4058

p32: 390# HNO_3

OAK RIDGE NATIONAL LABORATORY

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NUCLEAR DIVISION

UNION CARBIDE

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OAK RIDGE, TENNESSEE 37830

UNCLASSIFIED NOTEBOOK NO. A-7879

Assigned To: Hannis Blauer

Department: Chemical Separations Shift Logbook #32

Location:

Date ~~Issued~~ assigned Sept. 30, 1976

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

David R Hamrin 4/17/96

Technical Information Officer

ORNL Site

RUN 62: See pages 29 - 38

RUN 63: See pages 75 - 87

8/4/55 3- Sampled M.H. #25 = 167 #3500 = 30
12:8 O.D.B. = 241. Metal Rec. is Still Overflowing
Cont. the Canal.

4- The 2½ Ton Truck has a Loose Spark Plug Causing it to Miss.

5- Continued Pumping W-8 to Lagoon # 3 Sampling and pH hourly.

8-4-55 1. Higgins of Chem. Tech. Sent 200 Liters of Solution
8-4 to W7. The Wt. of Depleted U, in this Solution
Blevins. will be given to P.B. or by mail.

2. Maint. Replaced the Fluorescent Lights over Panel Board #2 in 3026-D Bldg.

3. The Steam off Gas Turbine was Started at 3:30 pm and is to Run over Night.

4. Contd. With Resin Regeneration Water is on the Resin. Step #7 3rd Cycle.

5. The Pickup Truck is Still in the Garage for Repairs.

6. The Bad Spark Plug to the Big Truck has been Replaced.

7. Contd. Pumping from W8 to Lagoon #3.

8. P^{32} Pickup Run is Boiling Down in EV1 The Product Taken up this AM has ~ 3900 mcs

9. The Sump Pump in the Tile Pit South of 3503 was Replaced today. And is Pumping at 3:45 pm.

8-4-55 1. Finished resin regeneration cycle 3036D.
4-12 2. Removed stainless steel wires from WC tanks.
Bailey Hottest ones are in stainless steel barrell in decontamination room & the cool ones in bucket. Sparging in citric acid.
3. Finished pumping from W8 to Lagoon 3. Flushed line & closed down pump & submitted sample to lab.
4. Started pump from W6 to W8 at 11:00 P.M. W6-L.L. 5'1" W8 L.L. 5'10".
5. Checked K. Ladd's dissolving North 3036D and added NaOH & H_2O as needed.
6. P^{32} pickup run in P1. Unable to get ppt. to form after adding a full flask of ammonia.
7. Continued tank farm and patrol duties.
8. Had to jart pump south of 3503 in order to get it to kick off.

8/5/55 1- Transferred 300 ml of the P^{32} pick up
12-8 run back to Ev #1 from P-1 and boiled
R.L.N. down. The solution in both ammonia bottles was water. pH ~8 Precipitated P-1 solution and continued with the run It is about ready to take out of Ev-#2 at 8:00 A.M.
2- The pump from W-6 to W-8 stopped pumping around 1:30 A.M. W-6 L.L. 9'11". Pumped 2" from W-5 to W-6 then switched the valves to pump from W-6 to W-8 W-6 L.L. at 7:00 A.M. was 5'
3- Continued with Ladds Dissolving.

4. Cleaned Five of the S.S. cables at 3026-D the Cables in the bucket read 20-60 MR/HR the two in the bannell read up to 1.5 R/HR.
5. Washed down the Cottrell Precipitaton.
6. Continued With Tank farm and Patrol metal Rec. is still overflowing the Canal slightly.

8-5-55 1. THE PICKUP TRUCK WAS REPAIRED AND RETURNED TO US.
8-4 2. TOOK LL. READINGS OF LAGOON #2 - 9.08' AND #3 -
BLEVINS. 11.74' THEN OPENED THE OVERFLOW VALVE TO ALLOW #3 LAGOON SOLUTION DRAIN TO #2 LAGOON. (8:30AM).
3. THE PUMP FROM W6 TO W8 QUIT PUMPING AT 11:30AM W6 LL - 4'11" W8 LL - 6'2" FLUSHED THE LINE TO W6.
4. STARTED PUMPING FROM W5 TO W8 AT 11:30AM WHEN W5 LL WAS 8'2" AND W8 LL - 6'2". SAMPLING W8 ONCE EACH HOUR FOR PH.
5. MAINT. REPLACED THE GRATING OVER THE S.T.F. WASTE TRANSFER PUMP PIT. THIS PIT CAN BE ENTERED WITHOUT REMOVING ANY VALVE HANDLES NOW.
6. THE BIG TRUCK IS IN THE GARAGE FOR INSPECTION AND WILL BE READY AT 4:00PM.
7. SAMPLED WC5 FOR LEUZE WC6 SAMPLER HASN'T BEEN REPAIRED YET.
8. MAINT. CONTD. WITH REPAIRS OF THE AUTOMATIC STEAM VALVE ON THE STEAM OFF GAS ENGINE.
9. THE SUMP PUMP SOUTH OF 3503 STILL FAILS TO SHUT OFF WHEN FINISHED PUMPING. AND CAN BE SHAKEN TO STOP THE MOTOR.

10. THE LOWER BROWN TELEMETERING INST. WAS OUT OF SERVICE FROM 9:30 AM TO 1:30 PM TO ALLOW MAINT. TO RE ROUTE ELECTRICAL LINES AT THE CONSTRUCTION AREA SOUTH OF M. RECOVERY.
11. RECD. 3,823 LITERS CONTAINING 14,349.358 GMS OF NORMAL U INTO W7 FROM HIGGINS OF CHEM. TECH. W7 PH IS 5.
12. THREW THE S.S. CABLES WHICH WERE USED TO HOLD THE TANK COUPONS. INTO A HOT CAN.

8-5-55 1. TOOK UP I^{131} product delivered to PACKING.
H-12 SAMPLED & SUBMITTED SAMPLES TO LAB.
BAILEY 2. TOOK OFF GAS VELOMETER READINGS AT STACK AREA.
3. Added NAOH TO W7 to bring PH UP.
4. Hosed down STACK AREA.
5. Cut OFF H_2O GOING INTO WC-13 RM E21.
M. H. LIETZKE.
6. Checked .05 N. ACID AT 3032 bldg. LAB. results .03.
7. Cut OFF LEAK IN hot drain H500 TO WC13 RM-D9 W. R. MUSICK & M. MURRAY.
8. Replaced Light bulb AT 125 H.P. blower.
9. Checked PUMP W5 TO W8 hourly & P.H. W8 hourly. PUMP STILL GOING OVER SHIFT CHART.
10. CONTINUED TANK FARM & PATROL duties.

8-8-55. 1. DRAINED OFF GAS AND CELL VENT. FILTER BOXES.
12-8 2. BROUGHT 1 SAMPLE CONTAINING .25 G. OF Na_2CO_3
BLEVINS. AND .25 G. OF K_2CO_3 TO 3038 FROM THE LITR.
3. CONTD. PUMPING FROM W5 TO W8 AT ~½" EACH

HOUR. TOOK APH OF W8 HOURLY.
4. BROUGHT PILE UNITS TO 3038 FROM THE PILE.
5. THE BIG TRUCK MOTOR IS MISS-FIRING. WHAT?
6. THE I^{131} SLUG CARRIER IS ON THE BIG TRUCK AT 3028 BLDG.

8-8-55 ① Continued pumping W5 - W8, very slow.
8-4 ② Repaired flat on pickup.
Schaich ③ Loaded FI slugs & started dissolving.
④ sent big truck to garage. Ready at shiftchange.
⑤ Maintenance worked on steam turbine automatic steam valve. should be ready for test at shift change. Still leaks - back on automatic.
⑥ Lag. #1 - 10½ turns
" #2 - 9.80
" #3 - 11.10
⑦ Samp pump S. of 3503 is out. Supposed to be a whirvly in at shift change.

8/8/55 1- Brought the 2½ ton TRUCK back from the
4-12 garage.
R.L.N. 2- Shut off the PUMP from H-5 to H-8 at 6:00 P.M. No increase IN H-8 LL. after 5:00 P.M. also Shut off the air to H-5 Sparger.
3- CONTINUED With F.I. Dissolving.
4- PUMPED the Water from the tile Pit South of Bldg. 3503 at 7 & 11 P.M.
5- CONTINUED With Tank Farm and Patrol. Sampled the Cobalt Source at 11:00 P.M. ONLY Requested by DON PHILLIPS. Yoder would like his FURNACES

Checked on the 12-8 Shift through the Remainder of this Week. Rooms #5 & 9 Bldg. 2005 Charge Code 34704-13

8-9-55 1. WASHED DOWN THE COTTRELL PRECIPITATOR.
12-8 2. BROUGHT A SULFUR CAN TO 3032 FROM THE PILE.
BLEVINS 3. CONTD. WITH I^{131} DISSOLVING AND HOURLY READINGS.
4. CONTD. PUMPING THE TILE PIT SOUTH OF 3503 WITH THE WHIRLEY PUMP.
5. JETTED WC1 JET PIT SOLUTION TO THE S. BASIN.

8-9-55 (1) Maint. reinstalled sump pump - S. of
8-4 bldg 3503.
Blauer (2) Maint. is replacing the diaphragm steam valve to the steam turbine driven off gas pan
(3) Turned the air sparger back on to Tank W-5
(4) Started pumping from Tank W5 to Tank W6.
(5) Emptied 1700 Gals. aluminum nitrate solution from bldg. 4505 to Lagoon #1. Fosters sent it
(6) Bldg 4505 - Chem. Tech. are withdrawing Thorium from Th 1 tank south of bldg 3503 into drums and storing drums inside ~~barrier~~ fence. Be careful of radiation there.
(7) P32 extractions come off E1 at 9:30 P.M and E2 at 11:00 P.M.
(8) Ran 3026 C+D turbine 4 hours.

8/9/55 1. PUMPED WC-9 to W-5 and let the PUMP
4-12 run a few min. after gauge came down to
R.L.N. zero.

2- The Sump Pump in the tile South of Bldg. 3503 Will Not Pump. The Motor seeks to be OK. the Switch is turned off. 100 MR/HR Background in this area.

3- Cleaned up around the Small Steam turbine at the Stack.

4- Shut off the Pump from H-5 to H-6 after Priming and it Still Would Not Pick up.

5 P^{32} Took up Extractions from E-1 & E-2 and Started boiling down in Ev. #1. Started Re extractions.

6. The Pile Bldg. Purged the Canal ~ 1½ hours this Shift. Started at 8:00 P.M.

7-

8-10-55 1. FINISHED BOILING DOWN P^{32} EXTRACTIONS IN EV1
12-8 E1 HAD 2,035 MCS E2 HAD 2,282 MCS.
BLEVINS. 2. THE MOTOR TO THE SUMP PUMP SOUTH OF 3503 WILL RUN BUT WON'T PUMP. THE SWITCH IS IN THE OFF POSITION.

3. THE PILE SENT CANAL DEMINERALIZATION WASTE TO W1. HAD TO BACKWASH THE W1 TO W5 JET BEFORE IT WOULD JET.

4. THE WC2 PUMP PIT, SUMP PUMP FAILED TO WORK - PUT A WHIRLEY PUMP IN THE PIT AND PUMPED TO THE S. BASIN DRAIN.

5. THE PICKUP TRUCK HAS A BROKEN AXLE AND IS PARKED ON THE ROAD SOUTH OF 3503.

8-10-55 1. Started pumping from Tank W8 to Lagoon #3 and
8-4 started compact W8 to Lagoon #3 - #11. pitting
Blower every hour. W8 L. level at start 10'9" Lagoon #3 11'0"
2. Pick up truck to garage with a broken axle
3. Maintenance removed sump pump from W-2 pump pit. Switch is bad. Back in service.
(4) Pump in tile South of bldg 3503 had a broken coupling. Back in service
(5) Started pumping tank W5 to W6.
(6) Shut off air sparger to W5 while pumping W5 to W6.
(7) Maintenance continued installing steam and air headers in tank farm.
(8) Automatic steam valve at stack area is repaired + back in service
(9) P32 boiling down in EV-1
(10) Ran 4500 area steam turbine 4 hours

8/10/55 1- P^{32} Continued through the Glassware. Had to
4-12 use 0.1 N HNO_3 to take Product out of Ev #1
R.L.N. diluted this down to .05 before transfer to S-1
Reading on dry Evap. 17.5 R^2 Scale. Had to use
3.0 N HNO_3 10 ml and diluted to 300 ml with
water to remove the Prod. from P-1 disc.
filtering through S-2 to Ev. 2 at 12:00
Took up extracts from E-1 + 2 and started
boiling down. S-1 has Not been Regenerated.
2- Continued Pumping from W-5 to W-6.
3. " " " W-8 to Lagoon
P 3 Sampling and PH every hour.
4- Cleaned up around WC-2 Pit.

5- Continued with tank farm and Patrol

8-11-55 1. SHUT DOWN THE W5 TO W6 PUMP AS IT HAD
12-8 QUIT PUMPING. W5 LL. AT 5:45AM 4'10" AND
BLEVINS. W6 LL. WAS 5'9½"
2. CONTD. PUMPING FROM W8 TO LAGOON #3 AND SAMPLING HOURLY FOR Ph AND COMPOSITE.
3. THE WC2 PIT PUMP HAD TO BE SHAKEN BEFORE IT WOULD PUMP.
4. P^{32} PRODUCT IS BOILING DOWN IN EV3 ALONG WITH THE H_2O WASH WHICH IS FILTERING FROM S3 TO EV3. S3 HEAD TANK READ 11 XR2.
EV2 CONDENSATE SAMPLE READ 280 mr/hr.
S1 AND S2 HAVE BEEN REGENERATED & WASTE IS BOILING DOWN IN EV1.

8/11/55 1. Ran hot off gas turbine 4 hours.
8-4 2. Cont'd pumping from W8 to Lagoon #3. Sampling
Blauer hourly for pH + composite. Radiation readings at Lagoon #3 are 800 mr/hr at sight glass, 200 mr/hr. at edge of walk.
3. Maintenance removed WC-2 sump pump for repairs again.
4. Checked all manhole samplers + gear reducers for oil level. Reoiled as necessary.
5. Started pump to go from tank W5 to W6
Can't tell if it is pumping yet.
6. Maint. continued installation of tank farm steam and air lines.

7. Maint. started repair of tank WC-6 sample
8. Maint. insulated automatic steam valve at stack area
9. Man lab #3500 sampler motor not operating. This should be repaired by shift change OK
10. Pick up run on P32 boiling down in EV-1

8/11/55 4-12 R.L.N.

1- Shut off the pump from W-8 to Lagoon #3 at 5:00 P.M. W-8 L.L. 5'10" flushed the line 1½ hrs. Lagoon #2 Reading 9.65' #3 11.62' Opened the Overflow valve from Lagoon #3 to #2 at 6:30 P.M. brought the sample in to the Lab.

2- Shut off water running into a hot drain Room H-23 Bldg. 4500.

3- Cleaned up around WC-2 valve pit.

4- Pile Bldg. Started Purging the canal at 5:00 P.M.

5- Checked all pH samplers at the Tank Farm W-8 was the only one that would work. W-5 L.L. was probably too low and W-8 steam to jet line seems to be partly plugged.

6- Started pumping from W-6 to W-8 at ~6:00 P.M. it is pumping ~½" per hour.

7- The sump pump at WC-2 valve pit seems to be working OK.

8- P32 Pick up Run is filtering through S-2 and boiling down. S-1 has been Regenerated.

8-12-55 1. WASHED DOWN THE COTTRELL PRECIPITATOR.

12-8 2. WC2 SUMP PUMP IS WORKING OK.

BLEVINS. 3. THE TILE SUMP PUMP SOUTH OF BLDG 3503 RUNS CONTINUOUSLY. THE SWITCH TO THIS PUMP IS IN THE OFF POSITION.

