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NOTEBOOK NO. A-240

Assigned to: Harris Blauer

Department: Operations

Location: 3037

Date: 4-27-51

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ChemRisk Document No. 2046

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

David R Hamrin 7/21/95
Technical Information Officer Date
ORNL Site

5/17/51 (1) Finished boiling down in Rm 10 and sample F1.
12-8 (2) Finished Iodine slug coating removal and proceeded
Sachs with the dissolving.
(3) Continued Evaporating on the tank farm.
(4) Started Blanco's Resin Capacity Experiment. Made up and added 6 liters of 2M NaOH to M.W. tank and at shift change, the 10 liters of 2M $NaNO_3$ solution is running from eluate tank through the column to to Main Waste? tank
(5) Recovery Run Status:
A1 – Empty.
A5 – M.T.
A6 – M.T.
A11 – 8WM Recovery. Sampled, 992 C's A.T., Hold
A8 – 8WM Heels, Sampled. 731 C's A.T. Hold.
A9 – 1st Metathesis digesting until 8:20 A.M.
A12 – M.T.

(6) Added new Resin to R.C. 300 Column. We assumed that the Resin in the beaker was the correct ~~[illegible]~~ amount and added it. The H_2O ~~[illegible]~~ Flow through the column seemed very slow. Either there is too much Resin in the Column or the valves are out of line. No free space is visible above the Resin.
(7) Made up a batch of Carbonate in M1.
(8) Cleaned up area around the Resin Regeneration equipment on the 3rd level. Didn't have time to start any regeneration of new Resin. Blanco would like to start this when the opportunity presents itself.

(8) Butted $Th(NO_3)_2$ down to 19.6%
(9) Resampled ~~Ba~~ K_2CO_3. It was still low. Butted it up to 40.3%.
(10) There is something damn screwy going on with regard to these HNO_3 normality samples. i.e. the 0.5N HNO_3 made up on 4-12 was analyzed as 0.517N. We added H_2O to butt it down to 0.50 and behold we get an answer of 0.588 N! Also the 3M HNO_3 made up for Blanco's test and located on 2nd level is also way high. Suggest these two jugs be resampled.
(11) Made up jug of 6M HNO_3. No results as yet.
(12) Boiled down P^{32} and proceeded with men through the glassware. Product is now in P2
(13) The P^{32} E2 extractor was refilled with water and fired up at 1a.m. Both extractors are still cooling at shift change.

5-17-51 ① Evap. operating with difficulty. - Foam - overs
8-4 Instr. Dept. worked on the probes again. Liquid level lowered to 30".
Blood ② Adjusted solns:- Lab results.

.5M HNO_3 = .485 butted up & sampled
3M " = 2.99 - OK
6M " = 6.05 - OK.

③. R.C #200:- Still working with Blanco's test. Backwashed column to remove gases. About 8L. $NaNO_3$ was put thru the Column when it was decided to remove any air lock.
M.W. - 2M ~~No~~ $NaNO_3$ effluent + 6L 2M NaOH +

Backwash H_2O from Deaerator.
Everything shut down at shift change - no further action necessary.

④. R.C. #300:- Resin in Column as per 12-8.
(a) Elvate line connected to R.C. #300. Elvate tank + line washed out before connecting.
(b). Ion Recorded connected to R.C. #300.

⑤. Cell A Status:
(a). Continued with Recovery.- 3rd Methathesis filtering at shift change.
(b). A-8 waste - Batch Heels - neutralized at A5 → A6 → ~~W12~~ weg
All waste - Batch Recovery " at A5

⑥ ~~(a)~~
Painter's continued painting Cell A+B.

⑦ A6 - L.L. Instru. repaired.

⑧. See Note #2:- .5M HNO_3 = .497M - OK.

