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NOTEBOOK NO. A-205

gned to: H. Blauer

artment: Operations Div.

ation: 901 Bldg.

: 12-6-50

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p194: Scrubber drys then water

RUN 51

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

David R Hamrin 7/2/95
Technical Information Officer Date
ORNL Site

ChemRisk Document No. 2045

4-1-51 Continued with EV and tank farm
12-8 SEP

4-1-51 8-4

1- Continued with Tank Farm & Evap.
2. Brought Down Slug Carrier Cranks From 205 To 3026 Third Level.

4/2/51
12-8
Sachs

(1) Brought Pile Units to 902 Bldg.
(2) Made up .5M HNO_3, 2M $NaNO_3$, and 6M HNO_3. Samples are in the lab with 4/1/51 on them instead of 4/2/51
(3) Butted down Carbonate to 39.2%. This sample was also dated 4/1/51
(4) Regenerated Resin For Run 43. It is in the stang reactor on the 3rd level.
* (5) Recleaned top of Pot #7 and smeared. Results were ten times higher than smears taken before cleaning. Rescrubbed, smeared and results should be back by 8 a.m.
(6) Run Status:
A1 - 2nd Coating removal going until 9 a.m. We are proof reading new run book against sheets of D.R. #8 as we go along. Both are at P.B. #1.
(7) The Resin from D.R. #10 was sent to tank farm on day shift, 3/31/51. Valves on R.C. #200 are to remain - as is until Unger

making some adjustments.

(8) Sent a 25 gallon wash from A9 - A3 - A11 - A5 - W12.

(9) See Note in this log of 3/31/51, 8-4 shift about $Pb(NO_3)_2$. Have lab remun it today.

(10) Continued Evaporating on the tank farm.

(11) The Slug carriers have been cleaned but not checked. They are in decontamination Room.

(12) Loaded 69 "X" Slugs into dissolver without incident. We were supposed to get seventy, but Pile Bldg lost track of one somewhere along the line.

(13) Two of four smears taken at 7:40 on top of Pot #1 are about 50 counts over tolerance. It will have to be cleaned again.

(14) Drained filter boxes.

4-2-51 (1). Evap. operating OK at 30# psi.

8-4 (2). Decontaminated the Clinton Carriers and Blood stored them over the N. Hot Lab.

(3). Made up $Pb(NO_3)_2$ 20%; 40% K_2Cl_3 was adjusted; re-sample $NaNO_3$; adjust .5M HNO_3 soln. - Turned in samples on all the above.

Results turned in = .504 M HNO_3
5.98 M HNO_3

(4). Cleaned up generally in D Bldg.

(5). Stored the "new" regenerated resin in a labled beaker. Started regeneration of the "Old" resin sent over by Mr. Blanco. Measured out the resin and drained off H_2O; ready

for 3.5 M HCl. at shift change.

⑥. Hot Run Status:-

(a). Finished 2nd Coating removal.

(b). Started dissolving in Al.

⑦. Photographer took pictures of the R.C. carrier. - 10:00 AM - 11:45 AM.

⑧. Rinsed the vessels in the R.C.

F.T. = draining to M.W.T.

MW.T = Contains other rinses.

4/2/51 4-12 ① Shut down Rimshaw's column when head tank went empty. Held flow to what it was which adjusted when 4-12 took over.

② Shut off K. Sadel's evaporation at 11 PM.

③ Run Status: A1 - Batch A dissolving

④ Changed reactors on resin regeneration equipment and got good flow rate. Next step for regeneration is .1M Na Versenate.

⑤ Diluted .112M Na Versenate with H_2O but 3 samples to Lab gave .25 M results. Made up .07M Na Versenate & adjusted pH - 6.25. Submitted sample to lab and got result of 0.01M Submitted sample of .256M Na Versene to lab and got a result of .254M. You take it from here, I'm lost. Looks as if pH adjusted has something to do with it.