4. THE #7 THERMOCOUPLE TO STEIDLITZ'S "D" POT WENT OUT AT ~2:00 AM.

5. SAMPLED MANHOLES. OLD D. BOX - 45 c/m/mL
#25 - 49 c/m/mL #149 - 0 #190 - 9 c/m/mL
#3500 - 149 c/m/mL #186 - 523 c/m/mL.
#16 - 38 c/m/mL D. BOX SPECIAL - 21 c/m/mL

6. CONTD. PUMPING FROM W6 TO W8

7. P^{32} PICKUP RUN IS FINISHED AND THE PRODUCT TAKEN TO SHIPPING. S3 HEAD TANK READ 6 ON R2
S1, S2 & S3 HAVE BEEN REGENERATED.

8-12-55 8-4 (1) Maintenance installed a union at the top of the outlet line from WC-2 sump. This will which make for easier removal.

(2) Sampled WC5 and sent to Leuze

(3) Gassed-up trucks.

(4) Repaired pan on M.H. 189

(5) Sump pump behind 3503 Bldg running O.K. on 8-4.

(6) Continued installation of T.F. steamlines; lagging auto. steam valve at stack; and repairing WC-6 sampler. Lagging & sampler job finished

(7) MH 3500 sampler just about shot order in for repair

(8) Closed valves between Lag #2 and Lag #3.

#2 Reading - 10.25 #3 Read. — 11.19

(9) High O.G. at 11 A.M. Sampled M.H.'s. Results:

3500 - 229 cb/min 25 - 79

ODB - 44 3503 sump - 0 cb/min

Recheck on O.B. — 143 cb

(10) 3503 Pump Sump sample — ~20 mm/hr. 182,000 cts.

(11) Continued pumping W6-W8.

8/12/55 1- Sampled the O.D.B. and M.H. # 190 at
4-12 6:00 P.M. O.D.B.=62 M.H. # 190 = 2 c/h/m/ the
R.L.N. high count 3:00 P.M. D.B. was probably from the value pit south of 3503. the sump was about ready to pump again at this time.

2- Shut off the pump from W-6 to W-8 at 8:00 P.M. it had stopped pumping. W-6 L.L. 4'11" W-8 6'11".

3- The Pile Bldg. pumped the canal about 45 min. started at 10:00 P.M.

4- Tried Air Jetting from the tile sump at WC-2 Tank without success. also tried a couple of other jets that wouldn't work.

5- Took off Gas Velometer readings.

6- Continued with Tank Farm and Patrol.

8-15-55 1. Drained filter boxes at stack area.
12-8 2. Brought down 2 samples from L.I.T.R.
Bailey and left on truck parked at 3030 bldg.

3. Need charts for P.B. 1 ring balances. F-100

4. Continued tank farm & patrol duties.
5. Started pre-run check 3026D bldg.
6 Brought down pile units to 3038 bldg & 24 slugs to I 131 cell.

8/15/55 1- Brought Gloves and shoecovers in to
8-4 Bldg. 3036.
R.L.N. 2- Loaded 24 F.I. slugs and started Dissolving Readings on the horn.
3- Lagoon Readings #1 10½ tunnes #2 10.05' #3 10.1'
4- Continued with Pre Run check in 3026-D it is about complete except for Inst. work. The loading cubicle sump to W-16 Jet is plugged on the discharge side. Ran a filter rate check on R.E. #200 that was slow. Put a Nitric Rinse through the tank and is to go about the C.H. to A-16 this is in the tank at shift change.
5- Maint. Continued work with WC-2 sump pump. It has been working ok since ~10 A.M.
6- Laborers started removing part of the concrete pad at the stack trying to locate the water leak under the pad. The water header valve for the small steam turbine is shut off.
7- The pick up truck is in the garage until Tuesday.

8-15-55 1. JETTED THE HNO_3 FROM 200 P.E. TANK TO CHG. HEAD TO A1L
4-12 THEN FOLLOWED WITH H_2O WASH. MADE A FILTER
BLEVINS RATE CHECK FROM PE TO MW WHICH AVERAGED 825 ml/
MIN. USING 60# STEAM PRESSURE.

2. BROUGHT THE PICKUP TRUCK FROM THE GARAGE.

3 SLAUGHTER HAS TWO HELIUM CYLINDERS WHICH HE WANTS CHECKED ON THE 4-12 AND 12-8 SHIFTS. THESE CYLINDERS ARE NEAR THE SOUTH END OF THE RACK AND ARE LABELED. HE WANTS PRESSURE ON THE MANI-
-FOLD AT ALL TIMES.

4. THERE IS A STEAM LEAK AT AN ELBOW ON THE MW TO A8 STEAM TO JET LINE. — ONE AT AN ELBOW ON THE Chg HEAD EXHAUST TO A1L STEAM TO JET LINE AND ANOTHER AT A UNION IN THE LOADING CUBICLE SUMP TO W16 STEAM TO JET LINE. ALL 3 LEAKS ARE AT P.BOARD 7A AND ARE MARKED WITH RED PENCIL.

5. TURNED ON THE H_2O HEADER TO OFF GAS AND B1C STEAM TURBINES.

6. WC2 SUMP PUMP HAS BEEN OK THIS SHIFT.

7. SCRUBBED THE SIDES OF THE RALA LOADING CUBICLE WITH VERSENE SOLUTION THE RADIATION DROPPED FROM ~140 mr/hr TO ~40 mr/hr AT THE TOP OF THE CUBICLE. THE L.CUB. SUMP JET IS STILL PLUGGED.

8. BILL GISSEL CALLED AT 9:15 PM ASKING US TO SERVICE TAYLOR'S LIQUID N_2 TRAP AT THE COBALT SOURCE AT 10:00pm AND 4:00AM.

9. CONTD. WITH I^{131} DISSOLVING AND HOURLY READINGS.

10. CONTD. WITH LADD'S U DISSOLVING WITH HNO_3 AT 3036 BLDG.

11. STARTED PUMPING FROM W5 TO W8 AT 4:30 PM W5 LL AT START WAS 6' W8LL WAS - 6'11"

12. RAN FILTER RATE CHECKS ON CF1 — 4.21 G/P/M AVE. CF2 — 3.81 GPM THEN CLEANED CF2 WITH HNO_3 AND MADE ANOTHER CHECK WHICH WAS 4.0 GPM.

13. THE HIGH STEAM HEADER BLOW DOWN VALVE AT PB #2 LEAKS AS DOES A17 TO A8 VALVE AT PB #3.

8-16-55 1. WASHED DOWN COTTRELL PRECIPITATOR.

12-8 2. TOOK HOURLY READINGS ON DISSOLVING AT I 131 CELL.

HE BAILEY

3. BROUGHT DOWN SULPHUR CAN FROM PILE BLDG. TO 3032.

4. TURNED ON VARIAC TO SULPHUR MELTER.

5. RAN FILTER RATE TEST ON P.F. I AND P.F. II — P.F. 1 - 3.6 GAL. PER MIN. P.F. II 3.3 GAL. PER MIN.

6. SUCKED SOLUTION BACK THROUGH JET STEAM LINE ON LOADING CUBICLE SUMP JET IN AN EFFORT TO UNPLUG LINE BUT WAS UNSUCCESSFUL.

7. SCRUBBED DOWN LOADING CUBICLE AREA WITH VERSENE & CLEANING POWDER. L.C. WALLS & FLOOR 30 TO 100 MR/HR. MANIPULATOR ARM AND AREA ABOVE & BELOW IT 700 MR/HR.

8. CONTINUED PUMPING FROM W5 TO W8. CHECKED L.L. & P.H. HOURLY.

(OVER)

9. Checked & Added to dissolving North 3036 bldg. And Added HNO_3 As Needed.
10. Continued tank Farm & patrol duties.
11. Removed Cone From C.H. Cleaned & Stored in box on 3rd Level.
12. Shutter in loading cubicle is in the Closed position.

8/16/55 8-4 R.L.N.

1- P32 E-1 Cools at 9:30 P.M. E-2 at 11:00 P.M. the Steam will be Shut off of the extractors and the air on at 4:00 P.M. due to a Steam Shutdown in the Iso. area. After the Steam is back on the air should be Shut off.
2- Pipefitters Repaired one Water leak in the line at the Stack. Cut out a Section of Pipe and Welded in another but there seems to be other leaks in this area. Fitters also repaired the drain valve for the header line for the North line at the stack.
3- There will be a Steam Shut down around 4:00 P.M. to Repair a Steam leak in Bldg. 3038 the Steam was Shut off of the Cottrell at 3:20 P.M.
4- Continued Pumping from W-5 to W-8 at around ½" per hour.
5- unplugged the Cubicle Sump Jet by drawing Solutions back through the Jet and Steam line.

8-16-55 4-12 Blevins.

1. The Leaking Steam Station over the Utility Room at 3038 Bldg. was Repaired and Steam Turned on at 8:20 pm.
2. Turned the Steam on to the Cottrell Insulators at 8:30 pm and Started up the Cottrell 1 hr Later.
3. Turned the Steam on and Air off to E1 and E2 P^{32} Extractors at 8:40 P.M. E1 Extraction will be ready to cool at 12:01 Am and E2 at 1:30 AM.
4. At W. Gissel's Request Taylor's Co. Source Liquid N_2 Trap was serviced at 10:00PM and he wants it serviced again at 4:00 AM
5. Put weak HNO_3 into the Rala Loading Cubicle and Jetted out - then followed with a water rinse. The Jet seems to be O.K.
6. WC-2 Sump Pump has been O.K this shift.
7. Contd. Pumping from W5 to W8
8. MH#22 Sampler cut out when the flow got up to 73% but samples OK at lower flows.
9. Contd. with Ladd's U Dissolving with HNO_3.
10. Nixon called at 8:10 pm saying they were going to purge the pile canal ~1 hr.

8-17-55 12-8 Bailey

1. Took up extractions on EI and EII, sampled and started boiling down in EVI. Started rextractions. 493 Cl - 2435 mc/S.T. 494 Cl - 2258 mc/S.T.
2. Shut down pump W5 to W8 at 2:00 Am. W5-L.L. 4'10" W8-L.L. 8'4"

3. Continued with K. Ladd's U dissolving North 3036 bldg. 8.
4. WC 2 - Sump pump operated off this shift. 8.
5. Continued tank farm & patrol duties.

8/17/55 1- Sampled the valve pit water south of Bldg.
8-4 3503 = 3.09×10^6 M.H. #25 = 36 # 190 = 1
R.L.N. #3500 = 22 O.D.B. = 45 C/M/M. The valves on the discharge side of the sump pump are set to WC-9 until decon. of the pit is finished.
2- Ran both small steam turbines 4 hours.
3- Riggers replaced the cover over WC-2 valve pit.
4- Pipefitters repaired the steam leaks in 3026-D Bldg.
5- Pipefitters continued work on the steam and air lines on the south tank farm. The sparger lines have been connected at W-5, W-6, and W-8 tanks. 8
6- The patrol job at 3026-D for Ratliff is shut down. 8
7- P32 first water wash is boiling down in Ev. #1
8- Added 300# of NaOH from D-Bldg to W-7 to bring pH up to ~ 9 after Ladd dumped 140 liters of UNH solution into W-7.
9- Continued with F.I. Run F-1 sample read 7 10 R/HR. 8

8-17-55 1. TAYLOR'S CO. SOURCE LIQUID N_2 TRAP IS TO BE
4-12 FILLED AT 4:00AM. WE FILLED THIS TRAP AT
BLEVINS. 11:00PM AT THE REQUEST OF R. MCCORD.
2. LOANED THE BIG TRUCK TO METAL RECOVERY FOR MOST OF THE SHIFT.
3. TOOK UP EXTRACTIONS FROM E1 + E2 & STARTED BOILING DOWN IN EV1 WITH THE OTHER WASTES STARTED NEW EXTRACTIONS.
4. 3019 SENT 260 GALS. OF H_2O FROM THE PIPE TUNNEL TO W1 AS THEY WERE SCRUBBING THE FLOOR.
5. THE P^{32} PRODUCT IS IN EV2 BOILING DOWN WITH THE 2nd H_2O WASH WHICH IS FILTERING FROM S2.
6. HAD H.P. SMEAR THE DAYTON TRAILER THEY WILL LEAVE THE RESULTS ON THE DESK. WHEN FINISHED WITH COUNTING THE SMEARS.

8-18-55 1. FINISHED P^{32} RUN. TOOK UP PRODUCT & DELIVERED
12-8 TO PACKING ROOM. DID NOT SAMPLE.
BAILEY 2. REGENERATED SI & SII AND CONTINUED BOILING DOWN IN EVI.
3. PIKE BLDG. REGENERATED THEIR DEMINERALIZER THIS SHIFT. ALSO PURGED THEIR CANAL FOR ABOUT AN HOUR FROM 3:30 AM. TO 4:30 A.M.
4. SCRUBBED HOT SPOTS IN TRUCK NORTH OF 3036 BLDG. READY TO RESMEAR SOON AS THEY DRY
5. CONTINUED TANK FARM + PATROL DUTIES.

8/18/55 1- P^{32} RUN # 493 HAS 2260 MCS. RUN # 493-1 IS
4 BOILING DOWN IN EV. #1.
L.N. 2- INST'S STARTED CHECKING THE INSTRUMENTS IN 3026.

3- Sampled O.D.B. = 45 M.H. # 25 = 108 and #3500 = 70 c/m/ml. The valves in the Pit South of 3503 Bldg. are still set to HC-9. The Pile Bldg. Started Purging the Canal at ~ 2:00 PM.

4- Ran the Large Steam turbine 4 hours.

5- Brought Gloves and Shoe Covers into Bldg. 3036.

6- Decontaminated the New Pump on the South Tank Farm. and Maint. Brought to Decon. Bldg. for Repairs. Pipefitters Started Installing the Sight Glass on the Pump Discharge line in the Pit.

7. Received 20 liters of U Waste from Chem. Tech. to H-7

8-18-55 1. At R. McCord's Request the Co. Source N_2 Trap is
4-12 To be Filled at 10:00pm and 4:00am.

Blevins 2. Cut off the Power Switch to P1 Agitator in Evergreen at 6:45 P.M.

3. Searched for the Leak into W1 But Couldn't Locate it. 3019 Started Washing their Cell 6+7 Floor at ~10:45 PM.

4. 3001 Purged their Canal All Shift.

5. Started a U. Dissolving With HNO_3 for Ladd North of 3036 Bldg.

6. P^{32} — Product is Filtering Through S2 and Boiling Down in EV2. S1 Has Been Regenerated.

8-19-55 1. Washed down Cottrell precipitator.
12-8 2. Continued U dissolving North 3036 Bldg.
Bailey 3. Cleaned ladder in decontamination room 3026 D and stored under East platform.
4. Sampled M.H. 190 - 9 cm/mr.
" 3500 - 34 cm/mr.
" 25 - 176 cm/mr.
Q.D.B. - 64 - cm/mr.
5. Pile bldg. purged their canal until about 3:30 A.M.
6. P^{32} pickup run boiling down in EV III. H_2O wash has been added.
7. Continued tank farm & patrol duties.

8/19/55 1. Finished P^{32} Run 493-1 ~ 1395 MC's.
8-4 2- Pipefitters finished installing the equipment
R.L.N. for Decon. Sulphur cans in Bldg. 3032
3- Maint Replaced the Belt on the exaust Fan on 3rd level of 3026-D Bldg. but the motor kicks out before the fan is at full speed.
4- Cleaned and checked oil levels on all M.H. samplers. M.H. #3500 sampler has repaired and replaced.
5- The steam was shut down for the ISO. area at 12:30 P.M. the Cottrell precipitator was also shut down at this time. The steam was turned back on at 3:30 P.M.
6- The pump on the south tank farm has been repaired and replaced but has not been checked on the sight glass and

Sample line has also been installed.
7- Had the Right front tire on the 2½ ton truck Replaced. Greased both trucks.
8- The leak into W-1 Tank was Probably from Room 205 Bldg 3019 leak into a hot sink.
9- Sampled HC-5 & 6 for Leuze.