5/17/51 ① Place squeegee sampler in manhole S.W. of 706-A.
4-12 Not too much success in getting it to work.
Schaich ② Made up + sampled .25 M NaVus, 3.5 M HCl, 2M $NaNO_3$.
Made up K_2CO_3 but did not sample.
③ Regenerated batch of new resin. pH-6.5
④ 12-8 regenerate P^{32} column. Product was high in metals. Will have to be reprocessed tomorrow.
⑤ Put batch of Pb removal in B12 sparging with B8 pipette.
⑥ Run Status: A9 - 74 gals for new extraction
A5 - neut waste

A8-A17-A11-MT
Feed Tank #300 - Product waiting for Pb analysis & pH.
(7) Cleaned up some of the crap in "D" Bldg.
(8) Continued evaporating.

5/18/51
12-8 Sachs
(1) Continued Evaporating on tank farm. Raised steam pressure to 22#s
(2) Regenerated P^{32} column in 3032 Bldg.
(3) Started Recovery Run #2 in A9. Began with extraction using 280 lbs of H_2SO_4. The extraction cake is now on P.F. #1 ready for 1st metathesis. 8WM Recovery #2 has been sampled and is in A8.
(4) ~~The~~ A pH of 6.3 was finally obtained and the Heels Recovery feed solution put on the column. Just at the end of the 1 liter H_2O wash, a back up of hot solution occurred. We're not sure just which line it was. The .07 M Versene was started through and ran well for about ten minutes. Then large bubbles of air started coming through the rotameter. At this point the column outlet valve was closed. This is the situation at 8 a.m. There's a leak somewhere.
(5) The pump in manhole S.W. of 706A Bldg is not working. Took a dip some at 7 a.m.
(6) Ran Iodine stills and boiled down in Rm 10 all shift. The 3rd still is ready to be fired up, but we had to wait for space in the Product transfer vessel.

(7) Sampled K_2CO_3 - 40.5 %
(8) F.T. sample - 4388 C's S.T.
(9) Jetted 365 gals of waste from A6 to W9.. but there doesn't seem to be any book to record the data in. The gauge hole at W9 is reading 2R/hr.

5-18-51 (1). Evaporating on the tank farm - 30" LL. 25#
8-4 Instru. Maint. checking the short probe - maybe
Blood working by now.
(2). Painters cont'd painting Cell A & B.
(3). Had an intercom. phone installed at P.B. #7B.
(4). Maint. changed leaking steam valves at P.B. #2. -(5 of them).
(5). Recovery Run #2 Cell A:-
(a). Made 2 ~~methath~~ metathesis thru P.F. 2 Discovered error. - Cooled A-9 - backwashed P.F. #1 with 45# H_2O. & P.F. #2 with 20# H_2O to A9. Filtered A-9 thru P.F. #1. Then proceded with metathesis all over again. The 1st Metathesis is about ready to go thru P.F. #1 at shift change.
(b). A-11 = Extraction waste from A8
A-5 = batch of K_2Cr_3 from M-1 ← (jetting now to A5)
A-8 = M.W.F.E. - Recovery #1 - This should go to A-5 as soon as Caustic transfer is complete.
(6). Recovery Run #1 - R.C. #300:-
ISO T = I.T. Na V.E. - sampled
HCl T = M.T. - not washed out to M.W.

M.W.T = HCl E. - Recovery #1 - to be sampled.

(7). A6 - Cell A - is to be jetted back to A-5 to neutralize it before going out to Tank Farm.

(8) At shift change 6M HNO_3 is ready to be added to the elvate Tank and then to column R.C #300 to P.E.

5/18/51 4-12 (1) HNO_3 carboy on East platform caught fire, probably from a cigarette butt. Put out blaze with CO_2 Shaich extinguisher and reported to Fire Dept.

(2) K_2CO_3 Result - 33.8%. Butted up three times to 40.3%

(3) Sutton took up P^{32} product & submitted samples to lab.

(4) Checked F.I. hul dissolving in 3026-W.

(5) Finished F.I. run in Run 10 and took up product in two bottles. Sampled both products

(6) Cleaned up hot spots around R.C.

(7) 2M $NaNO_3$ Result - 2.06 N OK

(8) .25M $NaVeo$ " - .245 M OK

(9) Feed tank Rinse Rec #1 - 432 c's S.T.

(10) HCl Effluent - 89.6 c's S.T.

