WJS

Outlet valve of A6-W9 jet located on top of W9 metal waste tank is reading 42 R three inches away. The surrounding ground is reading as high as 22 R. Apparently, this valve leaks and should be replaced as soon as possible, preferably before the next metal waste must be sent to W9.

One carrier of slugs on third level the other one at 105 bldg.

Jets A9-A8DA and A9-A8DA plugged up during decantation. The temperature of the tank was 22°C, and heating tank up to 90°C and cooling was still not enough to unplug the jets. We had to start the agitator and heat the tank to 90°C for a half hour with agitation. After cooling jets A9-A8DA and A9-A8C were found to be working O.K. The material was jetted back to A9 from A8. We then settled hot for one hour from 5:15 A.M to 6:15 A.M and cooled to 40°C. See EJW for further instructions on how long to settle. All contains about 300 pounds of steam condensate mostly that was obtained while we were trying to unplug A9 jets at the beginning of the shift. Follow lab results of wastes on Batch 11F closely.

A1- contains 11 G yet - diluted, boiled and sampled.

Operation Report

5/9/46 1. Discontinue boiling A1 dissolver solution after dilution. MCL says "Do not **@ with the process".

2. The fan house monitron seems to indicate that somebody may be jetting material in A5 without first checking that A5 has maximum vacuum. Please make an examination of your conscience.

3. Check that valve next to W9 in line A6-W9 is open at all times. Try using the jet only to start siphoning action from A6 to W9 when disposing of metal waste, make the transfer by using siphoning action only if possible.

5/9
8-
AM

5/9/46
8-4
AMR

251 slugs loaded on this shift

Batch F - settling in A-11 until 6 20 PM
Batch G - settling all until 9 40
hot until 4 40
Batch H - coats off or almost off

wind pretty favorable all day.

A cutie pie was picked up early on the shift and the person doing so got a hand count of over 100. This was removed and later the same person did another harmless thing such as driving the Tank Farm truck. This time a hand count of 150. SNAFU

2 slugs hung up in carrier. One heated out with a long bar by higher supervision, the other decided to drop them by itself on the next unloading.

74 5-9-46
4-12

RLP 523 c's 8WMF
36.5 cs 6WMF

A9-A8DA jet slow, 45 minutes to decant batch G.

A-6 batch F neutralized and waiting until we have two batches in A-6 and one in A-5 to be sent to W-9.

A-9 Batch H start settling at 12:10 AM.

A-11 Batch G settling until 4:08 AM.

A-1 Batch I dissolving.

High air count 10:45-11:15

3/1/46
12-8

A1 Batch I dissolved, diluted & sampled
A5 MT
A6 neutralized 6WMF + 6WMG
A9 settling cold 8 10/AM batch H
Attempted to draw 6WMG sample after jetting 11WMG onto 6WMF. Too much foam formed no sample taken. A5 is empty. Can still try to get a sample by jetting A6 to A5.

5/10/46
8-4

11H - ~~being~~ neutralized ready for A6 & W9
11I - settling cold in A9 till 6 40/P
11J - Dissolved & Sampled

5/10/46
EJW

1. Dispose of metal waste as soon as it it neutralized, do not wait for batches to collect in cell A. Line to W9 is ok. Use siphoning system.
2. If it is necessary to sample metal waste in A6, rinse A6 with weak nitric before jetting solution into it.

5-10-46
4-12

11 J in A-9 settling

11 I in A-11 (321 c's). A-6 washed with acid & empty. Decant at 12:50 AM

11 K dissolved, diluted, sample at 12 M.

Batch of carbonate in A-5

5/11/46
12-8
AMR

Run Status:
Batch K settling hot in A9 until 10 L
Batch L undergoing a dissolving
Batch J in A8

A8 sampler not working properly - Alternately steamed and tested - changed horoseal gasket also - no go. Left quite a mess around the blister - sorry.

Batch I settled out to 47 c's so sent it to W9.

5/11/46 11-J in A5, neutralized
8-4 11-K in A8 - to be sampled (non circulating)
11-L in A9 extraction to be started.
11 M to be dissolved (1st of insurance stuff)

-ashed
2:50 AM
le
0 LO
perly-
ged
left
sorry,
so

4-12 11 M dissolving. H_2O instead of caustic on.
11 L settling until 1:35 AM.

11 J and K are in W-9.

The batch of carbonate in M-1 is short 1 bag of phosphate.

5/12/46
12-8
AMR

8WML — 109 c's @ shipping time

A 8 sampler plugged again when we were ready to take 8WML. Unplugged with steam hose. Had emergency maintenence make us up a sampler unplugger for any future emergencencies. Gadget is well hidden from over-zealous housecleaners for the convenience of the writer & others should need for one arise again.

Extraction washes now in progress

Dicantate from Batch L in A11

5/12/46 8-4 11M ~~is~~ A1 diluted & Sampled

note capital

Phone

EJW wants you to call Him 2 Hrs before the transfer from A9 to Cell B occurs so he can come out - should be near the end of the shift.

A8 - 1st metathesis waste
A9 - Run 11 2nd metathesis being started
A11 - Heel of 11-L + 11K

8wc - 347 c's S.T.

A8 - 1st + 2nd metathesis waste

A-11 - heels of 11-L + 11-K

A-9 - 1st metathesis wash settling. 1st

A-1 11M diluted + sampled.

5/13/ 12- AMR EJW

A11

Call EJW !!!! 3:30

5/13/46
12-8
AMR, JCK
EJW.

~~A5~~
A8 - metathesis waste + washes (75# in A9)
~~A11 - heels of 11L + 11K~~ in A9
~~A-1 11M diluted + sampled~~ in A9
B-12 the new started electrolyzing at 7:05 AM.

before come

NH_3 cylinder needs changing (Probably better get ACV to get some NH_3 first tho).

75# of mat'l transferred from A8 to A9. 30# of H_2SO_4 ready for addition. See E.J.W. for detailed instructions.

See inventory sheet

6

Program

5/13/46 EJW

1. Carry on dissolvings and extractions in cell A. Start extraction washes and metathesis on batch N. We may be forced to use material in cell A if the 6P analysis of cell B material is low.
2. After sampling 6P, proceed with evaporation before lab results are obtained. Carry on to the point where it will be ready for transfer out of B6 but do not transfer it.
3. Be sure to run batch N through A11 before sending to A9, A11 contains metathesis waste.

5/13/46 8-4 SEC

① "Booster Batch" in A9 settling cold until 6:00 P.M.

② Batch N dissolving — almost up to gravity. Dilution water in T9. Amount of H_2O in scale is 40# heavy. Due to a smaller amount of dissolving HNO_3 the dilution H_2O cut from 170# to 130#'s. Be sure to jet Batch N to A9 via A11 to pick up OWCW's. —

③ Run 11 (Part of it) Electrolyzing in B12 C 25 Amp until 5:05 P.M.

④ Secured 4 Drums 23% NaOH from Y-12 today. Take note of percentage!

⑤ Ammonia cylinder needs installing. Due to Tank Farm operator on Vacation & one supervisor off, & one operator spending day at Y-12 unable to install.

⑥ Another dissolving (Ö) to follow present batch in A1. Probably nothing but butts left.

⑦ Metal waste in A5 was not sent to W-9 because of radiation in C-Bldg. working area. To be jetted on nite shift.

4-12

1, Batch O - dissolving in A-1
2, 8WMM - 137 c's
3, Batch N in A-9 settling, decant at 4:20 AM
4, Run 11 in B-6 1500 c's

5, Batch 11M in A-11, Decant at 12:10A

(over)

Ammonia cylinder needs changing. It is a pipe-fitters job on these two cylinders

5/14/46
12-8
JCK + AMR

Emergency maintenance changed pipe on new ammonia cylinder so that it could be installed

6 WMM 78 c'p

8 WMN 427 c'p

Batch M was left in A-6 unneutralized since analysis showed >50 c'p.

Batch "O" dissolving (?) - doesn't look like there's any metal left in A-1 to dissolve since the sp gr is still under 1.4

Cake washes going on in A-9

5/14/46 A9 - settling til 4[16]
8-4 A6 - batch N ready to be neutralized
A8 - first wash - awaiting the others.
A1 - heel cooking
Note that all washes + metal hsi stuff is to be added to A9 via A11 - see runbook

5/14/46 EJW 1. Please note changes in extraction washing procedure in run book. There are 4 more water washes scheduled to follow the washes settling at present. Add all washes to the material in A8 now and sample all combined.
2. You may discontinue taking H.P. sample reading with an electroscope, you can use a Cutie pie to speed up the job
3. Please try to clean out holes in slug carrier. This can probably be done best in decontamination room with

hose and bottle brush with drawer cranked out.

4-12

Slug carrier in decontamination room were given scrubbing with soap and also dilute nitric and washed with H_2O.

Run 11 - B-6 1510 c's

Batch D in A-1 sampler after cooling, about 23 slugs and 91 c's

A-8 sampler plugged again after steaming, we were able to sample P.W.W

165 got high air counts which they attributed to D operations

A-9 second half of run 11 1st metathesis, cooling till 12 Mid.

A-5 has neutralized waste waiting for waste from A-8 after analysis

5 ~~4~~ 15/46 8WW 102 c'o
12-8

AMR, JCK What's the explanation for the much greater volume obtained in the 2nd metathesis as compared to the first? I checked over the run sheets for the first part of the run and found the same thing true there.

A9 settling until 9^{45} AM.

8WC taken. 7^{30} AM.

Slug carriers gone over with Dutch Cleanser and a broom stick with a fabric wad on the end of it. Corrosion product in the holes removed satisfactorily - radiation levels low. Some of the holes seem slightly flattened tho probably not enough to cause any slugs to stick. Holes also examined for scoring - not noticeable.

5/15/46 ① Run electrolyzing at 15 amps till 4 05/ and then
8-4 at 25 amps.

② Test slug carriers with dummy slug on E.D.W.'s desk (Sizing gauge).

5/15/46 1. Carry on run in cell B up to
CJW and including evaporation to 350 c.c. in B6, then wait for Walt and Red to take it to glassware.

2. Please check all holes in slug carrier with dummy slug. Store carrier in graph file.

Rom - Hendrickson has serious illness in the family and will not be in until his long week-end is over. SJR

5-15-46 4-12 shift
SJR + WJS

Dummy slug will fit all holes in Carrier A, but will not fit any of the holes in Carrier B. Carrier A was put away above hot lab. Carrier B was left in decontamination room.

The combined runs are being evaporated in B6. There is no reading on B6 liquid level manometer because equalizing valve on this instrument was opened and bubbles turned up to prevent plugging. Follow instructions in the

book to take a reading on B6. Close equalizing valve carefully.