8-19-55 1. TOOK VELOMETER READINGS ON VARIOUS OFF GAS LINES.
4-12 2. STARTED UP THE COTTRELL AT 4:30 PM.
BLEVINS. 3. THE STEAM HEADER VALVE IS CUT OFF TO THE ROW OF ISOTOPE BUILDINGS FROM 3030 TO 3036 UNTIL A BAD EXPANSION FLANGE CAN BE REPAIRED.
4. PATROL — R. MCCORD REQUESTED THAT TAYLOR'S CO.^{60} SOURCE LIQUID N_2 TRAP ON 2ND LEVEL OF 4501 BLDG. BE SERVICED EVERY 6 hrs BEGINNING AT 10:00 PM TONIGHT THROUGH 4:00AM MONDAY MORNING. THESE CHECKS WILL BE AT 10:00PM 4:00AM 10:00AM AND 4:00PM EACH DAY. CHG. CODE IS 34204-22
5. THE 3RD LEVEL EXHAUST FAN AT 3026-D KICKED OFF TWICE THIS SHIFT. IT IS RUNNING AT SHIFT CHANGE.
6. CLEANED UP OIL FROM AROUND THE STACK MOTORS.

8/22/55 1- Resampled 40% K_2CO_3 left over from the last Run. 40.68%
12-8 " 1.0M NaOH in the Lab.
R.L.N. Made up 20% $Pb(NO_3)_2$ " " "
" " 6.0M HNO_3 " " "
" " 2.5M Na Acetate " "
" " 1.5M NaOH 1.49 OK
1.0 M HCl 0.996 OK

3.0 M HNO_3 2.96 M OK
Resampled 0.07 versene 0.069 pH 6.35
2- Drained both filter Boxes at the Stack.
3- Brought down Sodium sample to Bldg. 3030
4- Continued with Tank farm and Patrol.
5- Brought down F.I. Slugs and Pile units.

8-22-55 ① Repaired flat on pickup.
8-4 ② Lagoon readings: No. 1 - 10½ turns, No. 2 - 9.70'
Schaich No. 3 - 10.92'
☆ ③ Loaded 22 "X" slugs in "A" dissolver and 21 "X" slugs in "B" dissolver. Started both dissolvings.
④ Restocked "D" Bldg. cabinet.
⑤ Cleaned out hot mops and mop buckets at "D" Bldg.
⑥ Maintenance finished work on S. Tank Farm pump and pumped solution from WS to W8 for 1 hour. Probably need a light under bullseye.
⑦ Continued excavation at stack area to replace water line.
⑧ Continued solution make-up for run. At shift change 3M $NaNO_3$, 40% K_2CO_3, + .5M NaAc in Lab.

8-22-55 1. Cut off leak to WC1 - in 3038 Lab.
11-12 2. Took hourly readings on slug dissolving
Bailey in A+B dissolver at I131 cell.
3. Leak in copper tubing in oxygen line at I131

Cell. Copper tubing Needs Reflaring.
4. Checked K. Ladd's dissolving back 3036 bldg. And Added HNO_3 As Needed.
5. Cleaned pump pit in South tank Farm.
6. Made up 9M-HNO_3 sample in Lab. Butted 40% K_2CO_3 in T2 & .5M Na-Acetate. Sample in Lab. on these.
7. Continued tank Farm & patrol duties.

8/23/55 1- The Pile Bldg. Pumped the canal from 5 PM
12-8 until 11:00 P.M. Metal Rec. Stopped overflowing
R.L.N. their canal at 1:00 A.M.
2. Continued with F.I. Dissolvings.
3. Brought down a S. can and turned the heat on the melter.
4. Continued with Ladds Dissolving.
5. The 9 M HNO_3, 40% K_2CO_3 and 0.5 M Na Acetate are all OK.
6. Washed down the Cottrell Precipitator.
7. Put the calibration marks on the product cone and placed in the cannier. This cone seems to fit tight in the cannier.

8/23/55 ① Removed 2" rubber hose from S. Tank farm to
8-4 old burial ground (near Lagoon trailer).
Schoich ② Ran small turbines 4 hours.
③ Jetted 2" from WIS to Evergreen.
④ Calibrated Raka cone #14 and cleaned #10 cone to be sent to Los Alamos. It is over tolerance.
⑤ P^{32} - E-1 two cans off at 9:30 PM. E2-

one can off at 10:30 PM. Also filling sulfur cans.

⑥ Repaired sampler line in offgas system at point were line enters stack.

⑦ Continued excavation of stack area water lines.

⑧ Started repairing 4500 steam turbine header valve.

⑨ FI - some sparging to be done on 4-12. See P.B.

⑩ Pile Bldg. purged canal between 1 & 2 PM.

8-23-55 H-12 BAILEY

1. Something wrong with big truck. Tatum put it in reverse [redacted] & was backing up when it broke down.
2. Furnace in 3503 bldg. to be checked hourly.
3. Checked Co plating in bldg. 3031.
4. Continued K. Ladds U dissolving back 3036 bldg.
5. Oiled Scales 3rd Level 3026D.
6. Took up extractions on EI & EII sampled and started boiling down in EUI. Started Rextractions.
7. Melted Sulphur into cans in 3032 bldg.
8. Continued tank farm & patrol duties.
9. Continued I^{131} run. 2nd still ready for steam to be turned on.
10. P^{32} run H95-C1-2313 mc/ST.

8-24-55 1. Finished boiling down P^{32} Extracts in EV.#1
12-8 E-2 Ext. had 1641 MC's. Continued filling S. Cans.
R.L.H. 2. Continued checking Ladds Dissolving, and the Plating equipment in Bldg. 3031.
3. Continued with Tank farm and Patrol. had to change a Helium Cylender in Bldg. 3503
4- Turned the Air on from the header to the A-6 to H-9 Jet line valves.

8-24-55 ① Ran large turbine 4 hours.
8-4 ② Maint. replaced steam valve to 4500 turbine.
Schaich ③ Continued excavation of stack area water lines.
④ Sampled M.H. 25, 3500, & ODB at 1PM. Results #25 - 165 c's, #3500 - 24 c's, ODB - 114 c's.
M.H. #22 - 90 c's/min. Pile overflowing canal.
⑤ Sent big truck to garage for repairs. Back at shift change. Still shot.
⑥ P^{32} ready for 1st water wash. Also filling sulfur cans.

8-24-55 1. Continued I^{131} run and sampled F.I.
4-12 2. Checked K. Ladd's dissolving and adding
Bailey HNO_3 as needed.
3. Stored valves that were in 3026D decontamination room behind P.B.I.
4. Continued filling sulphur cans in 3032 bldg.
5. Started P^{32} run through glassware. boiling down in EV II. SI has been regenerated.

6. Took up extractions on EI & EII and started yextracts. Boiling down in EVI.
7. Continued tank farm & patrol duties.
8. Sampled M.H. 190 - 4 c/m/m.l.
" 3500 - 42 "
" 25 - 468 "
O.D.B. — 381 "
Metal Recovery Canal overflow 1195 --
9. Sample in lab on M.H. 22, 139 & 186

8/25/55 1- Sample Results taken at 11:00 P.M. M.H. #22
12-8 98 M.H. 139 = 0 M.H. #186 = 3513 c/m/ml.
R.L.N. 2. Continued with Ladds Dissolving.
3- Finished P^{32} Run and Delivered. Reading on S-3 head tank was 9 R^2 Scale. did not sample the Product. Waste is boiling down in Ev #1. Regenerated S-2.
4- Continued with Tank Farm and Patrol.
5- Sample Results taken at 5:00 A.M. M.H. #22 = 108 #25 = 90 3500 = 93 O.D.B. = 148. Canal discharge Bldg. 3001 = 699 c/m/ml. The Pile Bldg. is by-passing their Demineralizer with the canal water at about 10 gal/min.

8-25-55 ① Brought big truck to tank and sent pickup to
8-4 garage.
Schaich ② Continued work on stack water line.
③ Stopped large flow into WC-17. Washing glassware in hot sink with both faucets running.
④ P^{32} pickup run boiling down in EV-1.

8-25-55 1. Continued K Ladds dissolving back 3026D.
H-12 HNO3 being added.
Bailey 2. Made up 4% NaOH in M10.
3. Pile bldg. purged their canal about 2 hours from 8:30 to 10:30.
4. Continued tank farm & patrol duties.
5. P32 pickup run boiling down in EV-II. 1st H2O wash has been added.
6. Took up I131 run & delivered to packing.

8/26/55 1. Washed down the Cottrell Precipitator.
12-8 2. The ISO. axed truck has a flat tire right
R.L.N. front.
3. Continued with tank farm and patrol.
4. Checked Ladds Dissolving.
5. P32 pick up run is just about down to dryness at 8:00 A.M. in Ev. #3.

8/26/55 (1) Emptied all cell A tanks at 3026-D
8-4 (2) Sampled M.H's #3, 19, 22, MH#25, 16 West, O.D.B.
H.B. (3) Sampled Tanks WC-5, WC-6 for Lenze bldg 3508
(4) Results MH#3-37, 22-225, 19-29, 25-[illegible], 16-[illegible], O.DB-42
MH#140-[illegible], 3500-200+, 186-270.
(5) Maint. still working on stack area water lines
(6) Sampled MH's #[illegible], 190, 3500, 186, 121, 113 (no result yet on these)
(7) Passed both trucks.
(8) Pile purged canal from 3:00 P.M. to —

[FRIDAY]

8-26-55 1. Took off gas readings at stack area.
H-12 2. Made up 35% NaOH & weighed out 200# HNO_3 in scale tanks for coating removal.
Bailey
3. Back washed resin column 202. It is now ready for resin addition.
4. M.H. 121 – 128 cm/min. 113 – 39 cm/min.
5. Added 40 gallons H_2O to A1. Turned on A1 & A2 jacket H_2O & H_2O to coils.
6. Added 71 slugs to A1 dissolver.
7. Brought down one slug to I^{131} cell and stored on top of cell.
8. Cleaned and stored slug knocker and slug charging machine.
9. Checked & Ladd's dissolving and shut down at end of shift.
10. Continued tank farm & patrol duties.

[SUNDAY]

8-28-55 ① Tala: A1 – 20% HNO_3 cooking till 8:10 AM
12-8 T8 + T9 – 1150# 50% NaOH
Schaich M10 – Full
M-1 – MT

Bonding removal? yes

② PB-1 L.P. steam dropped to 17# at header gauge.
③ Continued TF & P.

RUN 62

8-28-55 1. Took Sample 1C - .127 Slugs.
8-4 2. Added resin to column & started titration.
Bailey 3. Started 1st dissolving about 2:00 P.M.
4. Continued tank farm & patrol
5. Run status:
A1 - Batch A - dissolving.
T9 — 130# H_2O
M1 - 1 Batch NaOH for M10
HCL Tank — 3m HNO_3
Eluhate Tank — H_2O
M.W. — H_2O
6. Raised steam pressure on PB I low pressure to 24#.

8/28/55 1. Finished Resin titration and Regeneration. All
4-12 Cubicle Tanks are empty except F.T. #200
R.L.N. has 0.7"
2. Continued with Tank Farm and Patrol.
3. Rala Status.
A-1 Batch A Dissolving added 2½ Bottles of Fuming HNO_3 to the Dissolver at 11:40 P.M. both funnel addition valves leaks through.
North Scale Tank Dilution Water for A-1
South Scale Tank H_2SO_4
M-1 MT.
All other Cell A Tanks MT.

8/29/55 1 PB-1 low pressure steam dropped again. Reducing
12-8 station orifice needs cleaned.
Schaich 2 Brought down Na, K, and Pile units

③ Cleaned cell ventilation filter box.
④ Washed down Cathwell.
⑤ Continued T.F. & P.
⑥ Rola status: A1 - Batch B diss.
A5 - Na_2CO_3
A8 - 8WMA - ready to sample.
A6 & A11 & A9 - MT
A17 - MT.
M-1 - MT
M10 - 80°
CF - clean.
⑦ IMA - 10,237 c's S.T., 14.95 slugs.

8-29-55 1. Bought flashlight batteries from stores T
8-4 Left here in desk drawer.
Bailey 2. Repaired safety lanterns 3026D.
3. Slow leak into W1 coming from 3019 pipe tunnel. Should be stopped by 4 P.M.
4. Took special sample of R.P. Also sampled flow from N. Tank Farm, W5, W6, W9, W8, W10, W16-17&18 drywells. No sample from W7 drywell & W11 & W12 jet pit. they were dry.
5. 8WMA - 57 C
6. Maint. continued work on H_2O lines at stack area.
7. Loaded one Hanford slug at I[131] cell. Made coating removal T started dissolving. Readings on the hour.

8. TOOK LAGOON READINGS. 1- 10½ TURNS
2 - 9.30
3 - 10.75

9. Sump pump in tile South of 3503 may be out of service overnight.

10. RUN STATUS: A1 Batch B - dissolving
A5 - 1 Batch NA_2CO_3
A6 - Batch A Neutralized
M1 - Batch NaOH for M10

11. 3503 Sump pump is back in service.

8/29/55 1- Dry Well sample results taken at 3:00 P.M.
4-12 (W-9 = 4.55×10^5) (W-10 = 149) (W-5 = 10) (W-6 = 8)
R.L.N. (W-8 = 2927) (W-16, 17, & 18 = 6157) C/M/Ml
Results on samples taken at 5:00 P.M.
(W-9 North line = 3.5×10^5) (W-16 tile pit = 4257)
W-16, 17, & 18 Jet Pit = 1021 C/M/Ml.

2- Continued with F.I. Dissolving.

3- Continued with Tank Farm and Patrol.

4- Rala status:
A-1 Batch C Dissolving. used 70% HNO_3 390# on this batch.
A-5 Batch of Na_2CO_3
A-6 Neutralized batch A
A-9 MT
P.F. Product
C.F. Clean
A-8 Batch B sample in the Lab. 10 R/HR @ 6"
T-8 255 # H_2SO_4 T-9 22# of 70% HNO_3
N-1 Batch of NaOH for M-10

5- IMB Results. 11,113 c's S.T. 17.55 Slugs.
6- Washed down the Cottrell after batch B dissolving.
7- Opened the trap by-pass valve for A-1 Jacket discharge.

8-30-55 ① Delivered one sulfur can to 3032 and turned
12-8 on melter.
Schaich ② At 12:30PM needed sample carrier and found all full. Found lead sample depository hanging on crane so I dumped into same.
③ Metal Rec. complained about loss of offgas and at ~ 3 P.M. they blew out their line. First notice we had, were columns of mist rising from W16, W17 & W18 float holes. Check for air activity after they shut down but found none. Float gauge boards contaminated to 15mr. slight amount of contamination on grass.
④ Pumped 3503 sump once this shift.
⑤ Checked FI dissolving.
⑥ Possibly lost 0.5" of Batch "D" dissolving when A5 developed back pressure while jetting Na_2CO_3 into MT tank. Don't know cause unless there was acid in A5. It jetted O.K. 5 minutes later. A1 did not go below 3" vacuum.
⑦ Run Status: A1- Batch D dissolving
A5- Na_2CO_3
A8- SWMC sampled
A6, A9, A11, B17 - MT
CF-clean P.F. 2 - Prod.

(8) IMC - 7814 c's ST. - 16.44 Slugs
8WMB - ~1500's

8-30-55 1. RAN two SMALL Steam driven turbines 4 hours.
8-4 2. MAIT. Continued WORK ON H_2O LINES IN
BAILEY STACK AREA. H_2O header to 4500 Steam turbine is OFF. It CAN be turned BACK ON About 4:30 P.M.
3. P^{32} extractions EI-COOLS At 10 P.M. EII At 11 P.M.
4. Opened FUMING HNO_3 FOR Cubicle run.
5. Placed Cubicle SOLUTIONS ON 2nd Level. 6M HNO_3 Carbon has 22.5 L. (Measured)
6. SAmpled M.H. 25- 39 cm/mL 3500- 1870 cm/mL
190- 0 cm/mL ODB- 43 cm/mL
119- 0 cm/mL 121S- 2 cm/mL.
113- 0 cm/mL. 121W-104 cm/mL.
121N-95 cm/mL. (D)
7. RUN STATUS: A1 - diluted SAmple circulating.
A5 - 1 BATCH NA_2CO_3
A6 - BATCH C Neutralized.
T9 - 390# HNO_3

8/30/55 1- Opened the water valve at the stack that
(4-12) Services the 4500 area Steam turbine
2- Washed down the Cottrell after Batch D Dissolving was finished.
3- Sampled M.H. # 149: 25 #25: 66 #3500: 552
O.D.B. = 66 c/m/ml 7:00 D.B. was low.