⑥ $Pb(NO_3)_2$ - 20.1%, K_2CO_3 - 39.9% + $NaNO_3$ - 2.06M

⑦ Acid carboy carrier needs repaired.

⑧ Drained feed tank to main waste. Seem to drain fastest at 1/4" off point 2 on PV-21

(9) Continued evaporating.
(10) New limits on make-up:

1M HCl	–	± .05
6M HNO_3	–	± .05
.25M Na Versenate	–	± .005
.07M Na Versenate	–	± .001
2M $NaNO_3$	–	± .1
3.5M HCl	–	± .1
1M NaOH	–	± .1
.5M HNO_3	–	± .01

.0767

4/3/51
12-8
Sachs

(1) Brought down load of Iodine slugs and one S can.
(2) 1MA - 171 Cs A.T, 58.6 slugs.
(3) Run States:
A1 - Heel dissolving
A9 - Batch A extraction digesting until 8 a.m.
C.F.-1 was backwashed.
(4) Had lab run 0.1M Versene. Results 0.104M
Also run .07 Versene. Results 0.0768 M
(5) Continued Evaporating on Tank Farm.
(6) Evp Run 1060 Catch tank sample was 12 counts/min
(7) Better check A9 thermocouples. Pt 3 is completely gone. We are using Pt. 4 on digestion. It was acting up for awhile. Instrument man tightened up a few wires and it seems to be O.K. now.
(8) There was no evidence of any radiation around the Crud Filters during the Filtration.
(9) Completed Regeneration of Resin For Run. It is in storage reactor on 3rd level.

4-3-51 ①. Evaporator operating at 35" LL. 30# steam.
8-4 ②. Made up Na_2CO_3 in M-1. Ready to go to A-5.
Blood. ③. Adjusted .07 M Na versene soln. and sent sample to 902. – 3:00pm.
(Analysis before adjustment = .08 M)
④. Made up 16% $NaNO_3$ soln (2M) and sampled.
⑤. The regenerated "old" resin was put into the column. – Ready to go.
⑥. ~~Dumm~~ Hot Run Status:- (#43).
(a). Dissolving in A-1 ready to come off. Starting cooling at 3:30 without water dilution. Sp. G. about = 1.40.
(b). A-11 contains - 8 WMA. – Hold.
A-8 " 8 WC
(c) R.C. - M.W.T. = H_2O.
Eluate T = H_2O.
(d). The last metathesis is ready to go thru the P.F. #2.
⑦. When putting the extraction on P.F. #2, the blow tank line reading was 10 R; after 10 min. it dropped to 1.5 R. Radiation around the lead P.F. cubicle other than this was neglible.
⑧. Ran the steam engines 4 hrs.
⑨. See note #3 -
Na-Versenate Soln. = .0697 M.; ph = 6.1

4/3/51 ① A8 sampler plugged while taking 8WCW. Steam
4-12 line out and took sample after throwing out Schaich condensate. Sample only read 100mm. Don't know

whether it is a bad sample or not. 12-8 please check.
(2) When Feed came into Feed tank from A9, solution suck up ~~sp~~ feed tank sparger line. Was able to blow most of it back into tank. Covered hot lines + posted radiation.
(3) While transfering wash from A9 to feed tank, solution back up blow tank line. Washed out line and brought radiation down to 50 mrs. No background.
(4) R.C. sampler was reading 2R. It is sparging in citric acid in decontamination room.
(5) Blanco wants all samples run for Ba^{140} + Sr.
(6) Check FI dissolving 706-C.
(7) Took 97 ml HNO_3 to bring Feed pH to 6.3.
(8) Run Status:- A11 - 8WMA sampled
A8 - 8WCW "
A9 - A9 Rinse "
A1 - Heel Dissolving "
Feed going on Column.
Call Unger 1 hr before Feed is thru going on column.
(9) Continued evaporating. All automatic samplers working okay after oiling.
(10) Continued UNH solution on Rimsham's column at 3026-W. Verbal to 12-8.