6P sample taken was not too large. Chemists may require another one. Check on this.

Watch fan house activity and air activity when B6 gets up to temperature.

5/16/46
12-8
JCK & AMR

6P — 4100 C'D 0.52 gms Pb

Glassware'd from 5 AM on — see day shift Sahibs for particulars.

5/16/46 ① Run 11 Evaporating in Big. —
8.4 To be examined @ 6 P.M.
JSC 17P — 2000 C's.

5/16/46
EJW

1. Remove plug completely from cone and start "skyshine" reading at 11:40 PM. Let it read through shift change.
2. After reading is taken, insert plug 1" into cone and let it stand that way until day shift.
3. Please follow directions in

run book and fill out data for skyshine reading.

16
5-14-46
4-12
SJR + WJS

First skyshine reading that is to be taken 16 hours after LST was taken at 11^{37} P.M and data filled in run-book which is on supervisor's desk. Reading was 11.9 R. Carrier was left in place under the chimney thru shift change. Pull carrier back into the cell and note that plug is to be inserted only 1" into the cone. Next skyshine reading will be taken on day shift at 9^{37} A.M.

8-4 all tygon lines to & from B20 + B21 rinsed with 3-500cc slt of Water.
17 WW 60 c's

5/17/46
E.J.W.

1. Remove PbO_2 from B12 according to instructions in run book 11N. Leave material in B3; it will be sampled Monday
2. Neutralize 3WFN, which is now in B3, in A5, then to W11
3. See WAR's housekeeping inspection report and take care of all items by 8AM so that General Groves, who

5-17
4-
WJ

intends to pay us a visit tomorrow, I may be pleased with the appearance of the building. Hanging of lead bricks from the balcony will be frowned upon.

4. Please clean off platform between 706-D and 706-C even though it does not belong to us, hide tools where they can't be seen and let me know where they are so we can give them back Monday.

Notice!

There will be a meeting of all supervisors Wednesday May 22, at 3:00 PM.

5-17-46
4-12
WJS

3 WFN neutralized + disposed of to W 11.

PbO_2 waste in B 12 removed to B 3.

Housekeeping items.

90

5/18/46
12-8
J.E.C.

① "Groomed for Grave"

He Came, He Saw, He Went!

5-18-46
WJS.

Steam shut down in 205 area for a couple of hours, Valves repacked.

5/19/46
12-8
M.L.

8-4

Power off 10:AM for 20 min
also 12:N for 20 min

5-19-46
4-12
WJS.

Present

5/20/46
12-8

3WPb - 11.c's

5/20/46 Notice

Each shift is to send one operator to the semi-works every day, Monday through Friday, to assist the producing 27 tracer. The same man is to report on the job every day. One man must be assigned to the tank farm but it will be unnecessary for a shift to have a man spend his full time in 706-D. In case of an emergency, however, the tank farm operator is to call on the operator in the semi-works to take care of it.

All supervisors are to report on day shift.

5-20-46
4-12
WSS

Present
Sent Walker to Semi-Works.

5-21-46
12-8

Richardson worked in Semi Wks.

5-21-46 LOU FAIRCHILD TO SEMI-WORKS.
8-4

Cleaned Makeup room.

5/21/46 1. 4-12 and 12-8 shifts, please move personal belongings that you will need tomorrow from your lockers to the S.S. office. So that the locker room floor may be painted tomorrow
2. Do not walk over floors that have been painted until 8 AM tomorrow

Acid washed & H_2O rinsed glassware

Started with 2 liters 25-27% HNO_3
Soln. looked dark & "crappy"
21R disc very slow. ~ 40 minutes.
Picked up ~ 400 ml along the way.

ACID

21R → 21T → B17 → 20T → 21T → 21R — 21T →

B24 $\xrightarrow{1/2}$ B17 ← B24 → B21T → B3

B24 $\xrightarrow{1/2}$ B20T $\xrightarrow{1/2}$ B24

B20T $\xleftrightarrow{1/2}$ B17

B20T $\xrightarrow{1/2}$ B20R → B20T $\xrightarrow{1/2}$ B3

Open Cell I – 2300 mr/hr at 13 ft!!
Closed Cell I PRONTO

H_2O

600cc	600cc
B20R	B21R
↓	↓
B20T	B21T
B20R	B21R
B20T	B21T
B17	B17
B20T	B21T
B24	B24
B20T	B21T
↓ ½ ↓ ½	B24
B19 B3	B17
	B21T ½ ½
	B3 B19

5/22/46 8-4 LLJ to Semi-Works.

Treated glass equipment
27% HNO_3, H_2O,

Both recycle valves getting stuck
NOTE → (Do not use until OK'd by Swenson)

Steam Heater on PB1 (125 psi) turned off. A1 may be leaking since it has filled up to 10". MT'd A1 & turned on A1 jacket water to determine if that may be the cause.
4-12 NOTE → If at 10^00 PM A1 is still MT, turn off jacket water and turn on steam heater — all other valves closed.
Thus day shift will carry on.

Jet A1-W11 plugged.

4-12 Closed off A-1 [illegible] at 10^00 pm A-1 MT.

5/23/46 8-4 Cleaned Cell I. Left 10 in. of wash soln. in B10 - to be sent to A5.

Program For Tonight

1. Cool the acid now boiling in A9, A8 and A11 to A5 and boil in A5 for 3 hours, then move to A6 and boil until tomorrow 8AM. Make sure water is on to scrubbers.

2. Pick out one good periscope (small) and clean thoroughly until there is no smear count. Then put it in Michener's office.

3. Continue decontamination of lead cubicle — cell I by spraying in carbaphosphate (from M1), citric acid, and steaming. Do not turn on steam directly on the glass. Keep jet C21-B22 on at all times when spraying cubicle, empty B22 to B10 frequently.

4-12 Continued spraying cubical with citric acid + steamed most of shift. The scope in L.R.M. office does not smear but has 13 [illegible] in [illegible] mirror.

A-6 Continues the acid [illegible] boil till day shift.

96
5/2 4/46
8-4

If anyone knows the whereabouts of a little yellow pamphlet dealing with the care of the hair and scalp please return to J.R. Farnsworth.

Continued decontaminating Cell I with steam, acid, carbonate.
Washed glass equipment with HNO_3
Reduced activity in Cell I by 15-20 %

Program for the Week-end.

1. Check the transfer rate of the following jets and record results.

A1-A9 A ✓	A9-A8 DB ✓
A1-A11 ✓	A8-A11 ✓
A11-A9 ✓	A11-A6 D ✓
A9-A8 DA ✓	A11-A5 DB ✓

Test all other jets in cell A (no rates necessary) and report any that are plugged. Do not test A9-B26A or A9-B26B.

2. When jet testing is complete, turn off steam headers at PB-1 and turn on water to A1 jacket and A2 coils and jacket. Check if there is any increase in liquid level in A1 in 24 hours, then turn off water and report whether L.L. in A1 showed rise.

done 4-12 3. Take care of enclosed housekeeping report, check items as completed and return sheet.

done 4-12 4. Please cooperate with painters who are coming in after 4 PM today to complete the job that they started.

5. 4-12 and 12-8 shifts please continue steaming and spraying of dead cubicles I and III but make sure that material does not run out on floor; keep cells M.T. at all times. Day shifts continue this spraying and steaming plus cussing of glassman itself.

Notice

See memo concerning Memorial day work on Bulletin board.

All men scheduled to work on memorial day may do so and receive time and one half pay. If, however, anyone desires to take off that day, he may do so providing that at least man be present to take care of tank farm.

No overtime will be paid to men who work 5 day next week but whose scheduled day of rest falls on Memorial day.

5-24-46

Continued steaming of cubicles. All housekeeping items done except number one for 3rd. floor and number 7 for first floor.

See Witkowski's program for milk and. items 1-2 and 5 yet to be done.

5/25/46

Operations normal. Only one zone to go to tank farm.

8-4

1. Washed cubicle with carbonate & steamed for 2 hrs.

2. Sodium citrate + NaOH sol thru glass ware. Thru B-23 this seemed to pick up some stuff which we sent to B-3 instead of circulating thru the other lines.

Reading 250 mr at outer edge of door when open. 2-3 R at opening to cell II

3. 20% HNO_3 filtering thru B-21R and steaming cell

100 5/25/46

4-12 Started jacket and coil test on A1 @ 10:00 PM to run 24 hrs, all jets checked for flow rate still same to be tested to get. see Don't say it write it Note

8-4 Steamed and washed cubicle. This seems to do the most good.

5/27/46. (12-8)

Continued suggestion of (8-4) in decontamination of cubical.

Program for Tonight

1. Continue decontaminating cells I, II and III using* carbonate, citric and steam. Try steaming 2 or 3 at one time.

2. Decontaminate cone, carrier etc in decontamination room and store away in proper place when clean.

→ Only in Cells I + III and on the bottom of cell II !!! do not spray citric or carbonate on the strings in cell II !!! — do not close cell II door all the way — it will cut the strings!! — destruction of the string may mean decontamination of cell B — so beware However do not neglect cell II — just proceed with caution.

3. at 8 PM and at 3 AM drain the small decontamination barrel and refill with hot water + soap — keep sparging with steam

[illegible]

102
3/28/46 12 to 8

Continued Decontamination of Cubical.

Product carrier decontaminated with H_2O + Steam Reads - 60 mr.

Removed hot can by Cubicals to platform.

The water still at 205 Lbs. was overflowing so I drained part of it into drain and left it in operation, I understand this is 706D's leaky at night???

Small decontamination barrel drained & refilled at 2:30 Am.

Roy M

Program - until Friday

1. Clean out decontamination room thoroughly, clean up all equipment and store away, empty and clean out crap in barrels.

Decontaminate tongs but do not use nitric acid on them.

2. Clean up area around lead cubicles.

3. Patrol entire building to see that the whole place is cleaned up and all equipment in proper place.

6-1-46 12-8

Operations as was.

Ferguson

Program for Tonight

6/4/46 OK There is a new mud pump (new to us) in 717 Q. Please get it into building and check it to see if it works.

OK Clean up area around cubicles and N end of 1st floor. The work there is now complete

Please note names, on bulletin board, of men who are to report for blood count.

6/7/

NG

18-1

6/7/46 Preparation For Run Over Week-end
Bg W

Sunday 8-4 Shift

1. Check that slugs are pushed at 105 bldg at 2:00 PM
2. After thorough blow-down of headers check that the following jets are in operating condition

NG A1-W11, A1-A9A, A1-A11, A11-A9,
A8-A5DA A9-A8DA, A9-A8DB, A11-A6D,
A11-A5 slow DB, A6-slow A5, A5-A6, A5-W11.