4- Rala status:
A-1 Dissolved Heels has been sampled.
A-5 Na_2CO_3
A-6 Neutralized Batch C
A-9 First Metat. Digesting With Water til 12:45 A.M.
A-8 8WMD Ready for A-5.
A-11 MT
A-17 MT
Crud & Process filters Clean.
5- 1MD Results = 6799 8WMD = 87 C's S.T.
6- Took up extract from E-1 & E-2 and started boiling down. E-2 extract has Not been sampled.

8/31/55 12-8 Schaich
① M.H. 139 not sampling. Probably a burned-out tube.
② Sampled E-2 extract and boiled down crude E-1 - 1390 mc., E2 - 2316 mc.
③ Heel dissolving - 194 c's, 0.36 slugs.
④ 8WC - 2350 c's S.T. +1807 c's Possibly bad sample since run book did not call for HNO_3 neutralization of 8WC.
⑤ Run status: A1 - Heels
A9 - 2nd Metathesis filtering
A17, A5, A6, [redacted], - MT
A8 - HNO_3 for 8WCW
A11 - 8WC
R.C. 200 - MT
A4 - Water on p.

8-31-55 1. Turned H_2O Headers to Stack Area OFF.
8-4 North Valve is back on.
Bailey 2. Set up Pumps to Sample M.H. 121 & 120.
Took pumps out of Service At 3:30 P.M.
3. P^{32} boiling down in E&I. 1st H_2O Wash
Should be in by 4:00 P.M.
4. Sample results - F.T. P. 28,600 F.T. PH-914
8WC - 2255 8WCW - 745.
4. Run Status: A1-heels Sampled
A5 - 8WC
A11 - 8WCW
A8 - Resin Cubicle Waste - Sampled.
F.T. - M.T.
P.E. - M.T.
ISO - M.T.
M.W. - MWHCLE - Sampled
Hold up - 6M HNO_3 Product
Eluate Tank - 6M HNO_3

8/31/55 1. Opened the Water valve that services 4600
9-12 area steam turbine.
R.L.N. 2. Continued checking the Oxygen flow through
the C.T. at the F.I. Cell.
3. The Rala Product Truck seems to have [redacted]
all the equipment we need.
4. Continued With Tank Farm and Patrol
5. Rala Status:
A-1 - Heels A-11 - 8WCW
A-5 8WC A-8 Resin Cubicle Waste
F.T. MT

P.E. Tank first fuming Nitric filtering to M.W.
ISO. MT
H. Tank 3 M $NaNO_3$
M.W. Water and fuming Nitric.
Eluate Tank 3 M $NaNO_3$ draining through the Column to H Tank.
6. P^{32} Run is boiling down in Ev # 2 both Water Washes have been added. Took up Extracts from E-1 & 2 and started boiling down in Ev. #1 S-1 has been Regenerated and boiled down. unable to remove the activity from E-1 #1 using .1N HNO_3 and diluting 17 x R^2 final Reading.
7. MWHC/E Results 3 C'S S.T.
8. Met. Rec. Shut off the Water Overflowing the Canal at 5100 P.M. the Pile Purged their Canal ~ 30 min after 7: P.M.

9-1-55 ① M.W. to A8 jet line at P.B. needs repaired
12-8 ② Light in Cottrell fence gate interlock is out.
Schaich ③ Continued T.F. & P.
④ Took up P^{32} product to head tank and boiled down solutions for pick-up run.
⑤ Run status: A1 - Heels
A5 - 8WC + R.C. waste M.W - MWFN #2
A11 - 8WCW P.E. - Product
A8 - MWFN #1 & $NaNO_3$ R.C. waste - 24 c's
⑥ MWFN #1 - 617 c's M.W. $NaNO_3$ - 121 c's
⑦ Had an 80R bond up in P.E. tank sparger

line while purging P.E. to M.W. jet with air. Washed out most of it with 35% NaOH followed by fuming nitric. Shielded remainder to room.

9-1-55 1. RUN LARGE STEAM TURBINE 4 hours.
8-4 2. INST. MEN replaced motor on lower BROWN BAILEY INSTRUMENT AT EVAPORATOR.
3. Set up SAMPLER PUMPS AGAIN AT M.H. 120 AND 121. Cut PUMPS OFF AT 3:30 P.M.
4. PAINTERS COCOONED SHIPPING CARRIER.
5. Pipe Fitters PACKED SOLUTION Addition VALVES 3rd Level 3026D.
6. Set up equipment for product removal.
7. RUN STATUS:
Product in cone drying.
M.W. P.E. RINSE - SAMPLED.
A8 - MWFN - SAMPLED.
8. P^{32} pick up run boiling down in FVI.

9/1/55 1. FINISHED boiling down the F.I. in the EVAP.
4-12 and transferred to the flask. Followed with
R.L.N. a 200 ml water wash total volume 2 liters.
2- M.H. # 120 : 14 # 121 : 211 these samples taken at 3:00 P.M.
3- Finished Drying the Rala Product and Loaded on the Truck. Ion Chamber Reading 5 on #1 Scale. Fission Chamber 7262 Counts > 20,000 Pen Wyatt. the truck is Parked at

3026-D Bldg with Water on the Jacket at ~ 35 ml/min. The Carrier Reads 100 MR through the Ring Smears ~ 200 Counts.

4. Made up a batch of Na_2CO_3 in M-1 Tank to Neutralize the A-1 Heels. All Tanks are as the 8-4 Shift left them

5- The Pile Bldg is Purging the Canal at ~ 5 gal/min. and Will go all Night. They say the Water Will Read ~ 300 c/min.

6- P^{32} Pick up Run is being taken out of Ev. #1 at 12:00 The first Run had 3016 MC's.

7. The first level of 3026-D has been Smeared Results are not back. The Carrier Hooks have been Cleaned once but Still Read 35 MR/HR

9-2-55 ① Finished Rala rinse samples and jetted all
12-8 hot waste to W9 tank.
Schaich ② A9-PF Rinse - 194 c's S.T.
FT. Rinse - 11.5 c's S.T.

③ Cleaned up hot spots on 1st level but did not smear because they were low.

④ Continued T.F. & P.

⑤ Sent one wash thru R.C.-200 and one wash thru A Cell tanks while sparging and sampling each tank. All tanks empty at shift change. Also washed out Process Filters.
Filtration Rates: P.E. Tank - 581 ml/min
C.F. #1 - 5 gal/min.

⑥ Continued P^{32} pickup run thru glassware. Boiling down in Ev's at shift change. Head tank - 5 x R

9-2-55 1. Finished resin cubicle washes & cell A rinses.
8-4 2. Cleaned & stored all sample carriers except
Bailey one. Lab wants to use it a few more days.
3. Sampled WC5 & WC6 for Leuze.
4. Set up pumps at M.H. 121. Removed & stored them at 3:30 p.m.
5. Mait. continued work on stack area H_2O lines.
6. Did general clean up 3026D, dumped solutions 3rd level, removed & stored periscope, stored chambers. Cleaned up east platform etc.
7. Dumped 1500 gallons $Al(NO_3)_2$ waste in lagoon I from 4500 area.
8. Based up both trucks.

9/2/55 1- Sampled manholes at 5:00 P.M. #3500 = 5024 #121 =
4-12 15 # 25 = 355 D.B. spec. = 801 #22 = 870 c/m/ml
R.L.N. Changed tubing on the O.D.B. sampler. The pile is still overflowing the canal at about 5 gal./min. the counts are up to 7000 c/m/ml. D.B. spec. sample at 8:45 P.M. 233 c/m/ml. Samples in the lab at 12:00 on O.D.B. #3500 and #25.
2- Took off gas velometer readings. did not take the ones inside the Cottrell fence.
3. Continued with tank farm and patrol.
4- Filled the water tank for the Rala Product cannier and adjusted the flow to 90 ml/min.

9-6-55 1. Washed down Cottrell precipitator.
12-8 2. Replaced burned out light bulbs in
Bailey Stack Area over motors.
3. Shut down North H_2O Still in 3026D bldg. due to a steam leak. Leak is tagged.
4. Brought down sulphur can from pile bldg.
5. Turned on variac to sulphur melter but it doesn't seem to be working. Unable to get electrician to check it due to pile shut down.
6. Brought down sample from L.I.T.R.
7. Brought down pile units to 3058 bldg.
8. Continued tank farm & patrol duties.
9. Unable to get whirly pump at stack area to pick up.

9/6/55 1. Had the flat line on the pick up truck
S. A replaced.
R.L.N. 2. Turned the air spargers on W-5 & W-8 tanks.
3. Brought gloves & shoe covers in for cleaning
4. Sampled M.H. at 12:00 Noon # 120 = 3 # 114 = 200 # 25 = 159 # 3500 = 62 O.D.B. = 100 c/m/m/. Installed pumps at M.H. # 120 & 14 for the 11 & 3:00 comp.
5. There was a process water shut down from 12:30 - 1:00 P.M. to replace the header valve to the Cottrell wash down line. The 3" line from this valve has been re-moved to be replaced with a new line.

6. Electricians Repaired the Sulfur Melter and two cans were melted out into E-1 the Steam should be turned ON at 4:50 P.M. the first can is being melted into E-2 and the last can is in the lead Pig
7. Pipefitters Repaired M.H. to A-8 Steam leak and Started repair of the Low Press. Reducing Station on the 3rd level.

9-6-55 4-12 1. P^{32} — Finished melting Sulfur into E2. and Started extractions in both E1 + E2. E1 Cools Blevins. at 12:50 AM E2 Cools at 3:45 AM.
2. Don Phillips Requested that Taylor's Co. Source Trap Be Serviced with Liquid N_2 at 10:00 PM and 4:00 AM.
3. Sampled MH #114 — 53 c/m/mL and MH #120 — 15 c/m/m at 7:00 PM then took up samplers and stored by the side of the street.
4. The Distilled H_2O Storage Tank in 3028 Bldg. has a small leak. — See Patrol Sheet.
5. Contd. with Ladd's U Dissolving in NaOH at 3036 Bldg.
6. Sampled MHs — #25 — 601 c/m/mL #149 — 0 #3500 — 84 c/m/mL #190 — 4 c/m/mL #186 — 35 c/m/mL
The Pile is still purging their canal.

9-7-55 1. Checked Ladd's U dissolving back 3036 bldg.
12-8 & Added NaOH as needed.
Bailey 2. Took up extractions on EI & EII sampled boiled down in EVI. Started extractions.
EI 499 CI - 1848 mC EII 500 CI - 2145 mC.
3. Started dummy run in 3026 D bldg.
4. Continued tank farm & patrol duties.
5. Air spargers still on W5 & W8.

9/7/55 1. Installed pumps at M.H. # 114 and # 120
8-4 Took samples at 11:00 and 3:00. Results for
R.L.N. 11:00 AM # 114 = 21 # 120 = 44 c/m/ml.
2. Started pumping from W-5 to W-8 at 10:00 A checking PH of W-8 every hour. The Radiation Reading over the pump pit is 600 MR/HR. W-5 LL at start 10'2" W-8 8'5"
3. Pipefitters repaired the steam leak at the North still 3026-D and it is back in service they also repaired the low press. steam reducer on the 3rd level.
4. Ran both small steam driven turbines for 4 hours.
5. P32 Run is boiling down in EV. #1. The carrier has been added.
6. Measured out 3.7 lit. of Resin to be used for the Next Run. Measured out some more to be Regenerated.
7. Had the Air filter on Pick up Truck refilled with Oil.

9-7-55 1. LADD'S DISSOLVING WITH NaOH AT 3036 BLDG
4-12 IS STILL GOING.
BLEVINS 2. P^{32} — PRODUCT IS BOILING DOWN IN EV2. THE 1ST
H_2O WASH HAS BEEN ADDED TO S2. EV1 DRY
READ 12 ON R1 P1 DRY READ 4 ON R1.
S1 HAS BEEN REGENERATED.
3. TOOK UP EXTRACTIONS FROM E1 & E2 AND PPTED
IN CARRIER FREE HOOD. STARTED NEW EXTRACTIONS
IN E1 AND E2.
4. CONTD. PUMPING FROM W5 TO W8.
5. SAMPLED MH #114 — 16 c/m/ml AND MH #120 —
0 c/m/ml. AT 7:00PM AND TOOK UP SAMPLES.
6. MADE UP 3.5 M HCl — 3.47 M 9.0 M HNO_3 — 9.045 M
AND 3.0 M $NaNO_3$ WHICH IS SPARGING AND
READY TO SAMPLE.

9-8-55 1. Checked K Ladd's dissolving back 3036 bldg.
12-8 2. Continued P^{32} run. Product boiling down
Bailey in EV III. All resin columns have been
regenerated. Boiling down waste in EV I.
3. Finished filtering extraction on carrier free
run and shut it down.
4. INST. MAN repaired lower brown
recorder at evaporator.
5. Cleaned & stored 200 cubicle sample
carrier.
6. Continued pumping from W5 to W8.
Checked P.H. on W8 hourly.

7. Sampled 3.0M $NaNO_3$ — 3.02.
8. Made up .5M Na Acetate sampled .531 This has not been labeled.
9. Started regeneration of batch resin in 3026D. Completed 1st cycle.
10. Continued tank farm & patrol duties.
11. Run filter rate test on P.F. 200 filter. C.F. I & C.F. II P.F. I & P.F. II

9/8/55 8-4 R.L.N.

1- The 3" water line to the Cottrell wash down tank has been replaced and checked for leaks.
2- Leadburner repaired the lead floor on 3rd level of 3026-D near the funnel rack.
3- Painters relabeled the valves & gauges at panel board 7-A.
4- Received the Rala product cannier and started cleaning. It is still reading > 10R/HR inside 2.5R at the threads.
5- Installed pumps at MH # 114 & 120. Samples at 11:00 A.M. #114 = 7 #120 = 0 C/M/ml.
6- Started excavation at W-16 valve pit trying to locate the leak in the line from W-16 to W-5.
7- Soaked P.F. #1 & 2 with versene solution and washed with water. They are ready for a rate check.
8- The Cottrell precipitator was shut down at 12:30 P.M. due to a steam shut down. The steam was turned back on at 1:20 P.M.

9- Started second cycle on Resin Regeneration Ready for 9.0 M HNO_3 at 4:00 P.M.
10- Took up P^{32} Product and Delivered. 2915 M.C.S.T. The Pick up Run is boiling down in Ev. # 1 first Water Wash.
11- The Chain for W-16 Telemetering has slipped off of the bottom Gear. Inst's say they will Repair the first thing Friday.
12- Continued Pumping from W-5 to W-8. at 3:00 P.M. W-8 L.L. was 11"

9-8-55 1. Started up the Cottrell at 4:40 P.M.
4-12 2. W8 L.L. Reached 11'6" at 7:30 PM. The Pump was
Blevins. Shut Down and W8 Air Sparger was Cut off. W5 L.L. was 7'7"
3. Calibrated the Spare Rala Cone with Dyken Solution at 200, 300, 400, 500 and 600 ML Intervals
4. Made Filter Rate checks on PF1 - 3.63 G/F/M Ave and PF#2 — 3.22 G/F/M Ave.
5. The L.L. Rise in W1 is from Jet Cooling H_2O at 3019 Bldg.
6. Had to make Visual checks on W16 and W18 tanks this shift as the Telemetering System to these tanks are out of order.
7. Found a full stream of H_2O running into a Hot Sink in the North West Room of 3026C Bldg. which was filling W18.
8. P^{32} Product is Boiling Down in EV2 with the 2nd H_2O wash added. EV1 Dry Read 70 N R^2 P1 Dry Read 5.5 x R2.

9. THE P^{32} CARRIER FREE RUN IS IN 300ML OF .025 N HCl IN THE QUARTZ EVAPORATOR UNTIL TOMORROW A.M.
10. CONTD. WITH LADD'S DISSOLVING WITH NaOH.
11. THE DISTILLED H_2O STORAGE TANK HAS 19.5" OF WATER IN IT AT 11:15 P.M. — COULDN'T FIND A LEAK.
12. SAMPLED MH #114 AT 7:00PM — 0 c/m/ml #120 — 24 c/m/ml TOOK UP SAMPLERS.