4/4/51
12-8 Sachs
(1) Checked Iodine dissolving in 3026W Bldg.
(2) Continued Rimsham's column operations in 3026W Bldg
(3) Pulled E1 extraction in 3032 Bldg, boiled down and fined up E1 again.

(4) Run Analysis
Ag Rinse - 3 C's at L.S.T.
SWCW - 1.0 C at LS.T.
Al heels - 91.9 C's L.S.T, 11.5 slugs.
Feed Tank - 224 C's L.S.T.
(5) Run Status:
(a) Cell A unchanged.
(b) R.C. Feed Tank - M.T.
(c) R.C. Main Waste Tank - M.W.F.E.
(d) Isotope Product tank - Versene effluent with H_2O going in
(e) HCl Tank - Caustic to neutralize HCl waste.
(f) Water wash following 0.07 Versene solution is now running from eluate tank → column → Iso Pro Tank.
(6) Broke three sample tubes getting the M.W.F.E sample. Evidentally the cone is forced against lid of canner when putting pin in, cracking the lip of the cone.
(7) Sample canner is in S.S. bucket in decontamination room. It's hot.
(8) Cleaned up a few hot spots around R.C. sampling area.
(9) Had a bad time putting H_2O wash behind feed through the column. Took Pressure to do it and the induction flowmeter was all over the chart.
(10) Found the spraying on the eluate tank was leaking and disconnected the Ceran connection at the tank.

1. Operations normal on the tank farm.
2. Run Status:
   (a) Cell A unchanged.
   (b) R.C. F.T.-MT
   (c) ISO Prod Tank - .07M Na V. effluent. - Sampled
   (d). MWT - HCl waste from HCl W. Tank - Sampled.
   (e) Eluate Tank. - 6 L. of 6M-HNO_3 ready to go on the column.
3. Cleaned the product Cone + placed it in the new carrier.
4. Cleaned up D-Bldg - generally.
5. Made adjustment on sample carrier to avoid breaking glass sample tubes.
6. Made up. 1M HCl + 3.5M HCl + sampled.
7. Adjusted 2M $NaNO_3$ - sampled.
8. Repaired the 125 HP. motor starter box.

4/4/51 4-12 Schaich

1. Run Status: Product cooling in PE - Ready to go to CH II
   Cone in place + adjusted under CH II
   Main Waste Tank - Fuming HNO_3 not sampled
   Sent HCl waste to A8.
2. Eluate to column valve leaking solution thru packing
3. FI - Last still to be sampled. Still some to boil down in Rm 10.
4. Check Rimshaw's column.
5. Changed Prissly's column + degassed at 7PM.
6. Continued evaporating.
7. Butted down 1M & 3.5M HCl. Samples in lab.

4/5/51 (1) Transferred and boiled down all the Iodine solution
12-8 Cleaned out distillation flask and sampled F1.
Sachs (2) Continued D^{32} men in 3032 glassware. Run is now on the column.
(3) Kept Rimshen's column in 3026 W Bldg going.
(4) Continued Evaporating on the tank farm.
(5) Run 43 Status: Product solution drying under C.H. #2. Seven hour period will end at 8:09 A.M.
(6) Lab analysis indicated high fuming nitric losses so started reprocessing fuming nitric waste as follows:
(a) Backwashed Resin to W12.
*(b) Transferred F.N. waste from main waste tank to Feed tank through Valve-21.
(c) Blew Feed Tank solution + water in column to P.E. tank.
(d) Now boiling down to dryness.
(e) Rest of steps are at R.C. Panel Board.
* This transfer leaves about a 2 liter heel in the M.W. tank. Evidentally the line doesn't go all the way to the bottom of the tank.
(7) Analysis.
1. 1st P.E. before F.N. Precipitation - 204 C's
2. 2nd P.E after F.N. Precipitation - 58 C's
3. F.N. Waste - 58 C's
(8) Changed bottles on Pressley's column at midnight and 4:15 A.M.