(11) A6-A5 jet not operating. Jetting small amount of Na_2CO_3 into A6 to neutralize Rec Butex extraction waste. Send to W2.

(12) 3.5 M HCl Result - 3.44 M OK

(13) Draining feed tank #300 to M.W. at shift change.

(14) Rec. Run #1 boiling down in PE #300

led.

(15) Rec. Run #2 - Metathesis H_2O wash filtering.
A8 - SWCW not sampled.
A5 - Na_2CO_3
A6 - Extraction waste partly neut.
(16) Continued evaporating. Instrument worked on probe lights. They are slightly confusing. C.T. samples running high. Cut back to 20 psi.

5/19/51
12-8
Sachs

(1) Analysis: SWCW Recovery #2 - 104 C's S.T.
P.E. #1 - 3040 C's, 23 gms Pb ? ←
(2) Finished up Product Evaporation to 2 liters in R.C. 300 P.E. tank
(3) Backwashed out old Resin and added new Resin to R.C. #300. There was just a little less than 2.75 liters of Resin.
(4) Started Regeneration of Resin on the 3rd level. Next Step, NaOH to go on.
(5) Checked off-gas on Iodine heel dissolving.
(6) Washed out all R.C. 300 tanks before adding new Resin.
(7) SWCW Recovery #2 is in A11, the R.C. wastes are in A6.
(8) The 3040 C's in P.E. #1 was figured on old S.T. on 0700 on 5/15/51.
(9) Continued Evaporating on tank Farm.
(10) Run Status:
R.C. 300 P.E tank. 2000 ml Product solution (1st Recovery)
R.C. 300 F.T. - 14.2" of Product solution (2nd Recovery)
A9 - M.T. Ready for A9 rinse
HCl tank - Condensate ?
M.W. - H_2O

(12) Probes aren't working at the Evaporator.

5/19/51 (1) 2nd recovery feed - 1520 curies
EJW " " " - (recheck)
8-4 (2) 2nd recovery A9 rinse - 1530 curies
(3) Made up 1M HCl OK.
(4) Made .07N Versene
(5) Made up 6M HNO_3
(6) Made up 6M NaOH & put into HCl tanks
(7) All wastes from cell A into A6

5/19/51 (1) pH of .07M Na Versene - 6.55
4-12 Norm .0706M
Schaich (2) PE #1 Rec #1 - no Pb.
(3) Checked heel dissolving 3026-U.
(4) Sampled 6N HNO_3 - 6.05N OK
(5) Finished regenerating resin on 3rd level.
(6) Lots of air bubbles thru elevate flowrate until connection was tightened.
(7) HCl going thru column at shift change
(8) Continued [illegible]
(9) Tank Status: MW - MWFE sample
[illegible] - [illegible]
Feed Tank - F.T. Rinse
[illegible]

(10) Feed tank Rinse - 22.78 [illegible]
(11) M.W. F.E. - 464 cs. S.T.

[illegible] Nave [illegible]
[illegible] Hel [illegible]

5-20-51 [illegible] + H. Blauer
1 [illegible] 31 in 706 [illegible]
2 Equalized [illegible] Pond [illegible] inst
[illegible] 31 [illegible] inst [illegible]
3) finished [illegible] H 53, to column --
[illegible] P.E. [illegible] to lab, 3400 C
4) [illegible] PR [illegible] to 2.2"
(5) Completed Run #44 through to drying
M.W.F.N = 25 c's
(6) Sample of P.E. Rinse in the lab.
(7) Product drying not up to temperature
as of 4 P.M.

5-20-51
4-12 (1) Hourly readings taken on prod. ~~[illegible]~~ drying
Blauer after elevating hot air temp to 450° ± 10 by
adjusting thermostat. Inspected product at 10:30 A.M. About 50 ml left to go
Product slows beautifully (2) Continued Tank Farm Evaporation
(3) Phosphorous — washing La(OH)3 cake in P-1
at shift change
(4) Window (Zinc Bromide) cracked in loading
area of Packing building. Leak is very slow but
it is leaking in barricade. Ed King says let it go. He will
get it fixed on Monday.