9-9-55 12-8 Bailey

1. Washed down Cottrell precipitator.
2. Finished P^{32} pickup run took up & delivered to packing.
3. Big truck has flat on left rear inside.
4. Cleaned shipping carrier down to an average of about 1R.
5. Finished 2nd cycle of resin regeneration.
6. Ran ~~to~~ two filter rate tests on P.F. 2. Cleaned filter with hot NaOH before 2nd test. Rate increased .33 after cleaning.
7. Checked K Ladd's U dissolving.
8. Made up 3 M $NaNO_3$ & 3.5 M HCl. Samples in lab.
9. Continued tank farm & patrol duties.

9-9-55 8-4 Clauer

1. Gassed up both trucks — repaired big truck rear tire.
2. Sampled tanks WC-5 & WC-6 for Lange
3. Inst. dep & recalibrated tanks W-16 & W-18 for the upper room at the evap.

4. Maint. continued work on water line installation at stack area.
5. Maint continued excavation for leak at W16 tank. Located leak on outlet side of W16 tank line.
6. Put plug for cone in the Ra La carrier ~~carrier~~
7. Decontaminated loading cubicle with brush & old Dutch to 1800 mf/hr. Did not touch manipulator
8. Butted up 3.5 M. HCl and continued Resin regeneration. Finishing H_2O after NaOH - ~~hydrogen~~.
9. Put weak HNO_3 ~30% ~ on P.F.-1, P.F.-2 Let it soak for 3 hrs, filtered out, followed with water wash.
10. Set up samplers at M.H's # 114 + 120. Sampled at 11 AM + 3 P.M. 11 A.M Results MH#120 = 1 MH#114 = 0
11.) P_{32} carrier pec - Product came through cruddy. Had to filter through charcoal to purify Resubmitted to Shipping - product now clear
12) Pick up truck battery replaced + starter repaired
13) Delivered four Sulphur cans to the pile.
14) Regenerated all P_{32} columns which needed it. S-3 disc is plugged.
15) Broke jug full of $NaNO_3$, brought a new jug from salvage recalibrated it, made up more $NaNO_3$ 3.03M
16) Pile bldg. started purging their canal at 1:30 PM to go for 3 or 4 hours at 100 g/min. This stuff is about 5000 c/min/ml.
17) Brought in gloves to K. Ladd.
18) Received mandrel for P_{32} extraction tubes from

Holcomb of glass shop. Stored it in storage area.

9-9-55 1. TOOK VELOMETER READINGS ON THE VARIOUS OFF
4-12 GAS LINES.

BLEVINS 2. MADE ONE RATE TEST ON PF1 4.0 GPM AVE.
MADE TWO RATE TESTS ON PF2 #1 – 3.87 GPM SOAKED
THE FILTER WITH HNO_3 THEN MADE ANOTHER TEST –
– 3.9 GPM AVE.

3. CUT OFF THE STEAM SPARGER TO THE BIG TANK
IN DECON. BLDG. THEN DRAINED THE TANK AND
FLUSHED WITH H_2O.

4. CUT OFF STEAM TO LADD'S U DISSOLVING AND
COOLED WITH H_2O.

5. WATER IS ON THE RESIN AFTER THE HCl STEP
IT IS READY FOR THE $NaNO_3$.

6. SAMPLED MH #114 AT 7:00PM – 63 c/m/mL AND
#120 – 1,717 c/m/mL TOOK A DIP SAMPLE OF
MH #120 N – 236 c/m/mL AND #120W – 42 c/m/mL
TOOK UP THE SAMPLING EQUIPTMENT AT #114
& #120 AND STORED.

7. HAD THE INST. MAN WORK ON THE LOWER BROWN
TELEMETERING INST. AS THE NUMBERS WERE
SMEARING AND TEARING THE CHART.

8. THE COTTRELL KICKED OUT AT 10:15 PM. – LOWERED
THE VOLTAGE TO 46 K.V.

9. THE PILE CANAL WAS PURGED UNTIL 9:00 PM.

9/12/55 1- Started Pre Run Checks in 3026-D Bldg.
12-8 2- Drained both filter boxes at the Stack.
R.L.N. 3- Made up 5 Lit. of 0.5 M Na Acetate and finished Resin Regeneration.
4- Brought down Sodium and Cobalt Samples to Bldg. 3030.
5- Cleaned the Bronze Ring for the Rala Product Cannier down to 100 MR/HR inside.
6. Continued With Tank Farm and Patrol.
7- Brought down Pile units

9-12-55 1. Took Lagoon Readings #1 - 10 Turns + to 8
8-4 #2 - 8.70' #3 - 10.52'.
Blevins. 2. Started Pumping from W8 to Lagoon #3 at 8:40AM
W8 LL was - 11'6". Sampling on the Hour
For Composite #1 + Radiation.
3. Had the starter on the Pickup truck Repaired and Both Trucks Gassed up.
4. Put the Squegee Pump in operation at MH #120 and Sampled at 3:00PM.
5. The Manual Steam to Jet Valve from W16 to W5 is on over Shift Change to Blow the Solution Out of this Line as Maint. is Going to Cut out a Section of this Line and Replace With New.
6. Finished the Rala Pre Run Check.
7. Maint. Contd. With Excavation to Check for H_2O Line Leaks and Installation of New Lines at the Stack Area.

9-12-55 1. H.F. Smeared Chambers in 3026D. They smeared
4-12 high. Scrubbed them & they are ready for
Bailey resmearing.
2. Cut off steam W14-W5. Scrubbed pipe from 10R down to about 2.5R.
3. Sampled M.H. 120 at 7 P.M. & removed pump.
4. Installed new charts in office.
5. Continued pumping from W8 to lagoon. Checked pH. & sampled hourly.
6. Taylor called & wants his Cobalt source serviced, 11:00 P.M. & 4:00 A.M. (3 flasks)

9/13/55 1. Brought down a sulphur can and turned
4 12.8 the heat on the melter.
R.L.H. 2. Washed down the Cottrell precipitation.
3. Continued pumping W-8 to lagoon #3. Lagoon
0 level at 6:30A 10.9' W-8 Lt. 8.6
4. Cleaned the W-16 to W-5 line down to
0 ~2 R/HR also steamed the line for ~20 min.
5. Washed A-9 tank with a large volumn of weak HNO_3 solution and followed with a water wash. This is all in A-5.
6. The Radiation Chambers in 3026-D Bldg. are ready to be smeared. The hottest smear the last results was 230 counts.

9-13-65. 1. INSTS. TOOK THE ION AND FISSION CHAMBERS FROM
8-4 THE PALA PROCESS TO THE SHOP FOR CALIBRATION
BLEVINS. 2. INSTS. REPAIRED AND REPLACED THE A1+A9 CONTACT MICROPHONE.
3. P^{32} — E1 EXTRACTION COOLS AT 10:30 PM. — E2 COOLS AT 1:00AM.
4. RAN THE OFF GAS AND 4500 AREA STEAM TURBINES FOR ~ 45 MIN AND SHUT DOWN TO LET MAINT. INSTALL A NEW WATER LINE TO THE OFF GAS STEAM TURBINE.
5. MAINT. POURED C.K. MATERIAL AROUND THE NEW WELD IN THE W16 TO W5 LINE.
6. RECD. 116.5 LITERS OF AQUEOUS SOLUTION INTO W7 FROM NURMI OF CHEM. TECH. THIS SOLUTION CONTAINED 16.4 GMS NET OF U 235.
7. CARPENTERS HAVE STARTED TEARING OUT THE EAST PLATFORM WHICH HAD ROTTED OUT AND IS TO BE REPLACED. 3026-D BLDG.
8. SET UP A SAMPLE PUMP AT MH #120 AND TOOK SAMPLES FOR THE LAB AT 11:00AM — 26 c/m/ml AND 3:00PM. — 83 c/m/ml.
9. SENT THE PICKUP TRUCK TO THE GARAGE FOR REPAIR OF BRAKES.
10. CONTD. PUMPING FROM W8 TO LAGOON #3 AND SAMPLING HOURLY FOR PH AND COMPOSITE.
11. THE OLD D.B. FLOW IS DIVERTED TO THE EAST AND WEST PONDS TO BUILD THE L.L. OF EACH TO 36".

9-13-55 ① Service Co source at 10PM + 4A.M. Two
4-12 flasks.
Schaich ② Took up P^{32} extraction (E-1) and started
reextraction.
③ Checked U dissolving behind 3036 & added
HNO_3.
④ Finished pumping W8 to Lag. #3. Flushed
line for 1.1 hour. Submitted sample to Lab.
Lagoon No. 2 – 12-8 please read at daylight.
Lagoon No. 3 – 11.18
⑤ Continued diversion of S.B. flow to E. & W.
Ponds. ~ 20" at shift change.
⑥ Continued T.F. & P.
⑦ Checked for vacuum leaks in 3026 Bldg. Found
one small one. Vac. at pumps – 25". (22" at
shift check)

9/19/55 1- P^{32} Took up extract from E-2 and boiled
12-8 down in Ev. #1. E-1 Results 2912 E-2 2184 MC's
R.L.N. 2- Diverted the flow of Water from the East
and West Ponds back to the New D.B. at 6:20A
The East Pond Overflows at 31" The West 28".
Was unable to stop the flow into the East
Pond Completely.
3- Checked U DISSOLVING behind 3036 Bldg.
4- Lagoon # 2 L.L. 8.6' before opening the
Overflow valve from Lagoon # 3.
5- Continued High Tank Farm and Patrol.

9-14-55 1. RAN THE OFF GAS AND 4500 AREA STEAM TURBINES
8-4 FOR 4 hrs EACH TODAY AND RAN THE 3026 CELL VENT.
BLEVINS. STEAM TURBINE 2 hrs.

2. INSTALLED A SAMPLER AT MH #120 AND SAMPLED AT 11:00 AM - 66 c/m/ml AND 3:00 PM —
3. LAGOON #3 IS STILL OVERFLOWING TO LAGOON #2.
4. THE EAST POND INLET VALVE STILL LEAKS SLIGHTLY.
5. THE UTILITY MEN CONTD. INSULATING THE SOUTH TANK FARM STEAM LINES.
6. MAINT. PUT TOP SOIL AND GRASS SEED ON THE BARE SPOTS IN THE SOUTH TANK FARM.
7. STARTED PUMPING FROM W5 TO W8 AT 8:40 AM. HAVE BEEN AIR SPARGING W8 AND SAMPLING W8 FOR PH ONCE/hr. W5 LL WAS - 9'2" W8 LL - 5'10" AT START OF PUMPING.
8. RECD. THORIUM WASTE (13 DRUMS) IN W5 FROM CHEM. TECH. AMT. OF SOLUTION WILL BE GIVEN TO P.B. ORR LATER.
9. ELECTRICIAN REPAIRED THE SHORT IN THE LIGHT TO THE COTTRELL GATE INTERLOCK.
10. SAMPLED THE WATER IN W16, 17, 18 VALVE PIT 3,300 c/m/ml AND JETTED TO S.B. STARTED FILLING THIS PIT WITH H_2O UP TO LINES AND THEN JETTING TO S.B. TO COOL OFF THIS PIT AS MAINT. HAS SOME WORK IN THIS PIT TOMORROW.
11. P^{32} PRODUCT IS IN EV1 WITH THE ACID AND READY TO START THRU THE GLASSWARE.
12. MAINT. CONTD. WORKING ON THE NEW WATER LINES AT THE STACK AREA.
13. MAINT. FILLED EXCAVATION PIT AT W16 WITH DIRT TO THE ELECTRICAL CONDUIT LINES.

9-14-55 1. Continued U dissolving back 3036 for Tatum.
H-12 Added HNO_3.
Bailey 2. Removed pump from M.H. 120 at 7 P.M.
3. Replaced motor to M.H. 190 Sampler.
4. Added H_2O to W16 jet pit & jetted to settling basin several times. Left H_2O in pit sparging over shift change.
5. Continued pumping from W5 to W8. PH. hourly.
6. P^{32} product boiling down in EVII. Both H_2O washes have been added. SI has been regenerated. Took up extractions on EI & EII and started yextracts.
7. Continued tank farm & patrol duties.

9/15/55 1- Light bulbs have burned out on the North
12-8 and West side of the stack.
R.L.N. 2- Continued with U Dissolving behind 3036 Bldg.
3- WC-2 sump pump has failed to operate. Borrowed the Whinley pump from the stack and pumped the water out then returned this pump.
4- Turned the steam off of W 16, 17, & 18 valve pit at 5:00 AM and put two air hose inside the pit.
5- P32 finished the first run and delivered to packing. S-3 head tank reading 14xR2 S-1, 2, & 3 has been regenerated and one boiling down in EV #1
6- Closed the overflow valve from Lagoon #3 to Lagoon #2 Lagoon #2 L.L. 5.0' #3 11.1'

7- Continued with Tank Farm and Pozzmol.

9-15-55 1. ~300 Gals. of H_2O went into WC1 from the 3029
8-4 Co. Cell wash down.

Blevins. 2. Stored pump and other equiptment which had been used to sample MH #120.

3. M. Recovery sent 200 Gals. of NaOH to W5 to build up the PH to 11.

4. The electrical conduit in W16 excavation pit was replaced with new and the pit was filled with dirt.

5. The switch to WC2 sump pump was repaired and the pump reinstalled in the pit.

6. Maint. replaced damaged extension handles in the 3026D make up pit and tightened the packing to M4 drain valve.

7. Maint. contd. with installing of new water lines at the stack area.

8. Maint. contd. insulating the steam lines in the South Tank Farm.

9. The pickup truck will be in the garage until tomorrow as they are putting new brake linings on it. They replaced a bad tire and repaired the tail light.

10. The Cottrell is shut down to allow maint. to replace the copper tube which is used as a heater for the wash down pump and replace a steam blow down valve to the insulator chamber.

11. P^{32} is boiling down in EV1 - there is ~600ml in the extract transfer to be boiled down.

THE FIRST P^{32} PRODUCT HAD 1726 MCS AT S.T.

12. CONTD. PUMPING FROM W5 TO W8.

13. ASKED CRAIG TO REPLACE THE BURNED OUT BULBS ON THE STACK AND HE SAYS THAT HE MIGHT HAVE TO GET THE SHIFT ELECTRICIAN TO DO IT.

9-15-55 1. Started up Cottrell precipitator at 3:50 P.M.
4-12 2. Increase into W1 coming from 3019 sump overflow.
Bailey
3. Cut off leak coming into WC-15 from B 33-4500.
4. Repaired safety lantern 3rd level 3026D.
5. Continued pumping from W5 to W8 & checked P.H. hourly.
6. Continued tank farm & payroll duties.
7. P^{32} pickup run boiling down in EVII NO H_2O washes have been added & no columns regenerated.

9/16/55 1- Continued pumping from W-5 to W-8. Checking
12-8 PH on the hour.
R.L.N. 2- Washed down the Cottrell Precipitator.
3. Shut off the steam header valve to W-13, 14, & 15 Jet pit. The steam to W-13 Jet valve leaks condensate into W-13 tank.
4. One of the belts for the ISO. zone fan is rubbing the guard on the top side.
5- P32 Run is filtering through S-3 to Evap 3 and boiling down. S-3 column is just about plugged had to use house vac. to pull the prod. through. S-3 head tank reading was 3 x R². Evap. # 3 feeds 10 R/HR at 6" with ~ 150 ml of the pick up run in it.

9-10-55. 1. SAMPLED WC5 AND WC6 FOR LEUZE.
8—4. 2. THE PICKUP TRUCK WAS REPAIRED AND RETURNED TO US.
BLEVINS. 3. MAINT. REPACKED THREE VALVES ON THE RETURN LINES ON THE COTTRELL INSULATOR HEATER STEAM LINES.
4. THE PILE SENT DEMINERALIZATION WASTE TO W1.
5. BILL MARTIN HAS BEEN SENDING WASTE TO WC17 FROM HIS PROCESS IN 4501 BLDG.
6. REPLACED THE EXTENSION HANDLE TO W13 JET STEAM VALVE THEN CLOSED THIS VALVE AND OPENED THE OVERHEAD STEAM HEADER.
7. P^{32} FINISHED RUN # 501-1 AND DELIVERED TO PACKING ~1700 MCS.
8. CONTD. PUMPING FROM W5 TO W8 AND TAKING A PH HOURLY.
9. GASSED UP BOTH TRUCKS.
10. MAINT. TOOK THE SLACK OUT OF THE LOOSE BELT ON THE ISO. AREA CELL VENT. MOTOR PULLEY.
11. ELECTRICIANS REPLACED THE BURNED OUT BULBS ON THE OFF GAS STACK.
12. LOADED 16 I^{131} SLUGS AND STARTED A DISSOLVING IN B DISSOLVER. READINGS ON THE HOUR.
13. ALL OF THE NEW WATER LINES AT THE STACK AREA HAVE BEEN LAID AND INSULATED. MAINT. IS LAYING A NEW CONDENSATE AND H_2O DRAIN LINE FROM THE OFF GAS TURBINE.