4-5-51 ① Evaporator operating OK.

8-4 ②. The 40 H.P. fan (Hot off-gas) was shut down at

Blood 2:45 P.M. and the small steam turbine put into operation. The electric fan has a cracked bearing which is in tact - and should ~~be~~ only be started up in case of an emergency.

③. Run #43 Status:

(a). A-1 - heel dissolving.

(b). A-9; A8 jetted to A-5; but not washed out.

(c) A-11 - 24 in of BWMA - not enough room in A-5.

(d) A-5 - Contains soda ash; A9-A8 + part of A-11 waste. - agitated 30 min. - ready to jet to A6.

④. R.C. - Run #43 Status: -

(a). Followed Ed. Nitkowski's instruction at P.B #7A.

Briefly — Evap. W. in P.E. to dryness - adjusted HNO_3 Conc. to be sure $Ba(NO_3)_2$ was in soln.

— Added $Ba(NO_3)_2$ carrier + 1L. H_2O.

— Added Conc. fuming HNO_3 + ~~HH~~ filtered Ba off

— Dissolved up Ba + Transferred to the cone on top of 85 ml. previously there. — Could not bring cone to dryness on first half batch.

Note: - Also diluted the heel left this morning in M.W.T. + sampled Results = 20 Co.

⑤. Ac, osted 1M HCl soln.; 3.5M HCl + 2 $NaNO_3$ soln.
– All OK and tagged.

4/5/51 ① Neutralized metal waste + sent to W9. Washed
4-12 out A8, A9, + A11 and sent to W5. Hold A1,
Schaich M.W, P.E., Iso, + HCl tank wastes.
② Sampled Main Waste & P.E. Rinse. See lab for results.
③ Put 2-100 ml washes into cone and continued evaporation. Unger says to cut back on air flow until you get 550°C.
④ Changed cuts on Presley column at 7PM + 11PM.
⑤ Started coating removal on FI slugs. Pile didn't push them till 8:30PM.
⑥ Continued evaporating.

4/6/51
12-8 ① Continued drying Product solution. Cutting back
Sachs on air flow will not increase air temperature. Looked at cone at 6:45 a.m. and there appears to be about one hundred ml. of solution left. Solution gives a fine glow with cubicle light off so we must have something. Solution is back under C.H. #2 at shift change.
② Continued Evaporating [redacted].
③ Started up Iodine dissolving in 3026 W Bldg.
④ Analysis - Main Waste - 17.5 C's } taken on 4-12 shift.
P.E. Wash - 1.0C

4-6-51 ① Evaporator operating ok.
7:04 ②. Small steam turbine still operating.
Blood ③ Maint. is digging another ditch on the N.E. Corner of the S. Tank Farm → W-[illegible]
④ R.C. Status & Run #43:
(a) Rinsed out the Iso Tank & HCl Tank with distilled H_2O. – Also [illegible] T. Jetted to A-8.
(b) P.E. contains P.E. Rinse.
(c) Continued evaporation of the Ba product in the Cone. - Inspected progress at [illegible] P.M. - about 10 ml. left.
⑤. Cell A Status:
(a) Made up soda-ash soln. for A-5 & jetted A-1 "heels" to A5. A-8 jetted to A5.
(b) Put 1-rinse through A1 → A11 → C.F. #1 → A-17 → A9 → P.F. bypass → A9 → A8 → A5. → A6 → W-9. (circulated thru sample Blisters)
(c) Started 2nd H_2O rinse thru A-1 → A-11 → C.F. #1 → A17. (shift change).
(d) Put 1 - HNO_3 wash thru blow tank line to P.F. to decontaminate hot line. – (sent to A-5 → A6 → W-9.)
(e). Sent 2nd HNO_3 wash thru the Blow Tank → A8 (via A9 → A8 by pass).
- Blow Tank line now reads 25 mr/hr.
⑥. Made a distilled H_2O connection on the back of P.B #7A. – We can now obtain distilled H_2O at this point.