If any maintenance work is required, please call me at 5-7351

Sunday 4-12 Shift

1. Make thorough equipment check, see that both off-gas lines and duct are completely empty and that there is sufficient vacuum on both systems.
2. I-stall new charts at PB-1 and PB-2 before drift change, check that all [illegible] and [illegible] [illegible] operating condition
3. [illegible] first portion of coating removal solution in A1, ready

for slug loading
4. Have slug carrier in canal at 105 bldg and truck at 105 bldg.

4

ATTN. LEVENSON —

STATUS OF "C" BLDG DECONTAMINATION

① NEUTRALIZER MT'D. —
WITHOUT CATASTROPHIC RESULTS —
② CRAP & GUNK REMOVED FROM CELL FLOOR (TO LIMIT OF BROOM LENGTH.)
③ DOORWAY READING — 160 mr/hr.
3' INSIDE CELL — 700 mr/hr.

J.E.C.

12
JCK

6-9-46 8-4
Slugs were pushed at 2:00PM

4-12 6/9/46 11 P.M.
Truck & carriers are at 105 ready to go.
Al- contains coating removal solution and is ready for slugs.
All equipment has been checked and off gas systems are in good shape.
Mt'd & pumped up several car boys of H_2SO_4 & HNO_3.
NaOH ran 1.40 sp.G.
New charts was installed about 4:30 P.M. on P.B. 1-
Duct has been mt'd.
Fairchild, Philips - McClellan

12-8 6/10/46
JCK & AMK
293 slugs loaded
Batch A in dissolver

110

8.4

6/10/46

RUN STATUS —

1MA — SETTLING IN Ag (HOT)
2 UNTIL 4'16 P.M.

1MB — in Al — about ready to dilute
2

Al ring balance reads about 0.05 or so low we think.

6/10/46 1. Please note change in method of caustic addition to A4 scrubber. Cut down to 100 rotameter reading after the temperature A4-W11 falls 10° below the reading at peak of reaction.

2. Check that 105 Bldg pushes slugs at 7:00 PM tonight.

3. Start loading slugs as soon as batch C dissolving has been completed. 4-12 shift please make necessary preparations for the slug loading.

Sl. delay due to shut down.

6/10/46
4-12 1MB — 390.2 C's 65.6 slugs

ED ⟶ T-6 outlet valve leaks. Suggest repair during day shift.

STATUS

A1	12 C	Dissolving
A9	B	Hot settling until 2⁴⁰ A.
A8	MT	
A11	12 A	settling until 3³⁸ A

NW wind! Watch air activity. — (over)

Continued,

Air activity began rising shortly after 10:00 PM.
Precipitation 10:30 - 11:00 read 6660 c/m!

Still going up.
Closed N side windows at 11:20

11:30 SWMA Sample 90.7 C's

6/11/46
12-8

Had 105 Inst. repair constant air monitor (Bad G.M. tube)

Batch C:
239 C's
62.4 slugs.

Loaded 276 slugs

A6 - Batch A - sampled
A9 - Batch B starting to A [redacted]
shift change
A-1 - Contains Batch C. Slugs have to have coats removed before starting Batch D.

Air activity was quite high all

nite since wind direction was unfavorable all night tho wind direction indicator does not show this to be the case — probably because the breeze was so slight all night as to be unable to move the wind direction indicator. Direction of wind was determined by observation of steam leaks around the area.

High air count on preceding shift (which lasted throughout this shift) was due to a material transfer in cell A under unfavorable weather conditions. Any doubting thomases can check the records for themselves.

6/11/46 1. 12-A - in W9
8-4 ~~12-B - in A4 - settling till 4 15~~
12-C - settling cold 'till 6 15/p
[redacted] SAMPLED IN A6 - READY
[redacted] BE NEUTRALIZED.
12-D - DISSOLVING.

2. WHO LABELED K_2CO_3 ON 6/6/46 AS 41.— % ?? CHEMICAL ANALYSIS ON 6/11/46 SHOWS 35.9 %. TO BE BUTTED!

6/11/46 CJW

1. Please note the following change in operating procedure: All metal solution must be jetted thru A11 to A9 to pick up metal waste heel in A11. The procedure for decantation of metal waste in A11 to A5 or A6 and sampling in A6 has not been changed. Please make sure that A6 has been rinsed with HNO_3 before waste is jetted into it for sampling.

2. Since it is probable that many samples will be taken from A6 please check that neutralized metal wastes are promptly disposed of so that they will not interfere with normal operation.

3. I appreciate your cooperation

in reporting equipment in need of maintenance work. In the future, however, try to be more specific in describing the necessary repair work so as to eliminate unnecessary rechecking of the items and delay in getting work done.

e.g. A valve may leak through packing thus requiring new packing, or it may leak through gate and require replacement.

6/11/46
4-12

6 WMB - 5.3 C's 5:15 PM
8 WMC - 170 C's
1 MD - 431.1 C's
68.1 slugs.

STATUS

A1 - Batch E diluted & Ready to Sampler
A9 - D Settling until 4:46 AM
A11 C settling until 12:20 A
A8 MT
A5 MT
A6 MT Washed out.

6/12/06 IME 369.[illegible] C's LST
12-8 271.1 C's S.T
AMR JCK 63.5 slugs

6 WMC 18 C's shipping time

H.P. reported quite high precipitation reading during the shift but a corresponding reading was not observed on the queery leading one to the conclusion that either the ~~[illegible]~~ precipitation or the constant air monitor is not telling the true story.

Run Status:

A-1 Batch F dissolving

A-5 - Batch C neutralized ready for W9.

A-9. Batch E - settling hot until 10:05 AM.

A-11 Batch D - Settling until 11:16

6/12
8-4
JE
M

8WMD - 174 c's shipping time

6/12/46
8-4
JEC
&
ML

① RUN STATUS ——:

A1 — MT. - READY FOR BATCH G DISSOLVING
A5 — NEUTRALIZED WASTE — READY FOR A6 → WQ.
A6 — MT. TO BE HNO_3 RINSED BEFORE 8WME
A9 — BATCH F - READY FOR EXTRACTION
A8 — 8WME - TO BE SAMPLED.
A11 — MT.

② ANALYTICAL RESULTS: —

1MF — 306 c's @ S.T.; 72.3 Slugs.
6WMD — 14.9 c's. @ S.T.

6/12/46 1. 4-12 shift [illegible] that
[illegible] 105 [illegible] pushed slugs at
11:00 PM.

2. 12-8 shift [illegible] have
truck and slug carriers ready
for day shift to start loading
slugs at 8 AM.

6-12-46 Slugs are being pushed by 105
4-12 on 4-12 shift.
SJR

Status:

A1 - 12G - diluted and sampled
A9 - 12F - settling until 1 45 A.M. cold.
A4 - Heel
A5 - Neutralized waste - 12 E

6/13/46
12-8
JCR + AMR

8 WMF - 300 c's @ S.T.

Run Status:

A-1 - Batch H dissolving - sp gr 1.72
@ 7 00

A6 - MT & rinsed with AN3

A-9 Batch G - Settling cold until
12 05 PM.

A-11 Batch F settling (300 c/o)

Both slug carriers loaded - one on truck upon 100 area the other one in the canal.

N.B. WHAT IS THE LATEST OPINION AS TO THE STRENGTH OF THE K_2CO_3

OK

Same as written on operating bulletin.

6/13/46 (1) RUN STATUS: —
8-4
MC & SEC

A1 — BATCH I READY TO BE DISSOLVED. (DISSOLVER CHARGED TODAY).

A5 — MT

A6 — MT

A11 — BATCH G SETTLING TILL 6^35 P.M.

A8 — MT

A9 — BATCH H SETTLING HOT TILL 5^50 P.M.

(2) ANALYSIS OF K_2CO_3 — 39.6 %
(3rd LEVEL)

③ LABORATORY ANALYSIS

8WMG — 225 c.s @ S.T.

NB A4-205 line filled up with liquid twice this shift — pit at H.P. office was emptied — Keep an eye on system — drain christmas tree just before starting next dissolving

6/16/46 EJW 1. Use jet A4-A5DB for decantation at 10:50 PM

2. When steam header at PB-2 is turned on to decant A11 batch, check all valves to A9 jets to see if they leak steam to A9. Have replaced, any valves that do leak

6-13-46 4-12 shift SJR & WJS

Vent header at P.B.# 1 was found to be hot at 8:30 P.M when ~~[illegible]~~ integrin on P.B.# 1 went up. Steaming down the header with High pressure steam was found to be effective in reducing radiation. Vent on A6-A5 jet found open. Floor behind P.B.# 1 is wet, but does not seem to be contaminated.

Power failure at 10:30 P.M. off for only about 10 mins. Air activity remained normal. Hell sand was popping outside.

6/1
12
JCK

A1 MT
A8 Batch H circulating ready to be sampled.
A9 Batch I Adding H_2SO_4
A5 Batch G neutralized
A-6 MT
HNO_3 weighed out for next dissolving in scale tank.

6/14/46 1MI 338 c/s
12-8 69.7 slugs
JCK+AMR

A-6 ring balance (sp. gr.) needs maintenance work. Giving incorrect reading. Probably L.T. also

Had maintenance clean out A9-A8DB steam line.

8WM - 72 c/s @ S.T.

1MJ - 310 c/s
66.6 slugs

A6 sampler plugged up - unplugged with steam hose.

Run Status
A-1 - Batch J.
A-5 - Batch of Carbo phosphate
A-6 - Batch H sampled
A-9 - settling cold until 9 20 AM.

Fan house monitron reading off on right hand side of scale - HP checked with cutie-pie found monitron to be at fault. Contacted 105 instruments but instrument trouble up there keeping instrument man tied up pretty well except in case of dire emergency which in the ~~case~~ opinion of the writer does not include this incident. Instrument left for time when more man power available, probably the 8-4 shift.

6/14/46
8-4 6WM8 — 13.6 C's.
8WM I 27.8 C's.

6-14-16
4-12 Run Status:
SJR

A1 - Batch L - diluted and sampled
A11 - Batch J - Settling until 2^{35} A.M.
A9 - Batch H - Settling until 6^{30} A.M.
A5 - One batch of carbophosphate solution
A6 - MT
A8 - MT

6/15/46 RUN STATUS —:
12-8

A1 — MT
A5 — MT
A6 — 8WMJ READY FOR W-9ING.
A11 — 8WMK SETTLING
UNTIL 12^{30} P.M.
A8 — MT
A9 — BATCH L (1 HR. DIGESTION
@ 80°-90° TILL A.M.)