~~7-8~~ 1. TOOK OFF GAS READINGS AT STACK AREA.
9-16-55 2. TOOK hourly READINGS ON SLUG dissolving
4-12 AT I^{131} CELL.
BAILEY 3. Shut down PUMP W5 to W8 AT 9:00 P.M.
W5-L.L. 4'11" W8-L.L. 10'9" Cut OFF W8 Air SPARGER.
4. PATROL JOB FOR MARTIN - BLDG. 4501 RM-105
1st FLOOR CELL B. OPEN VACUUM VALVE FOR
ABOUT 1 MINUTE THEN CLOSE. VALVE TAGGED. Check
ONCE PER SHIFT.
5. Continued TANK FARM & PATROL duties.

9-19-55 1. DRAINED THE OFF GAS AND 3026D CELL VENT. FILTER
12-8 BOXES.
BLEVINS. 2. BROUGHT 20 I^{131} SLUGS TO 3028 BLDG. FROM THE PILE.
3. BROUGHT 1 Na_2Co_3 SAMPLE TO THE ISOTOPE AREA
FOR GILLETTE IT IS ON BEAUCHAMP'S TRUCK.
4. BROUGHT 2 PILE UNIT CASKETS TO 3038 FROM THE
PILE.
5. I^{131} — MADE A 3RD SPARGING ON B DISSOLVER, RAN A
STILL, TRANSFERED THE PRODUCT TO THE EVAPORATOR
AND EVAPORATED DOWN TO 9.5%.

9-19-55 1. TOOK LAGOON READINGS. I — 10 turns back to 9
8-4 II — 8.4
BAILEY III — 11.00
2. HAD STARTER repaired ON pickup truck.
3. FINISHED REPAIR OF VALVE handles IN
3026 D MAKE UP ROOM.
4. OLD D. BOX SAMPLER GEAR box IS OUT FOR
REPAIRS.

5. Pumped About six inches From W5 to W8 & Closed down pump.
6. Loaded 20 SLUGS in each dissolver At I^{131} Cell, removed Coats & Started dissolving. Readings on the hour.
7. Sampled M. Holes – 25 – 111 C.M./ml.
" " – 190 – 14 " "
" " – 3500 – 184 " "
8. Shut down Cottrell precipitator At 1:30 P.M. For repair of Steam Valve At Stack.
9. Stored OFF GAS FAN ON 3rd Level 3026D.
10. Dumped 2644 GMS. U WASTE into W7 From Chem. Tech.
11. Steam back on At Stack Area At 3:00 P.M. Cottrell ready to start up At 4:00 P.M.

9/19/55 1. Started up the Cottrell Precipitator at 4:00 P.M.
4-12 2. Taylors Cobalt Source is to be serviced at
R.L.N. 10:00 P.M and 4:00 A.M two hours. Called in by L.S.S.
3. Continued Checking F.I. Dissolvings.
4. Checked Dissolving behind Bldg. 3036.
5. Continued With Tank Farm and Patrol.

9-20-55 1. WASHED DOWN THE COTTRELL PRECIPITATOR.
12-8 2. CONTD. WITH TATUM'S U. DISSOLVING AT 3036 BLDG.
BLEVINS 3. BROUGHT A SULFUR CAN TO 3032 BLDG. FROM THE PILE AND TURNED ON THE MELTER VARIAC WHICH IS HEATING BUT HAS A BAD THERMOCOUPLE AND ISN'T RECORDING THE TEMP.
4. CONTD. WITH HOURLY CHECKS ON THE I^{131} DISSOLVINGS.

THE C.T. TO STILL VALVE SEEMS TO LEAK SLIGHTLY.

9-20-55 1. RAN LARGE STEAM driven turbine 4 hours.
8-4 2. OILED ALL M.H. SAMPLER GEAR boxes & SAMPLERS.
Bailey 3. HAD FLAT tire repaired ON PICKUP.
4. HAD FLAT tire repaired ON big truck.
5. Replaced STEAM TRAP inside Cottrell Fence.
6. Melted out SULPHUR CANS & started extractions. EI Cools 9:30 PM. EII 11:00 PM.
7. PLACED procedure FOR FILLING MOAK'S TRAPS in PATROL Note book.

9/20/55 1. TOOK UP Extracts from E-1 and E-2 and
4-12 Started boiling down in Ev. #1. Had Inst.
R.L.N. Chart Changed on the Brown in Bldg. 3032 but it is a 0-200° chart so the temp's will have to be doubled on the chart Readings.
2. SAMPLED M.H. #186 very little flow = 764 #3500 = 239 #25 = 333 # 22 = 286. The pile Punged the Section of the Canal where the slugs have been Cut on the 8-4 Shift.
3. Continued ZINC Bromide filtration in Bldg. 3032.
4. Checked Dissolving behind Bldg. 3036. Added Caustic as Needed.
5. Continued TANK FARM and Patrol.

9-21-55 1. BOILED DOWN THE P^{32} EXTRACTIONS IN EV1. E1 HAD-2,594
12-8 MCS. E2-2,262 MCS.
LEVINS. 2. CONTD FILTERING THE ZINC BROMIDE AT BLDG 3032.

3. CONTD. WITH THE U DISSOLVING AT 3036 BLDG USING NaOH.

9-21-55 1. RAN the two SMALL Steam turbines 4 hours.
8-4 2. Started pumping From W8 to LAGOON 3.
BAILEY Checked P.H. & Sampled hourly. W8 LL. 11'2"
LAGOON reading ~~9.96~~. 10.96
3. Changed paper at OFF GAS blower turbine.
4. Replaced tubing ON M.H. Sampler 139.
5. P^{32} boiling down in EVI.
6. Still Filtering bromide in 3032 bldg.

9/21/55 1- Taylors Cobalt Source is to be serviced at
4-12 10:00 P.M. & 4:00 A.M. He appreciated the Service-
R.L.N. ing of the traps last Night although He forgot
to call them in.
2- The Starter Switch ON the Pick up Truck
is Out of Order. it also Needs the Emergency
brake leaver repaired.
3- Finished filtering the zinc Bromide in Bldg. 3032
4- Continued Pumping W-8 to Lagoon # 3. Checking
PH and Sampleing hourly.
5- The P^{32} Run. First Water Wash is filtering
through S-2. S-1 has been Re-generated, this
Waste is in the Waste tank. Took up Extracts
from E-1 and E-2 these are boiling down
in Ev #1 along With the L-1 Waste.
6. The West Vacuum Pump in 3026-D Was running
a little Warm at the first Part of the Shift

but it had cooled off at 11:00 P.M.
7. The Pile Bldg is still pumping the canal M.H. #22 sample was 376 and #3500 = 129 c/m/ml.

9-22-55 1 CONTD. PUMPING FROM W8 TO LAGOON #3 AND SAMPLING
12-8 FOR PH AND COMPOSITE HOURLY.
BLEVINS. 2. MADE A PRACTICE RALA DISSOLVING IN 3026-D BLDG.
3. P^{32} PRODUCT IS BOILING DOWN IN EV3. S3 HEAD TANK READ 17 ON R2. S1 & S2 HAVE BEEN REGENERATED S3 IS BEING REGENERATED AT SHIFT CHANGE. WASTE IS BOILING DOWN IN EV1.
4. THE RIGHT FRONT TIRE HAS A DEEP CUT- ON THE PICKUP TRUCK.

9-22-55 1. Had starter repaired on pickup truck.
8-4 2. Reset W16 Float & put on New Chain.
Bailey 3. Pump from W8 to Lagoon 3 still on. Checked P.H. & sampled hourly.
4. Switch to exhaust fan 3rd level 3026D is bad. Order in for repairs.
5. P^{32} pick up run boiling down in EV1.
6. Martin is to send about 275 gallons to WC17 on the early part of 4-12 shift.

9/22/55 1- The Pile Bldg. is still pumping the canal.
4-12 M.H. # 22 Results was 929 c/m/ml.
R.L.N. 2. Finished boiling down the F.I. Run and sampled F-1 8 R/HR 2050 ml volume in the flask.

3. Shut Down the Pump from W-8 to Lagoon # 3 at 8:25 P.M. after flushing the line for 1 hr 15 MIN. W-8 L.L. 5'10" Sample is in the Lab.

4. The transfer line from Ev. # 1 to S-1 (P^{32}) Plugged With Precipitate and a flask full of 0.1 N HNO_3 Was used to Open it up. So this acid is boiling down in Ev. #1 at 12:00 With an air sweep through this line from the Waste trans. Vessel.

5. Checked Dissolving behind Bldg. 3036. Adding Nitric Acid as Needed.

6. Made up 1400 # of Na_2CO_3 Solution in M-1 Tank to Neutralize the Contents of HC-2 Tank.

7. The Starter on Battery is Still out of Order on the Pick up Truck.

9-23-55 12-8 BLEVINS.

1. CUT OFF STEAM AND TURNED ON H_2O TO P1 JACKET AT 4:00AM. IN EVERGREEN BLDG.

2. TOOK LAGOON READINGS AS TO L.L. #2 - 8.20' #3 - 11.55' AND OPENED THE OVERFLOW VALVE TO #2 FROM #3 AT 6:25AM.

3. CONTD. DISSOLVING THE U WITH HNO_3 AT 3036 BLDG.

4. WASHED DOWN THE COTTRELL PRECIPITATOR.

5. PILE DEPT. IS STILL PURGING THEIR CANAL.

6. P^{32} PRODUCT IS BOILING DOWN IN EV2. THE 2ND H_2O WASH HAS BEEN ADDED TO S2. P1 READ 11 ON R2 S1 HAS BEEN REGENERATED.

9-23-55 1. Jetted Na_2CO_3 from M1 to A5 to A6 W9.
8-4 2. Made up another batch of Na_2CO_3 and
Bailey left sparging in M1.
3. Removed inspection plates on big steam turbine, 4500 area steam turbine and 4500 area electric steam turbine to check fan impeller. Both 4500 area fans were OK. Big steam turbine impeller & inside housing was pretty bad rusty.
4. Sampled WC5 & WC6 & delivered to Levze.
5. Lagoon 3 is still overflowing to Lagoon 2.
6. Pickup truck is parked in front of 3550 bldg. with more starter trouble.

9/23/55 1. Took off gas velometer readings. The
4-12 inside stop on 3515 & 3505 Bldg. line needs
R.L.N. repair.
2. Pumped WC-2 solution to W-9 610 gal. Jetted 487 Gal. of Na_2CO_3 from A-6 to W-9. Had to have the starter coil for the pump motor replaced before we were able to pump. also had to use the drine water. Reading over the pit is now 45 MR/HR.
3- Shut off water running into a hot sink in Room B-25 Bldg. 4500.
4- Took up F.I. Prod. and sampled. McHenrys samples are in the lead pigs at the doorway of 150. Packing these are tagged. The volumes were #49 215 ml #49-1 190 ml #49-2 185 ml.
5- Continued with Town Farm and Patrol.

6. Shut Down Hadsworth's Patrol Job Room #9 Bldg. 2005 after Calling him.
7- Shut off the Steam & Air to the Dissolving behind Bldg. 3036. 12-8 Patrol Sat. Shut off the Water to the Condenser around 2 A.M. Please

9-26-55 1. Drained Filter boxes at stack area.
12-8 2. Pickup truck has a flat tire on the left rear.
Bailey 3. Battery is dead on the isotope development truck.
4. Brought down 3 samples from L.I.T.R. and unloaded in shipping room so we could continue to use the truck.
5. Brought down pile units & unloaded in shipping room.
6. Brought down 20 slugs to I 131 Cell.
7. Made up 1.0M NaOH OK .995 1.50 M NaOH OK 1.49 1M HCl - Sample in Lab - spaiged & Resampled .07 versene.

9/26/55 1. Brought Gloves & shoe covers in for Cleaning.
8-4 2. Lagoon #1 10 turnes & back to 11, #2 8.8'
R.L.N. #3 11.16'.
3. Loaded 20 F.I. slugs and Started Dissolving Readings on the hour.
4- Millwrights Finished Inspection of the Hood and Cell ventilation fans at the Stack.
5- Ran the large Steam turbine 8 hours.
6- The leak into HC-15 seems to be from a floor Drain but was unable to locate it.
7. Continued Solution make up at 3026-D Bldg. 6.0M HNO_3 OK, 3.0M HNO_3 OK, 1.0M HCl OK, Samples in the Lab. on 9.0 M HNO_3, 1.0M HNO_3 2.5 M Na Acetate, and 20% $Pb(NO_3)_2$

the Lab. is making up new solution to check the 0.07 M Versene.

8- Had the flat tire on the pick up truck repaired.

9- Turned in a work order to replace light bulbs at W-16, 17, & 18 Tanks.

10- Started filling sulphur cans at Bldg. 3032.

9-26-55 1. Patrol - 4-12 and 12-8 shifts for D.W. Sherwood
4—12 Rm C-21 Bldg. 4500. Check every 30 mins. until 6:30 PM
Blevins. Then once every 2 hrs until 8:00 AM. - 1 steam pressure chart and 1 micromax temp. chart. If the pressure drops below 10 on the chart or the temp. goes above or below the set pointer call Mr. Sherwood at his home in Kingston phone 4751. His charge code is 34204-26.

2. Contd. with solution make up in 3026 D Bldg. The solutions made up on the 8-4 shift are all O.K. After butting down 1.0 M HNO_3 and 2.5 M Na Acetate, solutions made up this shift are 0.5 M Na Acetate - 0.531 M 0.25 M Versenate - 0.25 M 3.0 M $NaNO_3$ - 3.0 M Sample is in the lab. on 40% K_2CO_3.

3. Contd. with I^{131} dissolving and hourly readings.

4. Started melting flowers of sulfur into cans at 3032 Bldg. Had to kick the steam trap to the melter to get it to work.

5. Metal Recovery blowed out their off gas lines this shift.

6. THE SHIFT ELECTRICIAN REPLACED BURNED OUT BULBS AT THE O_2 ROOM BLDG. 4500 AND THE H_2 SHED AT 2005 BLDG.
7. THE BALANCE SCALE USED FOR WEIGHING CHEMICALS AT 3RD LEVEL IN 3026D BLDG. NEED TO BE REPAIRED OR REPLACED.

9-27-55 1. Washed down Cottrell precipitator.
12-8 2. Light switch on pickup truck is bad, also
Bailey right front tire is ready to blow.
3. Continued filling sulphur cans 3032 bldg.
4. Turned on Variac to sulphur melter and brought down sulphur can from pile.
5. Took hourly readings on slug dissolving at I 131 cell. Also added 20 liters H_2O to dissolver to cut Sp. Gr. down.
6. Steam pop off at H_2O stills 3028 bldg. is going constantly. Is this normal?
7. Cut off leak 4500 area Rm B-29 that was running into WC-15.
8. Butted down 40% K_2CO_3 it is OK now. (Carboy)
9. 40% K_2CO_3 sparging in T2. All other solutions OK except Versene.

9/27/55 1. P32 E-1 cools at 10:00 P.M. E-2 at 12:00 A.M.
8 to 4 2. Ran both small steam turbines 4 hours.
R.L.N. 3 Pipefitters installed Chicago fittings to the sprays for the hood & cell ventilation fans at the stack.
4. Continued filling sulphur cans at Bldg. 3032.

5. Continued Soln. Make up at 3026-D Bldg. dumped HNO_3 & K_2SO_4 and made up 4% Caustic in M-10. 90% K_2CO_3 was ok and the 0.07 Mol. versene is still being hooked on by the Lab.