(7). Decontaminated sample carriers for Cell A & R.C. and stored them in 2nd level cabinet.
(8). The leaking valve ~~to~~ on the distilled H_2O line to the Eluate Tank was repaired. 4
(9). Made up 1.0M NaOH soln. & sampled. 4

4/6/51 (1) Finished cell A washes & shut down all P.B.s.
4-12 (2) Removed product and loaded truck out at Schaich 5:25 PM. Product was reddish-brown in color and distributed evenly on lower half of cone.
(3) Decontaminated and stored carrier adapter and rod.
* (4) cleaned & smeared 17 drums and 2 pots. Truck has been washed out but not smeared due to rain. H.P. has orders to smear when dry. 4
(5) Did not sample 3rd FI still due to sampler plugging. Vac line in Rm 10 plugged or line from storage pot to mixflow pot is broken. Vac line reads up to 1R/hr.
(6) P32 is ready to go on column. All solution in head flask.
(7) H.P. will smear pots tomorrow.
(8) Continued evaporating.

4-7-51 12 — 8

4-7-51 1-CONTINUED WITH TANK FILLING.
8-4 I.E.L.G. FINISHED I'3' IN ROOM 10 AND DELIVERED TO PACKING. DID NOT SAMPLE.

(d). Repeated (b) + (c).
(e). Repeated (b) + (c). again.
(f) Added 5L. $NaNO_3$ 2M. - followed with 2L. H_2O.
(g) Added 2L. 1M NaOH. - followed with 2L. H_2O.
Stopped here with all valves closed, closing V208 last.
Next step. Na V.

(12). Evap. operating fairly well 25# + 35" LL. Coil "L" had a bad steam leak. - Maint. repairing same at shift change.

5-12-51
12-8

5-12-51 8-4 H.B.
1. Continued evaporator and tank farm operations

5-12-51 Continued with E.V. and tank farm.
4-12

12-8 Continued with EV. + TANK FARM.
5-13-51

RUN 44

5/12/51 1. Added 1st part coating removal to A-1.
8-4 2. Brought 1st load slugs to 3026-E.
3. Replaced pin on EV-W6-B
4. Continued evaporating.

~~5/13~~/51

5/13/51 ① Loaded 73 "W" slugs to A-1. Two hung in carrier
4-12 but dropped out when carrier was bounced.
Schwich Both 2nd & 3rd level cranes much harder to operate. Suggest air in lines.
② Sent charging machine to 3036 Bldg.
③ Run Status: 2nd coating removal cooking till 1:15 AM. Acid & dilution H_2O for dissolving in scale tanks.
④ made up 4% caustic in M10.
⑤ Continued evaporating. Sp.G. levelling off at 1.27 and evaporation rate dropping way down.

5/10/51
12-8 ① Dumped acids and made up batch of Carbonate.
Sachs ② Run Status. A1 dissolving coming up to gravity.
③ Drained Filter boxes and both off gas systems thoroughly before starting the dissolving.
④ Continued Evaporating. Cut back to 200 gal/hr when dissolving started.
⑤ Did a little more calibrating on the waste tank in N.E. corner of the tank farm.
⑥ Delivered Tile Units to 3038 Bldg.

5/14/51 ① The NaOH pump quit pumping at 10 A.M.
8-4 Switched to water through scrubber for remainder
Blaner Batch A dissolving. Found out the pump is O.K but on M10 wrong. The tank was empty
⑤ Finished regeneration of #200 cubicle resin. It is now ready for hum pH = 6.4
③ Tested line from P.E. to C.H. #2 from #300 R. Cubicle that is. Wouldn't deliver

proper amount through filter or by pass. Maintenance working on problem. ~~Valve O.K. Indicator~~

(4.) Evap. operating O.K. — Sp. Gr. pen was .1 low. Had it reproved. 4-12 & 12-8 watch the results on run #1117 — pushed the steam pressure to 20 p.s.i.