6/14/46 EJW

1. Operation procedure change — Use jet A9-A8DB for all decantations from A9.
2. Please use up the 10 barrels of 23% caustic now on E. platform when making up 4% caustic in M10.
3. Start dissolving batch "M" when batch "L" is extracting. It is planned to use batches "M" and "N" as standby run.
4. Please clean up make-up sink and decontamination room (The cone should be ready for storage soon).

6/15/46 8-4

8 W M K — 16.4 C's.

Status

A9 Settling until 5 50 P.
A1 Still dissolving: Batch M - Hold.
A11 4" heel
A5 MT
A6 Trouble W9ing this. Keep trying

Keep decon. cone. Still reads 240 mr/hr

6/15/46 Please note the following changes in operating procedure

1. Batch "M" will pick up heel of batches K and L in A11 when jetting to A9. It is planned to toss away 8 WW if reported low by lab. The dilution water will be 100 lbs of metathesis waste from A8.

2. Batch "N" is 1/2 normal size and all reagents have been cut down proportionately. The remainder of metathesis waste will be picked up by this batch from A11 on way to A9. This will be considered dilution water for this batch

Red 3. Please check that crud filter is OK for Tomorrow's transfer.

6-15-46 Same valve on metal waste tank

4-12 shift W9 that is on discharge side of A6-W9 jet

SJR is reading over 100 R at 3 feet. At top of steps leading to W9 tank reading was 750 mr. Tow could see a pool of metal waste solution (yellow) that had come up from this underground valve. Area has been roped off. We ran a hose from the water connection near W4 over to this valve on W9, and filled the excavated hole

near the valve with water to wash the activity into the ground from where it will drain to the Retention. We filled the excavated hole up once only. the water drains out slowly. Activity however dropped by a factor of three. Reading at top of stairs leading to W9 is about 250 mr per hour. Inlet to Retention Pond reads 17 mr per hour. Hose at W4 was disconnected at the fence, and water is being run down W4 dry well to dilute the hot water in the Retention Pond. Watch this, and hold up metal wastes in Cell A until further instructions.

Run Status:

A11 - Batch L - settling until 12^{25} A.M.
A8 - cake washes
A9 - Last cake wash settling until approx. 1^{00} A.M.
A1 - Batch M - diluted & sampled
A5 - MT
A6 - 28" of metal waste heel of combined batches J + K.

6/16/46
12-8
ML & JSC.

Crud filter checked - no leaks, rate is 1800 cc/min

ANALYSIS —

① 1MM — 63.0 SLUGS
281.5 C.s @ S.T.

② 8WW — 7.2 Cs @ S.T.

RUN STATUS:—

A1 —— 1MM DISSOLVED, DILUTED & SAMPLED.

A5 —— 8WML NEUTRALIZED.

A6 —— PARTS OF 8WMJ & K READY FOR W-9'ING WHEN TANK FARM IS DE-GREMILET-IZED —. (DECONTAM-INATED).

A11 —— HEELS FROM BATCHES K & L.

A8 —— HNO_3 + 1ST CO_3 WASTE.

A9 —— 2nd METATHESIS COOLING UNTIL 7:56 A.M.

TANK FARM DECONTAMINATION —

PIT WAS KEPT FULL OF H_2O ENTIRE SHIFT AND ALLOWED TO DRAIN TO RETENTION POND. — READINGS AT 7:00 A.M. INDICATES ABOVE IS EFFECTIVE.

6/16/46
8-4

8WML — 149 C's (Leaves 3050 C's still in the run at this point)

Heels of Batch K + L plus Run M are in A11 — Per. Edd W.

TANK FARM MESS

On 8-4 shift of 6/15/46 (~3:00 PM) it was discovered that A6 could not be drained to W9 below 18" either by jetting & siphoning or straight jetting. The next shift (4-12) checked the W9 area & found a pool of hot waste soln. See pp 125-126.

8WC — 86.4 C's —

At start of this shift the retention pond was MT. Analyses were as follows:

R.P. water Inlet	7:00 AM	—	51 c/m
R.P. water "	8:40 AM	—	17 c/m
R.P. water "	11:00 AM	—	[illegible] c/m
R.P. MUD	8:40 A	—	8500 c/m/gm.
W. Pond	11:00 AM		484 c/m

Electroscope readings at R.P. inlet

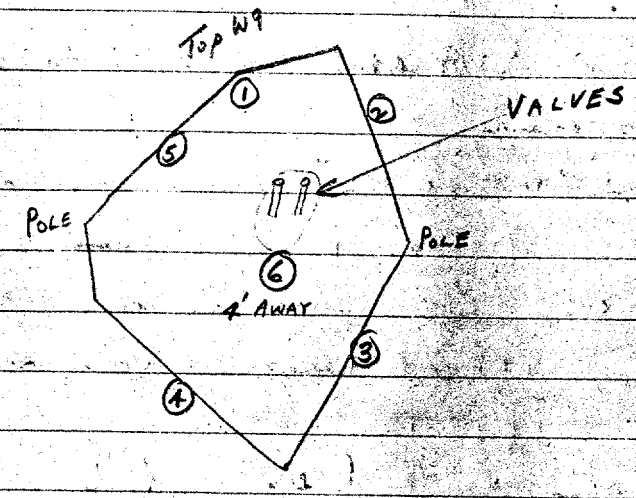
7:00 A 17 mr/hr

8:40 A 4½ mr/hr.

Continued

The excavated hole in the W9 area was still nearly full of water at 1^00 PM, indicating very slow seepage to the "saucer"

HP Readings



POINTS → (AT TAGS)	1	2	3	4	5	6
4-12 6/15/46	NO RDG.	N.R.	85 mm/hr	40 mm/hr	N.R.	N.R.
9^15 A 6/16/46	15 mm/hr	12	20	27	37	2500

It was intended to take further HP readings when the hole was MT and immediately after filling, with later readings to determine if the soaking treatment is doing any good. But this plan was abandoned because of the rain.

Continued.

It is suggested that the retention pond activity be watched very closely. If it becomes too high it may be OK to drain some of the water in the West Pond to make room for the water from the R.P. Emergency Maintenance (Ralph Raulston) was informed of this possibility and he said it would be possible to start pumping the R.P. water to the W. Pond with about 3 hours notice. He suggested keeping the R.P. level at a minimum so that if it became necessary to stop flow to White Oak Creek there wouldn't be as much to send to the W. Pond.

STILL 6/16 8-4 shift

Status

A1 – Batch N dissolving
A9 – Ready to decant at 3^{52} P.

Collier — Transfer to B6 about 3:30 AM. Get us a good 6P and try to have the evaporators ready for glassware by 8:00 AM. Remember you DON'T use the upper discharge funnel on this transfer!

WAR

6-16-46
4-12
SJR

The Run – Electrolyzing in B12 until 3:25 A.M when electrolysis will be complete.

Standby Run –

A9 – Batch M – Settling cold until 3:15 A.M.

A8 – 8CW heel (most of this was used in Batch M in A9).

A1 – Batch N – dissolving – Coming up to Specific Gravity slowly.

6/17/46
12-8
JEC

① BATCH N WAS DILUTED & SAMPLED AT SP. GR. 1.68. THE REMAINING PORTION OF $CO_3^=$ WASTE (~75#'s) WAS USED FOR DILUTION H_2O.

② TRANSFER OF RUN FROM B12 → B6 WAS CARRIED OUT WITHOUT ANY NOTICABLE CATASTROPHES. WAS DIFFICULT TO ASCERTAIN WHEN B8 WAS MT. AS "GURGLING" OF MIKE

WAS MISSING. PIPETTE AIR FLOW CONFIRMED MY BELIEF OF WHEN IT WAS MT. VOLUME IN B6 UPON TRANSFER WAS ~ 3660 CC. WHICH SEEMS CORRECT AS COMPARED WITH B12 VOL. BEFORE ELECTROLYSIS.

③ WILL DAY SHIFT PLEASE UNPLUG THE BOTTLENECK, NAMELY A6 —— A5 —— W9. NO MENTION HAS BEEN MADE AS TO THE WORKING ORDER OF A6-W9 JET SO CONSEQUENTLY WORKING SPACE IS QUITE CRAMPED.

④ RUN STATUS ——

A1 —— MT
A5 —— 8WML NEUTRALIZED
A6 —— PARTS OF 8WMJ & K
A11 —— 8WMM SETTLING TILL ????? 10^{35} A
A8 —— MT
A9 —— BATCH N SETTLING HOT TILL 9^{25} AM.
B12 —— PbO_2
B6 —— ~350 CC. READY FOR GLASS-SIDE:

6P ANALYSIS —— 3149 CURIES @ S.T.
PB —— 494 mg. (HUH, HUH)

8-4 – 6/17/46

Decont. of W9 Spill

HP Readings – Refer to Drawing p. 129

Points	1	2	3	4	5	6
Hole Nearly MT	25 mr/hr	15	45	50	100	6 R/hr.
Hole Full	10	10	15	19	33	2640

When water seeps out refill. This treatment will continue until the run is over + we have time to do something more effective. Better watch results of Retention Pond water analyses. Next time a man goes out to the Farm shut off the water entering the (W4?) dry well by hose.

Status

Getting ready to evaporate. Contact supervision (E.W. or Levenson)
B3 – "Flaming" nitric & washes
B6 – 200 cc wash soln
B20T – HCl – Ether wash (over)

Continued.

A5-A6 - Status unknown to 3 55 PM.
Pressly still working on it.

6/17/46 Program For Tonight

1. Evaporate run in B19 and immediately take Skyshine reading before putting plug cone. After taking skyshine reading, insert plug 1" into cone and let it stay in this position until tomorrow 8-4 shift
2. Continue run in cell A through extraction washes and metathesis but hold all metal waste in cell A, do not send to tank farm
3. Decontaminate floor around B3 and B6 samplers and clean up building in general.

6-17-46 Finished evap. the Run at 9 P.M.
4-12 Inspection showed a slightly brown cake with
JR & WJS some iron in it pretty close to the bottom of
the cone. A preliminary skyshine reading gave
21.3 R. The cone is in the carrier with
the plug just resting in it.
Floor cleaned at B-6 blister
brought down counts to 6.00
A9 last extraction cake wash
settling till 11 40 P.M. Sitting.
A11 batch N settling.
A8 8WW
A5 batch M neutr —
A6 metal waste heels neutralized

6/18/46 1.) 1ST CO_3 METATHESIS SETTLING.
12-8 IN A9 UNTIL A5, A6, A11, & A8 ARE MT.
JEC

A8 — 8WW — 8.0 C's @ S.T.
A11 — 8WMN — SETTLING

② HOUSEKEEPING DONE ON 2nd & 3rd FLOORS —.