6. Had the Right front tire on the Pick up Truck Replaced. they will have to order a New light Switch for it.

7. Inst. Dept. Repaired the Telemotering Chain for HC-6 Tank. also Recallibrated.

8. The Electric Wires that service H-16 auto. Jet and the flood lights at H-16, 17 + 18 are broken. The Cover is off of the Pit with Air Passing through to Cool down the Pit.

9. Stocked the cabinet in D-Bldg with Gloves & Caps.

9-27-55. 1. Picked Up 7 Lbs Bottle of HBr at Y12 for
4-12 R. Schaich.

Blevins. 2. Started Decontaminating the Big Steam Turbine Housing with H_2O thru the Spray but changed to Steam as the Duct started to leak in a Couple of Places. (marked these leaks with a Red Pencil.) The Drain Line from the Housing leaks where it enters the Concrete.

3. Contd. Filling S. Cans with Flowers of Sulfur.

4. The Inlet and Outlet Dampers to the Big Steam turbine are both closed.

5. The Shift electrician replaced the burned out bulbs over the stack area motors but

COULDN'T REPLACE THE NORTH AND WEST BULBS WHICH ARE OUT ON THE STACK.

6. P^{32} — TOOK UP E2 EXTRACTION, SAMPLED AND STARTED A NEW EXTRACTION. EXTRACT IS BOILING DOWN IN EV1.

7. RESAMPLED THE .25M Na. VERSENATE WHICH WAS .259 AND BUTTED DOWN TO .25. THE 0.07 M Na. VERSENATE HAS BEEN BUTTED DOWN 3 TIMES THIS SHIFT BUT THE MOLARITY CHANGES VERY LITTLE AND INCREASED ONCE SO IT LOOKS AS IF IT HAS PPTED. AND NEEDS A THOROUGH SPARGING BEFORE SAMPLING AGAIN. IT WILL BE READY FOR SAMPLING AFTER SPARGING.

8. CONTD. FILTERING THE ZINC BROMIDE IN 3032 BLDG.

9-28-55 1. TOOK UP EXTRACTION ON ~~[illegible]~~ EV1, SAMPLED, BOILED DOWN
12-8 IN EV1. STARTED NEXT EXTRACTION.
BAILEY 2. CHANGED CHARCOAL IN FILTERS AND CONTINUED FILTERING ZINC BROMIDE IN 3032 BLDG.
3. CONTINUED FILLING SULPHUR CANS 3032 BLDG.
4. P^{32} 505-C1-1885 MC. 506-C1-1882 MC.
5. SAMPLE IN LAB ON .07 VERSENATE. NO RESULTS UNTIL DAY SHIFT.
6. DAMPERS STILL CLOSED ON BIG STEAM TURBINE AND STEAMING INSIDE HOUSING & IMPELLER.
7. CUT OFF ~~STEAM~~ AIR SPARGER IN CARBOY OF SOLUTION IN PACKING ROOM.
8. CONTINUED TANK FARM & PATROL DUTIES.

9/28/55 1. P32 Run will be just about ready for
8-4 the first Water wash in Ev. #1 at 4:00 P.M.
R.L.N. 2. Pipefitter tightened the Packing on large
Steam turbine Steam Valve and H-18 Steam
Valve.
3. Electrician Replaced the burned out light
bulbs around the Stack and Cottrell
operating light.
4. Ran Filter Rate checks on both Crud &
Process Filters. also on P.E. tank #200.
the Prod. Evap. Filter was slow.
5. used the Steam, Soap, & Water Cleaner on
the large Steam turbine Impellers and
housing. Reduced the Radiation down to
~15 MR/HR Inside. Steamed ~~the~~ and sprayed
the Iso. area Fan through the spray Nozzel.
Reduced the Readings from ~100MR/HR to 30 MR/HR
6. Laborers removed the dirt from the broken
Electric Wires at H-16 Tank. The Steam header
is still off of H-16 automatic Jet.
7. Bought Inst. Charts for M.N #190.
8. The .07 versene Results are 0.0209 PH
6.45.

9-28-55 1. MELTED FLOWERS OF SULFUR INTO THE LAST CAN
4-12 AND TURNED OFF STEAM TO THE MELTER.
BLEVINS. 2. BACK WASHED THE 200 CUB. P.E. TO MW. FILTER
WITH HNO_3 AND JETTED OUT CHG. HEAD TO A16 THEN
FOLLOWED WITH H_2O RINSES MADE A FILTER
RATE TEST 993 ml/min. THE CONE IS IN

VERSENE SOLUTION IN THE DECONTAMINATION BARREL AND STILL READS 2.5 R/HR.

3. TOOK UP E1 P^{32} EXTRACTION AND TRANSFERED TO THE C.F. P^{32} HOOD. THE 1ST EXTRACTION HAS HAD ~ 800 ML OF NH_4OH BUT HASN'T PPTED YET AND NOT MUCH ROOM FOR MORE NH_4OH E2 EXT. HASN'T BEEN TAKEN UP

4. P^{32} — THE PRODUCT IS IN EV2 BOILING DOWN

9-29-55 12-8 Bailey

1. P^{32} product is boiling down in EVIII. The H_2O wash has been added to SIII. Reading on head tank was 12 on R2.
2. SII has been regenerated and waste boiling down in EVI with the other waste.
3. Tried to ppte the carrier free run in hood from 4-12 shift. Not sure but filtered it off anyway and took up the other extraction on EII at 4:00 Am. unable to get it to ppte. Left it in flask.
4. Continued tank farm & patrol duties.

9/29/55 8-4 R.L.N.

1- Finished P^{32} Run and sampled. 2593 MC.'S The Pick up Run is all in Ev. #1 boiling down. The C.F. Run is also boiling down in the Evap.

2- Decon. and calibrated the cone at 3026-D and placed it in the Prod. Cannion.

3- The wires were replaced for W-16 Auto. Jet and the flood lights. automatic Jet is back in service.

4- Steam, water, & soap cleaned the Iso. and fan impellers and duct down to a max. of 100 MR/HR.

5- Inst's zeroed the A-17 L.L. Inst. and all of the Cell-A Tank & MT.

6. The caustic line from M.R. to H-6 is all tied in to H-6.

9-29-55. 1. P^{32} — THE PRODUCT IS FILTERING THRU S2 AND
4-12 BOILING DOWN IN EV2. HAD TO USE 3N HNO_3 TO
BLEVINS. DISSOLVE THE PPTE IN P1 AND THE DILUTED WITH H_2O.

2. CUT OFF A FURNACE FOR TERRY IN BLDG. 2000 AT 5:40 PM.

3. P^{32} — C.F. RUN — THE PRODUCT CAME OUT WITH A YELLOW COLOR THE CHARCOAL WAS CHANGED AND THE PRODUCT WAS PUT THRU IT AGAIN AND IT STILL CAME OUT YELLOW IT WAS THEN PUT BACK INTO THE EVAP. AND BOILED DOWN AND IS BEING FILTERED THRU NEW FILTERS AND NEW CHARCOAL AT SHIFT CHANGE.

4. ASKED THE PILE DEPT. TO PUSH A SULFUR CAN WHICH SCHAICH WOULD WANTS DELIVERED TO 3032 AT ABOUT 7:00AM. HE ALSO ASKED THAT THE MELTER VARIAC BE TURNED ON AT 6:00AM

9-30-55 1. TOOK UP P^{32} CARRIER FREE PRODUCT delivered
12-8 to SHIPPING & SAMPLED. 21 mC. At S.T.
BAILEY 2. WASHED down Cottrell precipitator.
3. TURNED ON VARIAC to SULPHUR MELTER.
4. BROUGHT down SULPHUR CAN FROM Pile bldg. to 3032.
5. Closed the two west hatches ON ROOF OF 3038 bldg, but not until it had RAINED in Some.
6. P^{32} product boiling down in EVIII. H_2O WASH has been Added.
7. CONTINUED TANK FARM & PATROL duties.

9/30/55 1- P^{32} E-2 Cools at 9:00 P.M. to Make a
8-4 Cannien Free Run.
R.L.H. 2. The Steam leak INSIDE the Cottrell fence has been Repaired and the TRAP INSULATED. Precipitator Was down 1½ hours.
3- Started PUMPING from W-5 to W-8 at 8:10 A.M. W-5 L.L. 7'9" W-8 5'10" SPARGING W-8 TANK CHECKING PH of W-8 hourly.
4- Gassed both TRUCKS and had the tires ON the 2½ ton Checked.
5- The Waste line from Bldg. 3550 to W-12 is TEMPORARILY Out of Service. The line is broken between the TANK & Bldg. it is Plugged off.
6- Sampled WC-5 & WC-6 for Leuze.
7. Repaired the Balances ON 3rd level used to Make up RALA Solutions.
8. Delivered the TASON Cannien hooks to the Pile.

9. Cleaned the Water out from inside the Rala Product Cannion.

[FRIDAY]

9-30-55 1. Took off Gas Velometer Probe Readings.

4-12 2. Closed A4 and A16 Slide Valves and Blowed

Blevins. out the Condensate Pots. To these two off Gas Lines

3. Made up the 1st Coating Removal Solutions.

T9 – 459# of 35% NaOH T8 – 204# of 60% HNO_3.

Dumped HNO_3 into the Make up Tanks.

4. Took the Rala Slug Charger to the Pile Bldg.

5. Moved the Isotope Van into the Decontamination Bldg. To prevent the Isotopes from getting wet in case of Rain as the Van leaks.

6. P^{32} – Took up an extraction from E2 and precipitated in the C.F. L2 Precipitator.

Started a new extraction.

7. Shut down the W5 to W8 pump at 11:20 PM and cut off W8 air sparger. W5 LL – 6'9" W8 LL – 7' 1½". The drain to this pump pit is almost completely plugged.

RUN 63

[SUNDAY]

10-2-55 1. Brought down the F.I. Slug to 3028

12-8 Bldg.

R.L.N. 2. Finished loading the 89 Rala Slugs into A-1 at 7:30 A.M. and the first Coating Removal is started at 8:00 A.M. the Delay in Slug loading was due to a broken down Crane at Bldg. 3001 and the Riggers had to be called in to handle the Cannions.

3. The Slug Charger & Knocker is in the Decon. Room they have not been cleaned.
4. The Iso. Area Truck is out of Gas at H-16, 17, & 18 Tanks. The starter on the Pick up Truck is out of order. also the End gate is pulled off. Parked at D-Bldg.
5. Rala Status:
A-1 first Coating Removal
T-8 & T-9 6% HNO_3 for 2nd coating Remov.
M-1 Batch of Na_2CO_3.
All other cell A-Tanks MT.

10-2-55 1. PUT GAS IN BEAUCHAMP'S TRUCK.
8-4 2. CLEANED AND STORED THE SLUG KNOCKER AND CHARGER
BLEVINS. 4. INSTS. INSTALLED A NEW BATTERY IN THE MICROMAX TEMP. RECORDER #2 ON P.B. #1 IN 3026-D BLDG.
5. RALA STATUS
A1 — BONDING REMOVAL 20% HNO_3 READY TO SAMPLE AT 4:00 P.M.
T8 — 382# 50% NaOH M1 — 1 BATCH Na_2CO_3
T9 — 382# 50% NaOH
6. THE C.F. P^{32} SAMPLE HAS A HEAVY PPTE. CALLED SCHAICH'S HOME TO NOTIFY HIM BUT HE WAS OUT.

10-2-55 1. Finished Coating removal & Started 1st dissolving.
4-12 up to temperature About 10:00 P.M.
BAILEY 2. Added 3.7 Liters resin to 200 Cubicle And Started resin titration.

3. Continued tank farm & patrol duties.
4. 1C - .213 slugs.
Run Status:
Batch A dissolving
M1 - $NaCO_3$
T9 - 130# H_2O
Iso. Tank 3M HNO_3
Hold up - H_2O.
Eluate - H_2O.

10-3-55 1- Drained cell vent. filter box Hot off
12-8 Gas Reading 400MR/HR at the Fence.
R.L.N. 2- Finished Resin titration and Regeneration.
3- Brought Down Sodium Samples to Bldg. 3030 on our Pick up Truck.
4- Washed down the Cottrell Precip. after batch B Dissolving.
5- Brought down Pile units to Iso Packing.
6. Rala Status:
A-1 Batch B. Dissolving.
A-9 Batch A Extractions
A-5 " Na_2CO_3.
M-1 MT.
A-8 Cubicle Waste.
A-11 MT
A-17 MT
Crud Filter #1 Needs Backwash.
7- Made up 5 liters of .5 M Acetate for the Resin Regeneration. The Acetate on the 3rd level had Precipitated.

10-3-55 1. TOOK READINGS ON LAGOON LIQUID LEVELS #1- 10 TURNS
8-4 AND 9 #2 - 8.79' #3 - 11.30'.
BLEVINS. 2. TOOK GLOVES & SHOE COVERS FROM VARIOUS BLDGS TO DECON.
3. PUT NEW KIMPAK AT THE OFF GAS TURBINE TO ABSORB THE OIL FROM THE BEARINGS.
4. REMOVED A FROG FROM THE S.T.F. WASTE TRANSFER PUMP PIT DRAIN TO UNPLUG IT.
5. RALA STATUS: (1MA HAD 11,350 CURIES + 17.46 SLUGS)
A1 - BATCH C DISSOLVING. (1MB HAD 10,940 CURIES + 17.88 SLUGS)
A6 - BATCH A NEUTRALIZED - 50 CURIES IN 8WMA.
A5 - MT.
A9 - BATCH B DIGESTING AT 80° TO 90° UNTIL 4:35 PM.
A17 - MT T8 - MT.
A11 - MT T9 - MT.
A8 - MT M1 - MT.
C. FILTERS - CF1 NEEDS BACKWASHING CF2 - CLEAN.
P. FILTERS - PF2 HAS PRODUCT PF1 - CLEAN.
6. THE PICKUP TRUCK IS IN THE GARAGE FOR REPAIRS AND WONT BE RETURNED BEFORE TOMORROW.
7. I^{131} - HANFORD SLUG DISSOLVING. READINGS ARE ON THE HOUR.
8. THE HOT WASTE LINE FROM 3550 TO W12 HASN'T BEEN REPAIRED YET.

10-3-55 1. DUMPED 10 drums WASTE INTO W5 FROM Chem Tech.
H-12 2. TOOK hourly READINGS ON SLUG dissolvine
BAILEY AT I^{131} CELL.
3. CONTINUED TANK FARM & PATROL duties.

4. 1MC - 9679 C - S.T. 8WMB - 80C - S.T.
5. RALA Status:
A1 Batch D - dissolving.
A6 - Batch A & B - Neutralized.
A5 - 1 Batch NA_2CO_3
A9 - Batch C digesting until 12:00 Midnight.
A8 - MT
A11 - MT
A17 - MT
T8 - 255# H_2SO_4
T9 - 130# H_2O
M1 - MT.

10-4-55 1- Continued F.I. Dissolving.
12-8 2- Brought down a Sulphur can and
R.L.N. turned the heat on the Melter.
3- Continued with Tank Farm and Patrol
Jetted 697 Gal. of M.W. to W-9 from D-Bldg.
4- Washed down the Cottrell Precipitator after
Batch D- Dissolving.
5- 8WMC Results were 81 C's S.T.
6- Ra La Status:
A-1 - Batch E- Dissolving up to Temp at 7:00A
A-5 - Neutralized Batch C.
A-6 - MT
A-8 - MT
A-9 - Batch D - ~~[illegible]~~ Digestion Started at 7:40A
Crud Filters Need Backwashing.
1 MD Results 9,666 C's S.T.

E = heels?

10-4-55 1. MAINT. REPLACED THE H_2O HEADER VALVE AT THE BIG
8-4 STEAM TURBINE. AND ARE PLACING 4 MG. ANODES
BLEVINS. IN THE GROUND AND TYING THEM ONTO THE H_2O LINES TO ABSORB THE STATIC ELECTRIC IN THE GROUND AROUND THE COTTRELL AREA. THEY ARE ALSO POURING GRAVEL OVER THE H_2O LINES.

2. MAINT. WELDED A NEW SECTION OF LINE ONTO THE 3550 TO W12 HOT DRAIN AND THIS CHECKED OK FOR LEAKS.

3. RUN THE CELL VENT. STEAM TURBINE FOR 4 hrs TODAY.

4. JETTED WC1 JET PIT TO THE S. BASIN AND PUT 1 H_2O WASH FOR COOLING PURPOSES INTO THE PIT AND OUT TO S.B. THE STEAM HEADER VALVE IS LEAKING THROUGH AND AT THE PACKING NUT.