(5) Electricians ~~#~~ ran conductivity probe recorder wire into some flexible cable and conduit for safety. Continued wiring for the probe lights onto the panel board.

(6) Continued calibration of Tank on N.E. corner of settling Basin.

(7) In regards to item (3) Valve & line O.K. The valve position was slightly off.

(8) Instruments removed the #300 R.C. prod. Evap. liquid level gauge.

(9) Status of run

A1 — slugs

A5 — Na_2CO_3

A11 — 1MA just jetted to A-11 ready for filtration & filter aid.

5/14/51 (1) 1MA Analysis — ~~[illegible]~~ 8872 c's S.T. 38.1 slugs.

4-12 (2) Run Status: A1 - Batch B dissolving

Schaich PF-2 & A9 - Batch A

A8 - 8 MA Sampled.

A5 - Na_2CO_3

A17 & A11 - MT

Scale Tanks - Dilution H_2O & 255# H_2SO_4

A16 H_2O - Off

(3) Slight air count in 3026 E+W when A4 scrubber was cut back to 160. Boosted it to 200 and then brought it back to 160.
(4) Checked FI dissolving and opened EV to flask line in Run 10.
(5) Continued calibration of new tank on T.F. Draining 55 gal in at shift change. Should be full soon. Finished.
(6) Had trouble getting WC-1 to W5. Jetted pit water out and jet worked okay after filling pit with cold H_2O.
(7) Continued evaporating.
(8) Blow tank valve at PF cubicle reading 710R. Shielded with lead to 300 mr/hr.
(9) SWMA analysis — 26 c/s S.T.
(10) M1 has enough NaOH mixed to make 80" of 4% in M10 when diluted.
(11) Took Sp. C.T. sample on Run #1117. Result — 6 c/s/min.
(12) South WC1 jet is leaking steam at packing.
(13) The following valves should be replaced: A9 sparger A11-A6B, A11-A5A, A5-A8, A8-A9, A11-A5DB, A8-A11. All on PB-2.
(14) Dumped acids for Heel dissolving + extraction.

5/15/51
12-8 (1) Had shift Pipefitter tighten up packing glands nuts on P.B. #2 valves mentioned above.
(2) Run Status:
A1 — M.T, Ready to start heel dissolving
A9 — Batch "B" Extraction. H_2SO_4 started in at 7:44 A.M.
A8 — M.T
A5 — M.T

A17 - M.T
(2) cont A6 - M.T
A11 - M.T

(3) Continued Evaporating on the tank Farm.
(4) Brought a Sulfur can to 3032 Bldg.
(5) Checked Iodine dissolving in 3026W Bldg.
(6) IMB Analysis: 5380 S.T.

5/15/57 8-4 Blaser

(1) Raised the evaporation rate at the evap. Steam pressure is now 23 p.s.i.

(2) Discovered what may be the cause of the high settling Basin counts. There appears to be a leak at the valve pit west of 706-C. Hose is running in there now.

(3) Started heels dissolving 3026. Continued on with Rala run #44 Status:

A4 - Heels Dissolving
A9 - Run 44 2nd metathesis
A5 - Batch B going to A4
A6 Batch B from A5
A-11 MT.
A-8 - 1st metathesis waste

(4) Cud filters are backwashed.
(5) Made up some $NaNO_3$. OK 2.0 M.
(6) Received the flowmeter + Prod. Evap. L.L. gauge for #300 cubicle.
(7) Water line broken in S. Tank Farm. The water is shut off.
(8) Sampled W11 tank + W11 dry well. W11 tank to S. Basin valve was closed.
(9) Received platinum lined cone from Los Alamos

5/15/51 ① 125 HP bearings are hot.
4-12 ② Ran water into 706-C valve pit all shift.
Schaich ③ Started FI dissolving
④ Finished still and transferred everything to Rm 10. Should be boiled down at shift change.
⑤ Placed product cone in carrier.
⑥ Continued evaporating. Sp.G. line plugged.
⑦ No D.B. reading at 11 PM. Wouldn't work.
⑧ Run Status: A1 - Heel sampled
A8 - SWCW
A9 - M.T. ready for rinse
A5-A6-A11 - MT
Feed tank - Product adjusting pH.