6/18/46 B-3 3WPb - sampled 42 c's

B-6 B-6 rinse - 2 liters 19.6 c's

NOT CLEAR WHEN SHIPPED

A-5 neutralized waste

B-17 240 ml rinse 80 to 90 c's
Save; part going to c building

B-20T HCl ether waste

A-6 reads 5". Instruments worked on manometer. It is probably M.T.

Please fill in the sheet for Picnic attendance

6-18-46 Program for Tonight
1. Clean floor around B6 blister & outside gate. Have H.P survey the area.
2. Steam carrier containing about 50 c.c. of product for C bldg. Try not to get any steam into the cone. Hot, about 100 R, use caution.

6-1
SJR

3. Rinse cell B equipment with H_2O, dil. HNO_3 + heat.

6-18-46 Adapter tubes drilled into
SJR + WJS "C" bldg. carrier.

Set screw on adapter was broken off; maintenance is stopping the hole.

All waste from cell B jetted to A5 to W11 to W9 + valve set for normal waste disposal W11-W5.

Steamed hot carrier in decon-room, didn't do any good.

Tanks B1, B3, B6 and B10 were rinsed out with water, and now are on boil with 30% HNO_3. Start decontamination in Cell B on tanks B3, B1, B6 and B10 only until HCl-ether waste in B20 T is disposed of to 706 C via B19 on day shift tomorrow.

The stand-by Run is in A9 still requiring one more metathesis. Acid is added to Cell B via Scale tanks to funnel rack which has a line going to B10.

3-1121 3-4011
2-4053

138

6/19/46
12-8
JEC

① Steamed 706-ip "stiff" all night.-

② Neutralized HNO_3 in B Vessels with 50% Drum Caustic, & Recharged all vessels (B1, 3, 6, & 10) with fresh acid, and steamed, boiled, & sparged. Solution boiling at shift change.

③ No waste discharged to Tank Farm during shift. —— ARE WE TO USE A6-W9 Jet NOW ??

6/19/46 Still adding H_2O to W9 area hole.

Program for Tonight

6/19/46

1. Top priority job

a) Clean building outside of cells, check that all floors, including area around B6 and B3 blisters, are clean.

b) The equipment decontamination room is in a bad mess and almost everything in there is crapped up. Decontament everything you possibly can and restand everything when clean. The floor in there is hot too, wear rubbers

check the adapter on floor.

c) Clean up the building in general and put things where they belong.

2 Make all solutions that are now in cell A trailer to A6 and hold there until further notice. Do not send it to tank farm.

3 Start decontaminating cell B vessels and glass equipment with HVO_3 only. Be sure the NH_3 is on to A6 when

boiling the HNO_3.

Notice:

To improve our relation with 105 supervision and the instrument dept, please request shift instrument service through 105 bldg supervisor. Do not contact the instrument man directly without talking first to the 105 supervisor.

6-17-46
8-4

Tanks B1, 3, 6, 12, 10 cooling after a dil. HNO_3 treatment.

Dil HNO_3 added to B17 started sparging at 3 pm.

Batch of CO_3 in A5 for cell B acid waste also waste in A11.

NOTICE — C Bldg was unable to move out the Strontium carrier so it has been left on 1st floor, So. side of Cell A. Stay away. It is hot! They will remove it in the morning.

Continued -

D. Davis of H.P. says there will be some smear test results ready soon & that some look crapped up. Check with H.P.

6-19-46
4-12

All floor contaminations were cleaned with the exceptions of those reading less than 350 c/m. The background of the decontamination room dropped from 200 mr at the entrance to 12. The carrier now has one hot spot, 2500mr at 2". The general reading is approx 150mr One sample carrier is reading 3r.

6/20/46 (1) NOTHING LIKE SCRUBBING FLOORS ON
12-8 YOUR BIRTHDAY! "P.O." PLENTY.
DEC

(2) STATUS OF A "CRAPPED-UP" BLDG:

A) DECONTAMINATION ROOM —
ALL OR MENTIONABLES SUCH AS SAMPLE CARRIERS, TONGS, BUCKETS, TOOLS, ETC., STEAMING IN HOT $CO_3^=$ SOLUTION. THIS WAS LAST RESORT AFTER CONC. HNO_3.
SKID TRUCK WHEEL READING ~ 1.0 R.

FLOOR SCRUBBED WITH HNO_3. ALL PB BRICKS DISCARDED. STEAMING SKID CART ALL NITE. FLOOR IN FRONT OF DECON. RM. READING ~ 25 mr — BUT NO SMEARS, NEITHER DOES DECON. RM. FLOOR SMEAR.

B) B3-B6 SAMPLE BLISTER AREA — VIGOROUS SCRUBBING — NO SMEAR — STILL READING ~ 50 mr. CANT TELL WHETHER COMING FROM BLISTER OR CELL. DUCT.

C). ALL OTHER SMEARABLE AREAS SEEM OKEH.

③ INSTALLED NH_3 CYLINDER.

④ CLL A VESSELS ⟶ A6.

⑤ NO PROPER LENGTH CABLES TO INSERT CHIMNEY PLUGS.

⑥. MT'D DIL. HNO_3 FROM B17 — RECHARGED B17, B3, B10, B1 & B6 WITH 30% HNO_3. STEAMING FORTH AT SHIFT CHANGE. $CO_3^=$ IN AN FOR NEUTRALIZING.

(7) ~2.0L. 30% HNO_3 TO B21R 1R8
SPARGED MAJOR PART OF SHIFT.

(8) AS USUAL — GENERAL
HOUSKEEPING —.

Program For Tonight

1. Continue decontamination of cell B vessels according to instructions which will be attached to clipboard at 4 PM. Use HNO_3 only and try not to spill acid on floor, yet. Concentrate on the cycle which includes B12 since this will probably be the toughest one to complete.
2. Add all HNO_3 to B1 through A9, alternate using both gets from A9 to B1
3. Please indicate in log, the number of treatments each vessel gets
4. Take a probe reading over stool at entrance to cell once each shift to check progress in decontamination.

Notice

4-12 shift please greet Collier with "Happy Birthday" song at shift change.

8-4 6-20

~~A-9 contains 20% nitric~~

B-1, B-3, B-6, B-10 MT'D of 30% HNO_3 which was in the tanks at shift change and given two HNO_3 treatments. The second is in the cell B tanks at 4PM and boiling

B-12 contains 20% HNO_3 and steam on the jacket.

Three nitric rinses thru cond filter disk B-26 & B-27 B-12 to B-3.

A-5 MTD to W-11

B-26 3 liters 20% HNO_3

Leave glass ware equipment as is until day shift. $CaCl_2$ trap at glass PB is hot. B21T has 1800 cc of Na_2CO_3 soln. to be used for further rinsing.

6-20-46
4-12
JCK

Cell B reading at 1700 was 7½ r on the 0 to 20r probe placed 6 in above the stool

Decontamination (according to Sheet #1) schedule was repeated 4 times. At shift change solutions will be in B-6, B-3 & B-10 for the 5th pass

Decontamination - according to shee #2 - shedule was carried out completely for 1 cycle. The 2nd cycle is now at the step - boil for 30 minutes in B-12 - Boiling began at 11.45 pm

Procedure for steaming seemed quite indefinite.

6/21/46
12-8
JEC

① FOLLOWED DECONTAMINATION AS INDICATED ON SHEETS.

② STEAMED B9 & B11 ALTERNATELY ALL NITE. -.

P.S. WOULD AID CONSIDERABLY IF MOVABLE FUNNEL RACK WAS MARKED B19, B20, & B21 OR MORE THAN TWO PEOPLE KNEW HOW TO OPERATE THESE SO-CALLED INTRICATE PIECES.

EJW - HOW ABOUT A CONNECTION ON B2 PRESS. - VAC, LINE FOR STEAMING, ETC.

(3) A5 HAS NEUTRALIZED ACID → W11.
A9 CONTAINS SOME 6 ∂. HNO, FOR NEW CHARGE.

(4) BRAVO ——

CELL B READING — 3.2 R

(over)

6/21/46 1. Use 5R Cutie fin when taking
EJW reading in cell B so that some
comparison between readings can
be made.

2. Repeat last night's cycle
using 15% flux + 10% HNO_3
solution but do not hurt
material but sponge for the
period designated.

3. Continue hosing cell B as
fast as the gets can take
it out, use the hose stand
provided for this purpose. Do not
pump water out of the sump
into drain, it is still too hot.

4. Do not start stripping cell yet,
this is not yet practical sure
found but the board may

6. Do not put flux solution
in A9.

7. Note that all manometer to
cell B vessels are equalized out.

4-21-46 Johnny Farmer:

Glassware in cubicle gave a carbonate rinse + a H_2O rinse. All vessels in cubicle + B24 should be empty.

Follow through with a HNO_3 + a H_2O cycle. You may find that the filtration will be slower.

Stan Rimslow will explain some of the difficulties that occurred.

A preliminary steam treatment was attempted on Cell B, but too much activity, air and otherwise, got out of the cell. So, it will be necessary to continue to run solutions through the cell B tanks according to the three cycles outlined, and to ~~continue~~ hose down the cell using the fire-hose and the stand. Concentrate on hosing down the cell right now and get to W11 and to A6 to W11. Sand blaster is being set up, but do not use for awhile. ~~Stan~~

A steam hose is set up to B11. Make sure that when steam is on, the condensate goes to B19. Condensate to either B20R or B21R will fill up the glassware, and possibly overflow the cubicle. We filled up B21R this way, but luckily did not overflow the cubicle.

Two sections of firehose blew out on us while hosing down the Cell. We got one more old section of hose and two ~~more~~ new ones from the fire-house. One of the new sections of fire-hose is on the line now, and the other is stored away. The kinks should first about be ironed out of this hosing business.

Reading at Cell Doorway in 5R by Curtis Pie.

6/21/46
4-12

Completed five cycles of Fluo. through B-16 3+10
three cycles through R.W. B-17 B-26 + 7 + B-12
Steamed through Vac. + Press. Lines B-2
B-9 + B 11

Reading in cell, 3' inside 3' off of Floor
3.8 R. At the step down to cell
Floor 2.1 R.
Cell B, Tanks MT. At 12:00 m.

6-22 12-8

Four cycles of fluo thru B-17
B-26 to B-27

Steamed B-2, B-9, B-11

Steamed B-1 to B-6 for one
hour. Air count okay.

Hosed down cell B but did

not jet thru A-6 tank to W-11

3 cycles of 5% fluo 10% HNO_3
thru B-1, B-3, B-6, B-10

it might turn where stool is
now placed <1R 3' inside
cell 5' off floor 3.3 R
by cube pie.

B cell tanks M.T.

6-22-46 At the step down to Cell floor
8-4 the reading is now 1200 mr.
SJR B1, B3, B6 & B10 have fluo
solution agitating in them. Do not heat this
fluo solution.