5-21-51
12-8 (1) Bailey on vacation
Blauer (2) Lemons on P32 all shift + Wash going through column
& product + wash being evaporated at shift change

(3) I 131 still dissolving heels - Off gas O.K. Jetted out heels dissolvings and flushed all tanks with water, the tanks are now empty. Procedure sheet for I 131 decontamination is on P.B's desk.
(4) Tank Farm evaporator running well.
(5) Brought down pile units to bldg. 3038 & put in cide
(6) Sent Ira Whitney's Isotopes to him at main gate at 7 A.M.
(7) Made up .07M Na Versene, .25M Na Versene, 1M HCl. and 2M Na NO3. Samples are in the lab. 1.0M NaOH — result .992M. O.K.
(8) Zinc Bromide window still leaking slightly in packing area.
(9) Finished drying product. It was a rusty brown (color courtesy of Jim Ferguson) and all in the top of the cone. It gave a reading of 2.1 on γ scale on electrometer and 603.25 counts/min. on scaler at 4 A.M. Decontaminated carrier, had H.P. smear it. It is now all assembled for shipment & ready for the ~~tarpaulin~~ truck. The tarpaulin is on it.
(10) 1M HCl = 1.03M (lab analysis) O.K.
(11) 2M Na NO3 = 2.291M — No good.
(12) Removed the resin from #300 cubicle
(13) Hosed down cone manipulator and loading cubicle. It reads 20 mr/hr at floor level in corner nearest the charging heads with the lead block out.
(14) #300 cubicle feed tank is draining to main waste tank. Main waste has M.W.F.N. + F.T. rinse (going in)
(15) Jetted material in A9 + A8 to W12
(16) Cleaned up the East Platform + shed (Looks better than

(11) Decontaminated hot spot on back of ~~Dempster~~ Dumpster truck.
(12) Emptied all cubicle + cell A tanks
(13) Repaired steam leak in 3026 C bldg

8-11-51 4-12

8-12-51 8-4 GEP
added coating removal to A1 and cooled to 400C + load off slugs on 3 leavel.

8/12/51
4-12 (1) Loaded 150 4" slugs.
Sachs (2) Run Status:
A1 - 1st Coating Removal digesting until 12:00 p.m.
(3) Continued Evaporating.
(4) Had to oil up slug changer to get it operating
(5) Had instrument man fix a few instruments.
(6) Made up 359o NaOH in T9 for 2nd coating Removal.

8-13-51 (1). Evaporator operating at 40# + 30#Lh. Some
12-8 hot spots on the floor + sampler were cleaned
Blood up here. W-10 sparger still is on.
(2). Brought the pile units to the packing area.
(3). Drained the hot-off-gas Filter Box and also the Ventilation Filter box.
(4). Continued on with the Rala Run. - Third Coating removal at A-1 ready to cool at 8:10 AM. Dumped acid - Weighed out 390# HNO_3 for dissolving. - Made up 80" of 4% NaOH in M-10.

⑤. Washed down the Slug Charger in 706-D Decontamination Room.

8/13/51 ① Shut off W10 sparger and submitted sample
8-4 to lab.
Schaich ② Continued evaporating. Cut back to 200 gal/hr.
③ Switched vacuum pumps at 3026 and oiled pumps.
④ Instruments zeroed A17, R.C. #300 F.T., and P.E. tank.
⑤ Sent charging machine to 902 Bldg.
⑥ ~~Repa~~ Tightened packing on HNO_3 acid pump.
⑦ Dissolved enough caustic in M-1 to make 80" in M10 of 4%.
⑧ Dropped NaOH rate thru A4 scrubber, to 160 when Sp.G. of A1 solution came up.
⑨ Run Status: A1 - Batch 17 dissolving

8/13/51
4-12 ① The A17 P.V. gauge is out. Pipefitter was tied up
Sachs and couldn't work on it. Instrument man seems to think gauge is o.k. The line must be plugged up or leaking somewhere. Gauge showed nothing during Crud Filtration.
② Analysis: IMA 9481 C's S.T. 41.2 slugs, 230.12 C's/slug.
③ Continued Evaporating.
④ Dumped acids.
⑤ Made up NaOH in M1. There is enough to make 80" of 4% in M10
⑥ Backwashed C.F. #1
⑦ No radiation at Crud Filter. Reading of 30 mr/hr

over one crack in Process Filter.