5/16/51
12-8 ① Continued Evaporating on two tank Farm.
Sachs ② Took up P^{32} extractions, reextracted, and boiled down crude in Crude Evaporator.
③ Sampled FI in Room 10.
④ Checked Iodine dissolving in 3026W Bldg.
⑤ Run #43 Status:
A1 - Heel dissolving diluted and sampled.
A11 - M.T.
A8 - SWCW
A9 - A9 Rinse sampled.
R.C.200 Feed Tank. Feed tank Rinse, sampled.
" " M.W. tank - M.W.F.E, sampled.
" " Isotope Product tank - 4 liters of .04 Na Var. + rinse effluent. Not sampled

5 (cont).
HCl Tank - 5 liters 6 M NaOH to receive HCl.
(6) Feed solution was adjusted to a pH of 6.5.
(7) Average Flow of Feed solution was 62 ml/min over a 4 ½ hour period.
(8) Column now ready for 12 liters of HCl. Valve 208 is closed as is Valve #22. There is about 50 ml of H_2O in effluent tank to be drained out before HCl is added.
(9) Analysis:
Feed tank Product - 13,858 C's S.F.
A9 Rinse - 337 C's S.T.

5-16-51 8-4 Blood
(1). Continued evaporator operations. The multiple probe was checked to-day for shorts at the entrance to the evaporator. - Checked OK + instrument dept. still investigating the trouble. The electrician continued installion of instruments.
(2). Ran the steam turbine fans for 4 hrs.
(3). Run #43 status:-
A-1 - Heels
A-11 - 8WCW + MWFE.
A-8 - M.T.
A-9 - A9 - rinse.
R.C. #200 F.T. - F.T. rinse. - resampled.
" MWT - HCl E. - sampled.
" Iso T - .07 Na V. - Effuent. - sampled
" P.E. - ?? (6M HNO_3 Effuent - maybe)

(over)

④. P.E. L.L. instrument either refuses to work, or the product has gone some other place. Instru. Maint. is working on the Instru.
⑤. Painters were painting walls of Cell A + B.
⑥. Cleaned up some hots spots on the floor in "D" Bldg.
⑦ At shift change 6M HNO_3 is about thru the column going to P.E.

5/16/51 ① Boiled down P^{32} to approx 300 ml then
4-12 shut off due to condition "Red" in 3026-E.
Schaich E2 extractor vent was left open when started up. Shut off steam + cooled down Didn't have time to look at it.
② Removed S.B. sampler pump, cleaned, and smeared it. It is green tagged and on Blanco desk.
③ Finished F I stills and are boiling down in Rm 10 at shift change. Loaded Hanford slug and started coating removal.
④ Made up K_2CO_3 & $Pb(NO_3)_2$, and .5N H_2SO_4 Results K_2CO_3 - 39.74%, $Pb(NO_3)_2$ 20.45, 5N - .517.
⑤ Plugged hole in 706-C valve pit drain line with wooden stopper + duct seal.
⑥ A17 sparger line hot. Backed up line when solution hit evacuated line
⑦ 3PM DB - 2879 β c/s/min, 2874 Ba c/s/min, 1.88×10^{-5} mc/ml
7PM " - 874 β c/s/min, 882 Ba c/s/min, 5.76×10^{-6} mc/ml.
⑧ Continued evaporating with lots of foam over.
⑨ Recovery Run Stations: A9 - Batch A extraction