Cell was given a steam-carbonate treatment for about 45 minutes only. H.P. did not get any hot air count (600 c./min). On the next carbonate treatment it should be safe to steam Cell for 1½ hours, but watch air count. The sand blaster is full of sodium carbonate now. The offgas system should be steamed down when giving the Cell a steam-carbonate treatment.

Continue the cycles through the tanks, and, whenever possible, keep hosing the Cell with the firehose and stand as often as possible.

Farmers find that the glassware in the entrides fills up with water whenever the cell is being hosed down. Hence, keep jets C20-B22 and C21-B22 on, whenever you are hosing down the cell.

STATUS OF CUBICLES

Steam going into cell I
Jet C21 — B22 on.
Opened cell I:
700mr/hr max. with plug in
> 6R/hr with plug removed (Reading in open doorway)

The plug was placed in the decon room but not in the drum. It is pretty warm. Remember to have C21 - B22 jet on when steaming the cubicle.

TONY SKRABA You are very apt to find the reactors full when you come in. Apparently this happens when the cell is being hosed. So be sure to MT them before rinsing glassware or you'll have a back-up to the PB.

Tony → The monitor by the glass PB is out of order. Better have a cutie-pie sitting by your side when you work there. And watch the lines & traps very closely when you apply vacuum.
Farmakes

6/22/46
4-12
AMR

Sand blasted cell with Na_2CO_3 - steam 1½ hrs - and hosed down with water to full extent of available manpower.

2 cycles of boiling HNO_3 run thru vessels. Change over was made after cleaning out vessels with water rinses (to get rid of flux) before steaming.

A-9 56" of 30% HNO_3

B-12 4 liters 30% HNO_3

Glassware - not touched this shift probably has water in it from fire-hosing.

Readings at end of shift
at doorway, 3' off floor 1200 mr/hr
3 feet in cell, 5' off floor 2.4 r.

12-8 6-23

Steamed cell I with B-21 - B-22 on, for 6 hrs.

Filled B-cell tanks B-1, B-3 B-6, B-10, B-12 with 30% HNO_3 & heated 2 hrs. MT'D to A-5.

Blasted cell B with carbonate and citric acid, steamed for four hours and hosed down.

Reading: 6" inside cell 3' up - 1300 MR/hr; 3' inside 5' up 2.6R

Air fan drawing (>6R inside of barricade)

One batch of carbonate in A-5 to which we have added about 350# 30% HNO_3

6-23-46
8-4
SOR

Reading at cell doorway at step down into cell is 1000 mr.

Gave cell a steam-carbonate treatment for two hours with large fan off, but did not lower reading.

Hosing during the morning got reading down from 1200 mr to 1000 mr. Continue with:

1.) Hosing (at least two hours)
2.) Steam carbonate treatment - for two hours with large fan off.
3.) Steaming down the offgas system - steam is on now.
4.) Cycles of 30% HNO_3 through the tanks - A7 chus 53 inches 7 30% HNO_3.

When hosing Cell B, the water runs into Cell A. Watch liquid level in Cell A so that you do not overflow Cell A.

6-23-46
4-12
AMR

E & W Sarp: O.K to let glassware alone until further notice.

We had H.P. go into the cell with a fishpole at the beginning of the shift to try to find out where the high background was coming from

Here are the results:
Floor area around B19 >14R. The whole area around B19 in general walls, floor apparatus etc seemed hot as hell.

Plug K2 - 2R
" K3 - 5R
" J4 - 5R
} Probably coming thru holes from lead pagoda

B-3 - 5R
B10 - 8R

Keep AD-AS jet going or the big fan won't be able to pull anything as the duct fills up very easily from hosing.

Status.
Flue in B1, B6, B3, + B10 at shift change

Ran citric solns from funnels on 3rd floor into B19 allowed to spill on floor with intermittent hosing of the same corner. Hosed 6 times.

Ran 2 cycles of boiling HNO_3 thru vessels before changing to flue.

Believe he background coming from B19 area. Should probably rig up a pump & pump atole, opalin, carbonate caustic, powdered soap etc into that corner with HNO_3 as a last resort. Pump is in low storage.

H.P. readings

1 R at doorway
2.1 R 3' inside

W-5 1' 2" capacity left.

6-24-46

attempted to rig up pump to spray solution in B-19 area thru a plug hole. The pump wont work. We sent it to the shop and they tightened it up and put a new connection on inlet side of pump. Suggest a new pump

Finished the flow to 10% nitric cycle and sent 30% HNO_3 thru the tanks

Placed a steam hose thru a plug hole & steamed B-19.

Hosed down the cell several times.

Blasted cell B with carbonate & steamed for two hours & hosed.

Readings 1.2R at doorway 3' up & 6" from step. The reading 3' off step & 5' up is 1.7 R/hr.

Leak in cell duct outside of building

6-24-46
8-4
WJS

Leak in cell duct outside the bldg. located + roped off. Using a red can to catch ~~[illegible]~~ hot drippings. Area around the gravel is quite hot, at spots it reads 450 mr/hr at 1". Since nothing much can be done until cell is decontaminated + duct cleaned out, keep can under leak + drain periodically.

Cell reading beginning of shift 1250 mr/hr. Hosed down + blasted citric acid over equipment + floor, filled B10 + B3 with 30% HNO_3, + steamed cell for 2½ hrs. Air count on 3rd level between 8000 + 10000. Hosed down cell for second time + blasted more citric acid into cell, added another shot of 30% HNO_3 to B10 + B3, cell steaming at shift change.

Sand blaster contains some citric acid.

Suggest using CO_3 as next decontaminant

Cell reading 1200 mr/hr. at 1' inside doorway 3' (over) above floor.

Small spray pump not worth a damn should it be low storage area. Why not use gravity feed from 3rd floor as previously.

Cleaned up area around cubicle.

Used up all available man-power. Could not spend time on glassware.

Note → Since W-5 is 1½' from overflowing & analysis is 187,000 cpm do not pour down cell & avoid using as much H_2O as possible in cells. Keep up decontaminating the equipment using 20-30% carbonate, 30% HNO_3 + 10% fluo HNO_3 cycles & holding all wastes in A5 + A6. Do not send out to tank farm.

A-5 full neutralized waste.
A-6 MT

6/24/46
4-12
AMR

A 5 - 60"
A 6 - 57"

Doorway 750 mr/hr
3 feet inside 1.5 R/hr

The special type can for decontaminating the B19 head heater was put into place and filled with HNO_3.

A layer of carbonate of soda was put on floor in the B19 area and a carboy of HNO_3 sprayed over the B19 equipment thru a plug on the 3rd floor. A few minutes after adding the acid the area was hosed down with water and jetted to A6.

Did quite a bit of Housekeeping and straightened up the place.

162
6/25/46
12-8
JRF.

Steamed Cell B until about 2:00 A.M. Air count began getting out of hand, ~3000 & still climbing so this treatment was stopped. Air count dropped rapidly.

Treated Cell B tanks with 30% HNO_3; hot, rest of shift. This treatment was lengthened because of the acute disposal problem.

W-5 reading 11'5". See Tank Farm log. Better do something soon.

Tanks B1, B3, B6, B10, + B12 have HNO_3 in them at end of shift.

A5 — 57"

A6 — 56"

Cell activity.

1' inside, 3' from floor — 850 mr/hr.

3' inside, 5' from floor — 1.2 R/hr.

Did not touch cubicles, as per instructions on p. 155.

6-25-46

8-4 Shoveled in 200# soda ash, concentrated
HJ our effort on the B19 area & sump,
steamed for 3 hours & hosed down
cell.

at reference pt. Reading before 900 mr/hr
" " " after 550 mr/hr
3' inside 4' above floor, after 750 mr/hr

Repeated above treatment, cell now
steaming, started at 3:00 PM

B tanks emptied of acid &
manometer equalized.
A5 39" neutralized waste all H2O.
A6 MT
After using movable pipette please
reinsert them into the rest wells.
Air activity low all day.

6/25/46

4-12 Used all Manganese hassing & spraying
soda ash, & citric acid on cell.
Steamed cell five hours during
shift
air activity ok
Cell activity 1' inside 3' from floor 700 mr
" " 3 " 5' " " -1200 mr/hr

6/26/46

12-8 Used HNO_3, citric, sodaash, & H_2O hosing. Concentrated on North half of Cell B. Introduced acid thru hole above B19 area. In spite of what appeared to be excellent acid treatment the HP survey showed no reduction in activity from the 4-12 shift. This indicates that other techniques are in order but our man power was used up.

6/

6/26/46 Program for Tonight

1. Add 20% soda ash to B1, B3, B6, B10, B17, B12 until they overflow then steam sparge each one for couple of hours (sparge B17 with B8 pipette and B12 with B7 pipette)
2. Clean out pipe from B12 probe to cell with steam, by lifting probe out of cell and steaming pipe to the cell
3. After couple hours of steam sparging with carbonate in tanks, cover cell with soda ash or citric and steam down cells with all jets to cell B on.
4. Please clean up building, esp. decontamination room
5. Please have H.P. check precipitron readings while steaming cell.

6-26-46
4-12 Filled B1-B6-B10-B3-B12-B17 with 20% Carbonate Soln to overflow and steam sparged for 2 hrs, emptied tanks then steamed entire cell for rest of shift. Reading at end of shift — 500 MR @ 1 ft inside doorway and 900 MR @ 3 ft inside of doorway

6-27-46 (12 to 8)

We cleaned up decontamination room to the extent of manpower. Cell B. Vessels were treated with Carbonate and sparged. The blower seems to be plugged so we applied CO_2 to cell by hand as best we could and stemmed the rest of shift—

1 ft. Inside door 450 mr.
3 ft. " " 750 mr.

Air count was low the entire shift.

Roy M

6-27-46
8-4

Cell Survey
20 R Probe 9 or AM

B23	6.0 R	N sump	10.3
B17	7.5	Center sump	2.4
B7	2.6	S sump	0.6
B8	2.0	air heater	7.4
U D funnel	1.6	head heater	9.0
Horseshoe	2.4		
B9	1.5		
B11	2.0		
B2	<1.0		

Reference point 1' in 3' up 460 mr.
Center cell 1.9 R

6/27/46 Program For Tonight
EJW

1. Overflow B1, B3, B10, B6, B17 and B12 with 20% soda ash solution (20 lb soda ash in 80 lb water). Steam sparge each for 2 hours, (sparge B17 and B12 with B7 and B8 pipettes).
2. After 2 hours of steam sparging, cover cell floor with soda ash or citric acid and steam down the cell. Leave the soda ash solution in the tanks while steaming cell
3. Except while steaming, hose the cell by attaching it to

iron stand and by the [illegible] position periodically. Use the [illegible] pump to dispose of the water, it is fast enough to keep up with the fire hose. Keep an eye on the pump in case it loses prime also make sure duct jet is on.