(8) Checked Iodine dissolving in 3026 W Bldg.

(9) Run Status:

A1 – Batch B coming up to Sp.G.

A9 – M.T.

A8 – 8WMA sampled.

P.F. 2 - Batch A Extraction cake

A11 – M.T

A6 – M.T

A5 – M.T.

8-14-51 (1). Evaporator operating at 20# & 30" LL.

12-8 (2). Checked I^{131} dissolving & recorded data.

Blood (3). Brought one "S" Can to #3032. This can has S on the outside of it and likewise contaminated everything it contacted. – Hot spots on the truck were cleaned up & with special care in handling #3032 is o.k. — But there is danger of further contamination at #3032 without proper care!

(4). The A-17 P.V. gauge failed to work. Called Instr. Maint. – They wanted to replace the gauge to see if this would help. – Did not allow them to open any lines as long as we can operate.

(5). 8WMA = 22 Curies.

1MB = 8,827 Curies S.T.

(over)

⑥. Run Status :-

A1 - Batch "C" dissolving
A11 - M.T.
A9 } - Passing thru P.F. #2 after extraction.
A8 } - 8WMB.
A17 - M.T.
A5 - M.T.
A6 - 8WMB neutralized from A-5, now getting to W-9 at shift change.

Dumped acid. - Refilled M-10 with 4% NaOH (we need more NaOH). - Finished 1MB extraction. - Made up Na_2CO_3 used in A-5. Backwashed the Crud-Filter.

⑦. There were no special radiation hazards observed. - but while taking A1 sample of 1MB, it read 1400 mr/hr. thru the wall of the sample blister.

8/14/51 ① Millwright will repack HNO_3 pumps in the near future.
8-4
Schaich ② Instrument removed A17 gauge but it was okay. Line is plugged and order in in for repair.
③ Did not run steam turbines for various reasons. Will run tomorrow. Oiler refilled large turbine and millwrights unplugged sight glass.
④ 8WMB - 27 cs S.T. 1MC - approx 7000 cs S.T.
⑤ Split 1MC dissolving and proceeded with extraction using ½ amount called for in procedure.
⑥ Run Status: A-1 - half of 1MC

A9 - Batch C extraction working to 4 P.M.

(5) Continued evaporating.

(8) Stored fuming HNO_3 in shift supr. office. That is the last fuming HNO_3 on the plant.

8/14/51
4-12
Sachs

(1) Run Status:

A1 - One half of 1mc

A11 - 8wmc

A8 - 1½ of 8wc

A9 - 2nd Metathesis filtering to A8.

A5 - Batch of Carbonate.

A6 - M.T

(2) Spent two hours trying to put a tire on pickup after getting flat. Truck now jacked up on road west of Evp. Couldn't get tire at garage that would fit.

(3) Continued Evaporating.

(4) Finished Stills and boiled down Run 10 all shift. About two more hours of transferring and boiling down to do.

(5) Instrument man put new chart on P.B. # 1 micromax.

(6) 8wmc - 96.2 C's S.T.

8-15-51 (1). Evaporator operating at 20# & 30" L.L.
12-8 2
Blood (2) Took up P^{32} extraction - Boiled down the crude. - Started re-extraction.

(3) Finished boiling down I^{131}. Sampled F-1.

④. Had Instr. men zero F.T. L.L. gage at R.C. #200. Also had them examine the Flowrator and ink the pens.

⑤. It was necessary to repair the sampler valve extension for I^{131} in Rm #10.

⑥. Run Status:-

A1 = ½ 1MC.
A5 = Nuetralized ½8WC.
A9 = A9 rinse - sampled same.

RC 200-FT = Product feed - awaiting Pb. analysis - Ready to adjust pH.

Eluate Tank K = Distilled H_2O.

Metathesis was finished in A-9. Dissolved this cake on P.F. #2 and Transferred to R.C. #200 F.T. After the metathesis washing, the P.F. had a high background. - Radiation seemed to be coming mainly from the Blow tank line. This read 42 hr./hr. Crack in top of the P.F. Cubicle read 380 mr/hr. As soon as the cake was dissolved radiation fell to 12 mr/hr at blow tank line & about nothing over the top of the Cubicle. - While we had the high readings 1st & 3rd level read 50-60 mr/hr.

The Feed soln. Transferred from A-9 went ok. No radiation hazards. After the second H_2O wash was transferred,

the Moore-Transmission instrument line on the Feed tank read 26 R/hr. Shielded this with lead down to about 200 mr/hr. F.T.-pH sample read 1 R/hr thru the Carrier + 4.5 R/hr. at 2 feet over the top of the sample. Rough pH by the lab. was about 11. - Having waiting for Pb. analysis.

The low pressure steam regulator on P.B #7A didn't work - Had ~~steam~~ pipefitter adjust the pressure to 30#.

~~Fis~~ First Pb analysis about 100g - awaiting recheck. - Add 55 ml. - 70% HNO_3 to F.T. + 100 ml. H_2O wash. Sparged for 5 minutes. - Ready to circulate sampler + sample at shift change.

8/15/51 ① Results: SWCW - 431 c's S.T.
8-4 A9 Rinse - 431 c's S.T.
Schaich F.T. - 19,372 c's S.T. - 111 gms Pb.

② Ran both steam turbine 4 hours.
③ Made up batch of 4% caustic in M10 and started 1MD.
④ Millwrights installed door clamps on paper rollers.
⑤ Continued evaporating.
⑥ Run Status: P.C. #200 - Product going on column
A1 - Batch D dissolving

A11 - 1/2 IMC
A9 - A9 Resin
A6 - Neut. SWMC & SWCW
A5, A8 - MT
R.C. #200 samplers are clean to <10mm/hr.

8/15/51
4-12
Sachs

(1) Continued Evaporating on the tank Farm.
(2) Checked Iodine dissolving in 3026 W Bldg.
(3) R.C. 200 Operation:
Checked pH of F.T. at 4:15 p.m., it was 7.2. Added 7 ml 70% HNO_3 and butted it down to 6.5. Added 3.5 ml HNO_3 and butted down to 5.6, added 2.5 ml. Sat. NaOH solution and brought pH back to 7.2. Added 8.5 ml HNO_3 and butted pH down to 5.0. Added 2.5 ml NaOH and butted up to 6.0. Then started running Feed through column. Had to backwash for 30 seconds at Rotameter setting of 1 to get Feed moving. Checked pH of Feed when F.T. volume was 4 liters and it was 6.5. Added 2 ml HNO_3 to F.T. and completed Feed solution addition to column.

4. Run Status:
~~Eluate~~ Eluate Tank - 1M HCl.
Feed Tank - F.T. rinse not sampled.
Iso-Product tank. Na Versene waste not sampled.
Main Waste Tank - M.W.F.E. sampled 669 C's A.T.
HCl tank. Receiving HCl effluent.
P.E. Tank - Empty.
A1 - ~~Bat~~ Batch D dissolving

8.

A11 - 2nd half of IMC - hold
A8 - M.T.
A9 - A9 rinse - hold
A5 - M.T.
A6 - Neutralized waste hold.
(5) Continued P^{32} Run. Settling in P2 at shift change.
(6) Started Running H_2O through A4 at 11 p.m.

8-16-51 (1) Evaporator operating at 20# + 30" L.L.
12-8 Tried raising steam pressure to 30# - no good!
Blood (2). Checked I^{131} data at #3026.
(3). Took up P^{32} extract, boiled down and start re-extraction. Put P^{32} product thru the column + evaporation in Ev #2 is in progress.
(4). Run Status:

P.E. Tank = now receiving product at shift change. Almost all 12 L. are thru.
ISO - Tank. = ISO product effluent. Sampled
HCl - Tank = M.T.
MW - Tank. = M.W HCl Effluent. Sampled
A8 - Tank. = M.W. F. Effluent.
F.T. - = F.T. rinse. - Sampled
Elvate Tank = Remainder of 12 L. 6M HNO_3
A1 - Tank = IMD - Hold. - Sampled.
A11 - Tank = ½ IMC - Hold.