Notice

Supervisors meeting on Wednesday July 3rd at 3:00 PM.

6-27-46 4 – 12

We ran one cycle each of Carbonate and acid in Cell B, steamed the Cell for about 4 hours, and each spent our time hosing down cell. but noticed very little drop in radiation. Activity now seems to be in B22 and B 19 area.

6-28 12 to 8

Added CO_3 Solution (20%) to all Cell B Vessels and boiled for a Couple of hours. We washed & steamed for the rest of shift and must have hit pay dirt some where -

1 ft. inside, 3 ft up - 300 mr.
3 " " 5 " " - 500 mr.

P.E.P - Roy M -

6/28 Please take care of housekeeping
EJW items enclosed also repeat last night's performance.

6-28 4-12

Shift was spent boiling Carbonate in B tanks and hosing down Cell. Readings at end of shift

1 ft inside & 3 ft high - 290 mr
3 ft inside & 5 ft high - 625 mr.

A few housekeeping items were also taken care of (checked on list) Acid wash seems to do the most good

6/29/46 Program for Tonight
EJW

1. Please unplug sand blaster so that it can be returned to paint shop Monday.
2. Concentrate on hosing down cell especially B12, the horseshoe and B19 area.
3. Try spraying the B19 area and vamp with liquid soap (once) and then steam down cell for couple of hours. Do not put soap in tanks.

6-29-46 4-12

Readings at end of shift

1 ft in + 3 ft up	340 MR
3 ft in + 5 ft up	440 MR

We sprayed the floor + B19 area with liquid soap and steamed cell for about 3 hours. Rest of shift was spent hosing down.

6-30-46 8-4

60% HNO_3 in B-6 and B-3 Circulating through samplers. Discard if you think best.

6-30-46. 4-12

Readings at end of shift

1 ft in + 3 ft up 285

3 ft in + 5 ft up 375

Sprayed cell with acid and hosed down. Concentrated on B19 & B12 area

7/1-46 12-8

Reading at end of Shift

1 ft in + 3 ft up 2.04 MR/hr

3 ft in + 5 ft up 3.00 MR/hr

sprayed cell with acid and hosed down. Concentrated on B19 & B12 area

Program for Tonight

1. Continue running water to B17 until tomorrow morning. The water line to B17 will be lift in through shift change.

2. Continue steaming all 6 funnels in the movable funnel rack and all funnels in the golden horseshoe with the steam pipes provided. Steam the 6 movable funnels as follows:

a) Top E funnel
Push rod all the way in

b) Top W funnel
Push rod all the way in

c) Top center funnel
Pull rod all the way out

d) Bottom E funnel
Steam in any position, but watch B21, it will run over and cubicle will have to be emptied

e) Bottom center funnel
Steam in any position, but watch B20, it will run over, keep cubicle empty

(2) Bottom E funnel
Steam in any position, it will run to B19.

3. Continue hosing down cell while carrying on above decontamination

7-2-46 12-8

I. Steam is on horse shoe funnels and H_2O is running into B-17.

7/2/46
8-4
AMR

Ran HNO_3 from B21 → B20 → B3 → B17

Sprayed cell III with HNO_3

Steamed top W + top E funnel with push rod all the way in this shift.

Hosed down cell B with water.

AD - AS } jets running at shift change
AS - W11 }

7-2-46. 4-12

Steam is on to Lower Neat Funnel
Jets AD to AS + AS to W-11 are on.
Water to B-17 is off.

7-3-46 12-8

Steaming moveable funnels
Water is on to B.17
Hosed down Cell B. with Water
Jets AD to AS are on & BS-W11

7/3/46
8-4

7/3/46 Program For Tonight

Continue same program lined up on page 172 with the exception of the following change — use steam on hot water in B17 and use hot and cold water in the funnels.

Nelson you use water in the funnels, some of the water will always run into the cubicles, so keep the jets from cubicles going at all times.

Make sure the duct is always empty so that there is sufficient air sweep through cell B. High air count was experienced recently because of lack of vacuum.

7-3-46 8-4

Steaming B17, water hose in lower East funnel, — hot water hose from D'cantan room to wall + Floor in B19 area, based down cell with fixed

~~have~~ AS-A11 + AD-AS jets left on over shift change

4-12 July 3rd.
Continued remote controls decontamination of Cell B. Jet from B21 + 20 are on to B22. Cleaned up all phones, Desks + chairs so jackie can stay cool and not get hot again. T.E.C. returned. Some clothing, flashlight, + rubbers.
L.L.F. P.E.P. R.y M

7/4-46 12-8
Hot water runing to B.17 from decontamination Room.
Steaming W. top funnel
Jets A.D. to A.S. & AS to W11 left on over shift change

7-4-46 8-4
Continued steaming and hosing cell with hot water.
Cut off jets AD to AS and AS to W11.

7/4/46 4 - 12

Continued decontamination of Cell B.

7/5-46 12-8
Continued Steaming and hosing cell with Hot Water
Jets { AD to AS AS to W11 off

7/5/46 Program For Tonight
EJW
1. Spray lead cell II with solution of citric acid and soda ash and steam. Cell II overflows to cell III so watch out for cell III liquid level.
2. Concentrate on hosing of walls around movable funnel rack esp. the W wall. Continue steaming B17.

4-12
7/5/46 Steaming Cell II - Jets are on up stairs ~~to~~ 20 & 21 to B10
Hot water is spraying movable pipettes. Steaming B 17.
Turned raw Water on to bldg.
Jetting from BS to B10 & AD to AS.

178
7-6-44 12-8

Continued hosing and steaming of cells. Sprayed cell II with citric acid and soda ash solution.

Cleaned around cubicles. Spots on floor and below cell 4 door reading as much as 1500 mr/hr. Last reading the hottest spots were about 20 mr/hr.

Jets C-20 & 21 to B-22 to B-10 on. Also Jets at PB3.

4-12 7/6/46

Cleaned up entire 3rd floor, Removed all carboys & trash Washed out all cell B. tanks several times -
Hosed down cell B. for a couple of hours.
Washed lead & concrete floor around cubicals.
Covered floor around cubical with citric acid. Let remain over shift change.

7/6/46
EJW

1. Please clean up the entire building top to bottom, decontaminate lead and concrete floor in front of cubicles.
2. Continue hosing down the area around the [illegible] funnel rack. Keep the cubicle gets on.

Empty and rinse all cell B vessels from HCl which was sprayed in cell may have gotten into the vessels.

over

Program For Tonight

7/8/46 1. Work in decontamination room. Try to decontaminate and remove as many pieces of equipment as you possibly can. Do not throw away any pieces.

Try to take some of the contamination off the old magnet. Do not spend too much time on it — then store it in the corral.

2. Clean up cell B entrance and sweep out all junk on cell B 12-8 floor. Check the cotton gloves and save if clean — there is a glove shortage again.

3. Empty and bail out tanks M10 and T6. Flush out tank M12 and pump T3. Pump T3 will be overhauled tomorrow.

7/8/46 4-12

Cleaned up decontamination Room. Put B12 and other parts in HNO_3 and boiled them. Cleaned up one carrier & stand. Hot water is now running over the other one.

Flushed out M10 several times. Its now being air operated. M3 has been flushed out. T6 was flushed out and not boiled. T3 + T2 have been washed.

7-9-46 — 12-8

Cleaned cell-B floor. Put all nuts and bolts in stainless steel bucket. Checked all gloves and suppers at doorway. Threw out bad ones.

Drained water from M-10 and flushed it again.

Program for Tonight

7/9/46 1. Continue decontamination of cubicle (cell II only) with soda ash solution only.
2 Try to finish work in decontamination room and clean up around entrance to cell B

[illegible] 4-12
Cleaned up decontamination room. Stored carrier after scrubbing with acid & acetone. Smears were taken and it OK. Less than 100 MPH.
Continued decontamination of cell II with soda ash and steam.

7-9/46 4-12
Cleaned up carrier & stored over hot lab.
Cont. to use soda ash & steam on cell II
steam is on at shift change.

7-10-46 12-8 Continued work on cell II.
Cleaned cell B entrance.

Program for Tonight

7/10/46 EJW 1. Clean out and flush nitric and tank and pump in make-up pit and nitric head tank. Pump will be replaced tomorrow

2. Nitric Pump cleaned and Pit Head tank flush out with water and cleaned up around cell B. door.

4-12.

Notice

7/11/46 JW Please check safe in Whitney's office each day on 4-12 shift

Program

1. Please clean up the building. Have HP man check smears on floors around lead cubicles and N end of cell B. Please clean them up if floors are found to smear high.

2. Continue work in decontamination room and

remove as many fuses as possible after closing. Pay particular attention to platinum lines, try to get it down as low as possible by tomorrow.

4-12

7-12-44 12-8

Scrubbed floor around cubicles and Cell 8 door with soap, water and old Dutch cleanser. Smears were OK after scrubbing.

Cleaned out tanks in decon. rm. Stored cones and plugs over hot labs.

7/12/46 Prog. Kon Enright
OJW

1. Clean and flush out with water, the sulfuric acid pump and tank make-up pit. Do not pump any water to acid in head tank.

2. The concrete around the lead floor around cubicle is still smearing hot, try further decontamination.

3. Clean up building in general, remove carboys on 3rd floor, put plugs back in chimney etc.

4. Shift maintenance [illegible] will be lined up [illegible] at PB-4A and PB-5. [illegible] what we want done.

a) If valve is leaking through to cell, replace with new valve.

b) If it leaks through packing have them repack valve.

4-12 - Scrubbed floor around cubicle and Smears was 300 CTM Tank in Decon-Room. Read 150. and does not Smears Bad - Put Block Back in chimney cleaned.

acid Pump Hose drawn. Pit Valves on. PB 4 & 5 charged -

7/13/46 EJW Program For Week-end.
Please note housekeeping inspection report attached to clipboard. You may notice that we are getting extremely particular on this inspection; this is due to the plant inspection due next Wednesday. Please do a very thorough job.

7/15/46 EJW 1. Please check that headers at PB-4A and PB-5 are off so that cell floor will be dry for lead burning tomorrow. Clean up cell floor.

2. Continue decontamination of platinum [illegible] in decontamination room.

3. The soda ash on platform in make up room still looks a bit sloppy. Junk under sink also looks bad.

4. Please move periscope from in front of power panel to S side cell A.

Notice

Anyone who has hot shoes in personnel decontamination room please remove same by tomorrow at 8 A.M. at which time we will dispose of them.