(5) No results on the 4 samples taken.
(6). There is one R.C. #200 Carrier cooking in D Bldg.

8/16/51 ① Maintenance repaired W17 valve extension handle.
8-4 ② Made up 18 liters 6M HNO_3. Results 5.956M-ox.
Schaich ③ Ran 800 ml 6M HNO_3 thru column to P.E. tank to reduce radiation from a backup in waste line. The backup occurred while trying to backwash column to F.T. It looks as if PV-21 is plugged.
④ Diluted HCl & MWFE wastes to 50 gal, added 1200 gms NaOH, sparged, and sampled at HCl-MWFE.
⑤ Resampled FT rinse
⑥ added 1 liter of 1M NaVeO to FT, sparged, and sampled again.
⑦ Jetted A8 & A9 to A6.
⑧ Run Status: A1 - 1MD
A11 - ½ 1MC
A6 - 8WMC, 8WCW, HCl, & MWFE. Neut.
A5, A8, A17 - MT
CH II - Prod. drying
Iso Tank - NaVe sampled
P.E. - P.E. Rinse not sampled or sparg.
M.W. - M.W. F.N. sampled.
F.T. - F.T. Resample #2
⑨ Continued evaporating.
⑩ Painters started work on 3026 Bldg.
⑪ Working on W17 float at shift change.

8/16/51
4-12 ① Continued Evaporating on the tank Fanny.
Sachs ② Continued Iodine Run. Passed on information to Lemons

(3) Analysis:
MWFE-HCl resample - 1015
MWFN - 1562
F.T. Rinse - Resample - 6820
PE Rinse - 159

(4) Jetted ~~[illegible]~~ M.W.F.N. to A8 as per Blauers instructions.

(5) P.E. rinse was sampled in Main Waste tank. Couldn't get P.E. sample.

(6) Ran 12 liters 6M HNO_3 to PE tank followed by 2 liters H_2O. This has not been sampled. This sample should be taken before starting Blanco's regeneration business since it may be necessary to sample P.E. product holdup #1 in the Main Waste tank.

(7) The Product looked very good, and down in the tip of the cone. Had a very fine glow. It counted 1626 counts/min and read 10×10^2 on the chamber.

(8) Cell A status:
A1 - 1MD
A11 - $\frac{1}{2}$ 1MC + M.W.F.N.
A6 - same as 8-4.
A5 - M.T
A8 - M.T.
Iso Tank - NaVe sampled.
P.E. - P.E. holdup No. 1 not sampled
M.W. - P.E. Rinse, sampled.
F.T - F.T. rinse resample No 2.

8-17-51 ① Evaporator operating at 30" L.L. + 20# steam.
128
Blood

②. Run Status:-

A1 - IMD
A-11 - ½ IMC + M.W.F.N.
A-6 - same
A-8 - P.E. Rinse + M.W. washes.
150 T. - Na Ver.
P.E. - P.E. Hold up No. 1 - sampled = 642
F.T - F.T. Rinse
M.W. - 5L. - 2M NaOH + 2M $NaNO_3$ effluent passing thru the column at shift change.
Carrier - Contains product!

Put Product Carrier in the hole. Shine was 20 R/hr. over top. Loaded the carrier and moved to the floor. - The Carrier was contaminated to 4R/hr. in spots. Scrubbed it down to about 10 mr/hr generally with 1 spot still about 55 mr/hr. Had H.P. smear it.

Started Blanco's regeneration of the column.

③. R.C. #200 sample carriers were cooked to less than 10 mr/hr. outside. Decontaminated other pieces.

④. I^{131} sampled F-1. - Finished scrubber stills #3, #4 + #5. Crude still boiling down at shift change; about 1 more transfer from the cell to go.

8/17/51 ① Maintenance repaired W/7 float.
8-4 ② Loaded out Run #45 at 9:35 AM.
Stoich ③ Maintenance repacked HNO_3 pumps.