7/16/46 EJW

Program For Tonight

1. Remove lead from between tracks in B19 area and store same on E side cell B. [illegible] your exposure time.
2. Clean up entrance to cell B and N side of cell [illegible]. Put away welding [illegible] behind fence at entrance to cell B.
3. Try to put some order into the glass equipment cabinet.
4. Anything else you can do to pretty up the place for tomorrow's inspection will be appreciated

7/18/46 EJW

1. A dummy [illegible] is being run in B12. Keep it at 25 amps until 7:45 P.M., then sample it and throw out. Make sure the sample is taken before current is shut off, take it directly out of B12, about 5 cc.

2. Check lines from all funnels, movable ones as well as golden horseshoe for leaks. (Run hose water into each). Tag any leaks you may find and report in log.

7/18/46

4-12 1- Sampled B-12 @ 7:45 + cleaned out the tank with two shots of 25% HNO_3 + H_2O_2 all waste is now in B-3,

2- Leaks! Leaks! all over golden horse S, we taped what we had time for but pretty sure there is still more

7-19-46.
12-8 Checked funnel lines and found several more leaks. Suggest that they be checked again when the welder is here so he can see the exact location of each leak.

Dummy run on B-12 after 9 hours contained 24 mg Pb total.

4-12
7/22/46 The valve handles in lead cuxicals B-3 + B-17, had 7,000 CPM are ok Nash.

7-23-46
WJL Believe we have most of the leaks welded. However the 4-12 + 12-8 shifts check all lines for leaks + use danger tags to label any that are found. Do not use chalk or crayon pencil. Make a written report of the number of leaks + approximate location of each in the log book.

UX, column in operation, please continue
AMR

7/23/46 Gunnel lines from golden horseshoe
4-12 To B-6 B-3 B-1 + B-26 have leaks
seem to be on bottom of weld. in
all cases, tags are tied directly on leaks
-2- Lines from upper discharge to glass
ware and B-19 are ok.

7/24/46
12-8 Completed U.X. Column operation.

7/25/46 Program For Tonight

1. All leaks have been taken care of except one. Check all lines again + tag if any new leaks occur.

2. If when checking for leaks the stop pressure on the gauge does not rise make a note of the jet lines in which the plug occurred.

3. Clean cell B

UX, column in operation

12-8 7/24/46

operations of ux, cont.
also cleaned up cell B floor & entrance to cell.
Checked lines for leaks
a list is on desk.

192

7/27/46 Program for Weekend:
EJW

Please tour the building and clean up junk that may be lying around. For example:

1. Roll up hose on 3rd floor
2. Clean up junk around cubicle
3. Table at N end cell B
4. Acid bottles at 3rd floor sink
5. Clean out all junk in decontamination room.

7-29-46. 4-12.
Jets & Lines Checked as per attached List.

7/30/46 4X, column, Run 9, in progress

7-31-46 Att'n 4-12 & 12-8 shifts!!!
Decontaminate Cubicle I with washes of water, soda ash, citric acid and steam. Use these in any sequence. Leave a record as to what treatment you gave the cubicle — Reason — Leaky line from stationary funnel to Reactor.

7-31 - H-12
Cell I readings at beginning of Shift.
Entrance to cell 50 mr/hr
just inside of cell 300 mr/hr
4" from T 21 1200 mr/hr
4" " off gass valve 800 mr/hr
8" " plug hole in rear of cubical 800 mr/hr.
gave cell I 2 critic acid treatments,
one water wash & continued
to steam cell between washes.
Steam is on at shift change.
also Rom's UX, is in Operation

8-1-46 Cell readings.
Entrance to cell 30 mr.
flush inside 145
4 in. in side 725
8 in up clast to off gas line 800
washed with critic acid
and water and Steamed

8-1-46
Until further notice the UX, column will
not be operated AMR

8-2144 H-12
House Cleaning

8/5/46 light in fan house is out, bulb
Shot 2 suppose

8/5/46 4-12
Called (Mant) and hot two
light bulbs replaced in fan house.

Check all file cabinets on 4-12
shifts i.e., those in mishaven, Whitney's
shift supervisors, WAR's chemists office etc.
AMR

8-6/46 4-12
checked acids in make up room
M4-HNO_3 59% or Sp Gr 1.362
M8-H_2SO_4 90% or " " 1.82
Head tanks third level
T3 tank 90% or Sp Gr 182 same
as storage tank.
Other tanks were empty no
point in checking them.

8/7/46 UX1 run 12 in progress. Please
continue
AMR

8/8/46

4X, run 13 in progress. Start evaporating product down to a 2 liter volume on hot plate in hood, south lab.

AMR

8/9/46 Program For Tonight

1. All cell A jets are supposedly unplugged. Jet some water through each one to make sure they're ok. Report any not working.

2. Putty up the open hole around the inspection plate on large fan. This will eliminate high bar count in fan house during run.

3. Move all furniture from LRM's office to 3rd floor outside offices.

Give the H.P. man a hand in moving the furniture from present H.P. office to LRM's present office.

Tomorrow on day shift help Reynolds move into new chemistry office.

8-10-46

8-4

Building barricade for collection of iodine condensate.

8-11-46

8-4 Built lead barricade for iodine collection.

8/12/46 Program For Tonight
EJW 4-12

1. Make thorough equipment shift check early in the shift.
2. Check that slug carriers are in good operating condition, grease them if necessary.
3. Have slug carriers and trucks at 105 bldg at midnight.

8-12-46 Both Slug carriers are loaded
4-12 up at 105 Ready to Bring down at 1200

8/13/46 ① 286 SLUGS CHARGED TO A-1 &
12-8 COATS REMOVED. BATCH A COMING
SEC UP TO GRAULTY AT SHIFT CHANGE.

② NEEDED EQUIPMENT REPAIRS

A). MICROMAX (PRI-2) "KAPUT" — READING 10°-15° HIGH. — ok

B) NH_3 SYSTEM ON 2nd LEVEL QUITE "FRITZY". LINE APPEARS TO BE PLUGGED PAST ORIFICE, & VALVES NEED REPLACING. ok

C). HAD GREAT DIFFICULTY WITH 30% NAOH FROM M-11 — CRUD COMPLETELY PLUGGED ADDITION FUNNEL & STRAINER LEFT LAYER INCHES DEEP IN BOTTOM OF SCALE TANK. — HAS M11 BEEN CLEANED IN THE LAST SEVERAL MONTHS? — see next page.

8/13/46 1. Do not use M-11 caustic
GJW for coating removal. Use
[8-4] up M-11 caustic in making
up 4% caustic only then
leave it M.T so it can be
boiled out.
Use the caustic in M2
and T6 for coating removal.
Dilute lot of slurry in
scale tank or dissolver.

4-12 → 2. Please check that slugs
(200) are provided at 105 bldg at
7:00 P.M. tonight.

3. ~~Lead~~ slugs immediately after
batch "C" is diluted H spiked.

I IMB in A-1 Sampled

II IMA in A-9 Settling 8:35 PM

III Do not collect any iodine
condensate on 4-12 & 12-8 shift

7-13-46
4-12
7 A

1. Air count in N lab
3000 cpm (due to I)
2. Air count 3rd level during jetting 4802 cpm. N.E wind
3. Air count at guard shack (restricted area) 279 c.p.m.
4. Activity OK at W 11 + W 5

The air activity must be coming from 706 D stack as indicated by the high air counts during jetting + wind in NE or NW direction.

The guard shack friskers sounded off spasmodically throughout the latter part of the shift. This probably was due to wind gusts carrying activity.

Checked 703 A integron in Thurner's office. OK

Suggest the incoming shift continue monitoring the guard shack area + should the activity be too high have the guards rotate more frequently than scheduled.

(over)

Check air activity in S lat.

Process

A-1 batch C diluted + sampled
A-9 batch B settling hot 7 55 AM
A-11 batch A settling 7 50 AM

the two slug carriers are loaded + in 105 canal

8/14/
12-8
SEC

8/14/46
12-8
SEC

lab.

① AIR ACTIVITY (3RD LEVEL) DROPPED TO ~ 300 C/m —.

② CHARGED A1 WITH 208 "LITTLE ATOM BOMBS".

③ RUN STATUS:—

BATCH A — BEQUEATHED TO VALLADO (W-9).

BATCH B — 8WMB SAMPLED - READY FOR A11 SETTLING.

BATCH C — IN A9 READY FOR EXTRACTION.

BATCH D — DISSOLVING

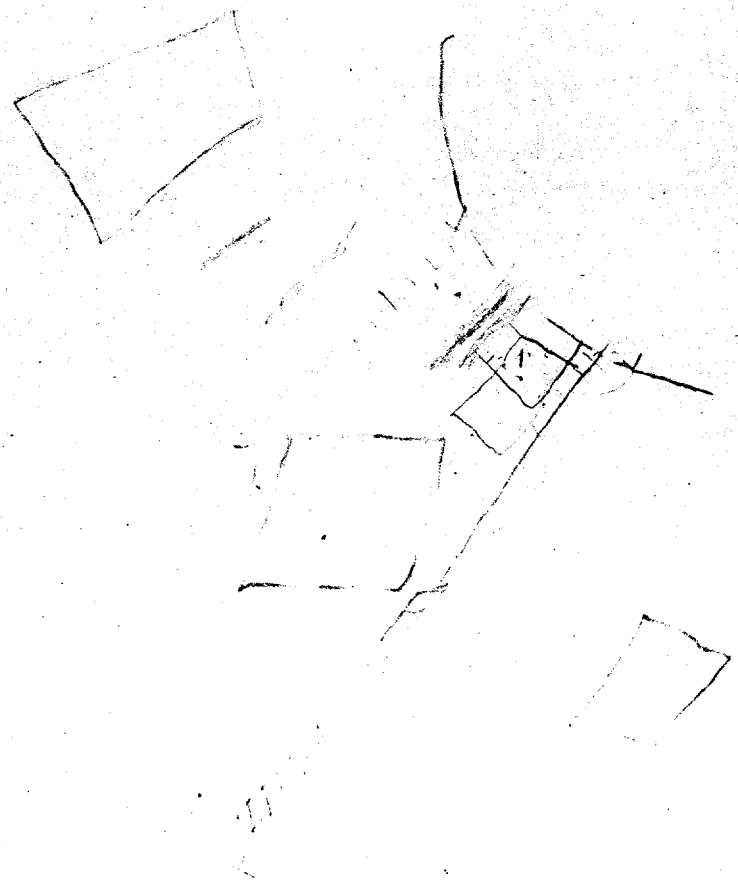
sampled
1 / 55 AM
50 AM

~~[illegible]~~
l

B21T ↑ ↓ B17 → B3 (where green in color) on top of NaOH

B21 → B20 → B3

CL → OR

12 45 12

2 15 1 30