5. THE PICKUP TRUCK WAS REPAIRED AND RETURNED TO US.

6. RALA STATUS:

8WMD RESULTS — 109 CURIES

A1 — HEELS DISSOLVING. ← No Batch E shown E = heels?

A5 — MT

A6 — BATCHES C+D NEUTRALIZED.

A8 — MT

A9 — 1ST METH. FILTERING THRU. PF2 TO A17.

A11 — MT T9 — 130# DILUTION H_2O.

T8 — MT M1 — 1 BATCH Na_2CO_3.

PF1 — CLEAN PF2 — PRODUCT.

C.F. — BOTH CLEAN.

7. P^{32} — E1 EXTRACTION COOLS AT 10:00PM AND E2

COOLS AT 11:00PM.

8. H.P. SMEARED THE ACID BOTTLES AND CARBOYS. AND THE HOT PIECES OF WOOD WERE KNOCKED OFF THE ACID CASES.

10-4-55 1. RAN 2nd Still on I131, product in dist. reciever.
4-12 2. Took up extraction on EI & EII Sampled & Started boiling down in EVI. Started rextractions.
Bailey
3. Added H_2O to WC1 Valve pit Sparged & Jetted to S.B.
4. Opened North H_2O Valve At Stack Area.
5. Transferred metal waste from A6 to W9.
6. Cooled A1 & Sampled - 3000 C.
7. Put Solutions on 2nd Level For Cubicle operation.
8. Opened 10 bottles Fuming HNO_3.
9. RALA Status:
A1 Heels - Sampled 3000 C.
A5 MT
A6 MT
A8 HNO_3 For 2nd meth.
A9 2nd meth. Filtering to A17.
A17 Waste From A9.
A11 8WC — 6359 C.
M1 - NA_2CO_3
All - 200 Cubicle tanks M.T.

10-5-55 1- Finished boiling down P^{32} Extracts
12-8 in Ev. #1. E-1 Results were 1392
R.L.N. E-2 2659 MC's.
2- Continued Cooling WC-1 Jet Pit. The Steam is Now Shut Off of the header in Bldg. 3038.
3- Continued With Tank Farm and Patrol.
4- Ra La Status:
A-1 - Dissolved Heels.
A-11 - 8HC.
A-8 - 8WCH sampled 1120 c's.
A-6 MT.
A-17 MT.
A-9 MT.
F.T. Versene Feed Needs PH.
Eluate 1.5M NaOH draining through the Column.
M.M. First Cubicle Waste.

10-5-55 1. RUN THE OFF GAS AND 4500 CELL VENT. STEAM TURBINES
8-4 FOR 4 hrs TODAY.
BLEVINS. 2. THE PAINTERS COCOONED THE RALA CARRIER.
3. MAINT. REPAIRED THE STEAM LEAK FROM THE PACKING TO THE WC1 JET PIT STEAM HEADER.
4. THE CONES THAT ARE TO BE USED FOR F. WILLIAMS RALA SAMPLES ARE ON THE DESK IN FRONT OF PB #7B
5. MAINT. REPLACED THE H_2O DRUM ON THE RALA TRUCK WITH A S.S. DRUM AND ARE WELDING A LEAK IN THE S.S. DRUM AT SHIFT CHANGE.
6. MAINT. INSTALLED AN EXTENSION HANDLE ONTO THE

CELL VENT DAMPER AT THE EXIT SIDE OF THE 125 HP ELECTRIC DRIVEN BLOWER.

7. PUT TWO MT CONE BOXES ON THE AEC TRUCK.

8. INSTS. INSTALLED THE ION + FISSION CHAMBERS AT THE LOADING CUBICLE.

9. SAMPLE RESULTS — F.T. 29,780C FTPH — 1,030C
A8 RCW — 46C MW HCl — 9.0 C.

10. RALA STATUS:
THE PRODUCT IS BEING REMOVED FROM THE COLUMN WITH HNO_3.
ELUATE TANK — HNO_3
H. TANK — REC. THE PRODUCT.
P.E. #200 CUB — PART OF THE PRODUCT WHICH IS BEING EVAP. DOWN IN VOL.
MW — MWHCl SAMPLED.
A8 — A8 RCW — SAMPLED
A11 — 8WC — SAMPLED.
A5 — 8WCW — SAMPLED
A1 — HEELS DISSOLVED WITH H_2O ON A1 & A2 JACKETS
A6 A9 A17 — MT.
M1 — 1 BATCH Na_2CO_3 FOR THE HEELS BATCH NEUTRALIZING

11. P^{32} PRODUCT IS IN EV1 WHICH IS READY FOR THE 2ND H_2O WASH.

10-5-55 1. LEAK INTO WC17 COMING FROM COLUMNS IN CELL B
4-12 1st LEVEL.
BAILEY 2. RAN 4th STILL ON I131. Boiled down transferred to FLASK + SAMPLED F.I. 10R AT 12 INCHES.

3. P^{32} product boiling down in EVII. Both H_2 washes have been added. SI has been regenerated.
4. Took up extractions on EI & EII & started re-extracting. Boiling down in ~~EVII~~ EVI with waste.
5. Cleaned up all MT sample carriers.
6. Continued tank farm & patrol duties.
7. RALA Status:
   PE. 1st Fuming Filtering to M.W.
   HCl. - $NaNO_3$ + H_2O wash
   Eluate - H_2O
   ISO - MT
   M.W. - Fuming HNO_3 + H_2O

10-6-55 1. Finished P^{32} Run and took up Prod.
12-8 2. Continued with Tank Farm and Patrol.
R.L.N. 3. Rala Status:
   A-1 Heels.
   A-5 MT
   A-6 MT
   A-8 MWFN Sample in the Lab.
   A-11 - 8WC
   A-17 MT
   Cubicle F.T. MT
   Eluate Tank MT
   H Tank Condensate
   Iso. Tank $NaNO_3$ Waste 16.7 C's.
   M.W. MT
   Product in the Cone Drying.
4. Passed P^{32} Pick up Run status on to G.E. Phillips.

10-6-55 1. THE CO. CELL IN BLDG. 3029 WAS WASHED DOWN WITH
8-4. THE H_2O GOING TO WC1.
BLEVINS. 2. MAINT. REPAIRED THE LEAK IN THE H_2O DRUM ON THE
A.E.C. RALA TRUCK. AND IT IS FILLED WITH H_2O.
3. MAINT. POURED CONCRETE OVER THE NEWLY INSTALLED
H_2O LINES. AT THE STACK AREA.
4. SPARGED W6 TANK SOLUTION FOR MOST OF THE
DAY. CUT OFF THE AIR SPARGER AT 3:00 PM.
5. RALA. — THE PRODUCT WAS DRY AT 3:00 PM
INSPECTION IT WAS LOADED AND THE PRODUCT
CARRIER IS BEING CLEANED AT SHIFT CHANGE
THE PRODUCT WAS WHITE WITH A VERY FEW
SMALL BROWN PARTICLES AND WAS A SIZE OF
~ 2.5" IN DIAMETER IT READ 4.5 ON R1
ON THE ION CHAMBER AND 7,941 COUNTS ON THE
FISSION CHAMBER.
6. A1 — HEELS A5, A6, A17, PE, HCl TANK ARE MT.
A11 — 8WC A8 — 8WFN AND $NaNO_3$.
A9 — A9-PF RINSE MW — PE RINSE
FT — FT RINSE. M1 — 1 BATCH Na_2CO_3
SAMPLE RESULTS — A8FN — 4,318 CURIES
PE RINSE — 277 CURIES A9 — PF RINSE — 184 C.
FT RINSE — 51 CURIES.
7. DELIVERED 12 SAMPLES OF THE P.E. RINSE TO
F. WILLIAMS.
8. BILL MARTIN WILL SEND 20 GALS/HOUR (AROUND THE
CLOCK) TO WC17 FROM HIS CELL IN 4501 BLDG
FOR QUITE SOME TIME IN THE FUTURE.
9. P^{32} BOILING DOWN IN EV2.

10-6-55 1. Took up remaining part of I[st] and delivered
H-12 to shipping room.
Bailey 2. P[32] pickup run boiling down in EV II.
3. Cleaned product carrier and loaded on truck. Bolted down & hooked up H_2O hose. Spread tarp over truck and tied down only temporarily.
4. 1st floor 3026D is ok according to H.P.
5. Jetted batch Na_2CO_3 to A5 - transferred 1M Hecks - SWC & SWFN to A5 - A6 to W9. 438 gallons.
6. Backwashed resin from column to W16.
7. Transferred all cubicle waste + A9 rinse to A8 - A5 - W16.
8. Backwashed P.F. with 5 - 40 gallon washes.
9. Made two transfers 18 liters each to cubicle for rinse.
10. Made 3 - 40 gallon washes through Cell A tanks & circulated samplers.
11. All cubicle tanks & Cell A tanks are M.T. & all panel boards shut down.
12. Ran filter rate test of P.F.1 & P.F.2.
13. Continued tank farm & patrol duties.
14. Both H_2O washes have been added to EV II.

10-7-55 ① Steam or air blowing into drain at W19 & 20
12-8 tanks. Can't find source. No air piped to these tanks.
Schaich ② Washed down cotrell.
③ Cleaned out sample blisters.
④ Cleaned & stored crane hook, periscope, adapter, and sampler carriers.

(5) Continued TF & P.
(6) Took up P^{32} pickup run.

10-7-55 1. THE RALA TRUCK LEFT 3026-D BLDG. AT 9:25 AM.
8-4 2. THE PILE DEPT. HAS BEEN PURGING THEIR CANAL THIS
BLEVINS SHIFT.
3. SAMPLED WC6 AND DELIVERED TO LEUZE. NO SAMPLE WAS TAKEN FROM WC5 AS IT WAS EMPTY.
4. 3030 WASHED THEIR CELL AND SENT THE H_2O TO WC1.
5. GASSED BOTH TRUCKS.
6. MAINT. REPACKED THE A CELL SUMP TO W16 AIR BLOW DOWN VALVE. IN 3026-D BLDG.
7. BOUGHT SOME FACE MASKS TO REPLACE ALL BAD ONES IN 3026-D BLDG.
8. P^{32} RUN 507-1 HAD 1,349 MCS.
9. MAINT. INSTALLED AN EXTENSION HANDLE TO THE DAMPER ON THE OUTLET SIDE OF THE BIG, STEAM DRIVEN CELLVENT. TURBINE.

10-7-55 1. ONLY TOOK OFF GAS READINGS OUTSIDE COTTRELL
4-12 FENCE. RADIATION TO HIGH INSIDE.
BAILEY 2. TATUM CONTINUED DISSOLVING U IN ROOM 10-3026C.
3. CONTINUED TANK FARM & PATROL DUTIES.
4. HELD SAFETY MEETING.
5. PATROL TOB FOR BUSSEY H500 D-33.
ORAL INSTRUCTIONS PASSED ON TO 12-8 MAN.

10-10-55 1. DRAINED THE CELL VENT. AND OFF GAS FILTER BOXES.
12-8 2. BROUGHT 1 Na_2CO_3 AND 1 K_2CO_3 TO 3038 FROM THE BLEVINS. L.I.T.R.

3. BROUGHT 2 PILE UNIT CASKETS TO 3038 FROM THE PILE.
4. THE PICKUP TRUCK HAS A FLAT TIRE.
5. THERE IS A STEAM LEAK AT ONE OF THE STEAM REDUCERS IN LOW STORAGE IN 3026-D AND A LEAK AT THE PACKING NUT OF A VALVE AT THE OTHER STEAM REDUCER IN LOW STORAGE.

10-10-55 1. Had heater fixed on big truck. Get pickup repaired
8-4 tomorrow.
Bailey 2. Started repair of steam leaks in low storage 3026D.
3. Cleaned out both pump pits in south tank farm area.
4. LAGOON READINGS: 1. 10.10
2. 8.64
3. 11.32
5. Started air jet WC-6 to WC-5.
6. Cut off extension handle to wrench at valve pit South 3503.
7. Gathered up all ladders 3026D and had them checked by H.P. Called Mait. to pick up ones on east platform.
8. Replaced battery to light at evaporator.
9. Started removing housing from around big steam turbine for painters.

10. HAD FLAT FIXED ON PICKUP TRUCK.
11. HAD LIGHTS REPAIRED AROUND WC TANKS SOUTH 3503.

10-10-55 1. Cleaned up the used Coveralls, gloves, & shoe
4-12 Covers from around the big steam turbine
R.L.N. also put down new Kimpak around the bearings of small off gas Blower.
2. Continued with Tank Farm & Patrol.
3. The Air Jet from WC-6 to WC-5 is still on at shift change.
4. Sampled H.H. #25 = 305 O.D.B. = 203 # 3500 19 C/K/M/I. The Pile Bldg. has been loading slugs and purging the canal.

10-11-55 1. WASHED DOWN THE COTTRELL PRECIPITATOR.
12-8 2. BROUGHT A SULFUR CAN TO 3032 FROM THE PILE
BLEVINS. AND TURNED ON THE MELTER VARIAC WHICH IS HEATING BUT THE THERMOCOUPLE ISN'T WORKING.
3. WC6 IS STILL AIR JETTING TO WC5.
4. CONTD. WITH TANK FARM AND PATROL DUTIES.
5. THE DOOR TO ONE OF THE 3RD LEVEL OFFICES IN 3026-D IS LOCKED AND THE KEY IS GONE.

10-11-55 1. RAN the two SMALL steam driven turbines 4 hours.
8-4 2. Pile bldg. is purging their CANAL FOR A FEW
Bailey hours.
3. Repaired steam leaks in low storage 3026D.
4. Removed housing from large steam turbine and started sandblasting before painting.

5. Melted out 4 sulphur cans and started up extractors. E1 cooks at 9:30 P.M. E2 cooks at 11:00 P.M.

10-11-55 1- Painters finished sand blasting the large
4-12 steam turbine housing and it has been cleaned
R.L.N. out inside. The Rubber Stopper used to plug the drain line had a hole in the center so the line is full of sand.
2. Continued with Tank Farm and Patrol.
3- Took up P^{32} extracts from E-1 & E-2 these are boiling down in Ev. #1. E-1 Results 2059 MCS.
4. The leak into HC-1 has stopped.

10-12-55 1. Finished Boiling down the extracts in EV1. At
12-8 P^{32} E2 had 2,442 MCS.
Blevins. 2. Contd. with tank farm and patrol duties.
3. Cut off an agitator at Evergreen at 2:30 AM. for W. Phillips.
4. The Pile canal was purged all this shift.

10-12-55 1. Received product carrier from L.A. unloaded
4-12 it in 3026D. No cone in it.
Bailey 2. P^{32} boiling down in EVI.
3. Continued work in stack area painting steam turbine.
4. Cleaned up evaporator North tank farm.
5. Maint. drained oil from bearings of large steam turbine.

10-12-55 1. P^{32} Run is filtering through S-2 to
4-12 EV. #2 and boiling down. S-1 has been
R.L.N. Re-generated. Took up extracts from E-1
and E-2 and started boiling down in Ev.1.
2. Continued with Tatums Dissolving behind
Bldg. 3036. Adding Caustic as Needed.
3. Policed up at the F.I. Cell & Building
the Sampleing Cabicle Needs Cleaning Inside
and Outside. This is Lab equipment.
4. Continued with Tank Farm and Patrol

10-13-55 1. ALL MEMBERS OF THIS SHIFT ATTENDED A FIRE
12-8 FIGHTING EQUIPTMENT DEMONSTRATION.
BLEVINS. 2. FLUSHED THE CELL VENT., TURBINE HOUSING, DRAIN
FOR 5 MINS. WHICH SHOWED THE DRAIN TO BE
UNPLUGGED.
3. P^{32} THE PRODUCT IS BOILING DOWN IN EV3 WITH
THE H_2O WASH WHICH IS FILTERING THRU S2.
S3 HEAD TANK READ 15 ON R2. REGENERATED
S2. AND THE WASTES ARE BOILING DOWN IN EV1.
4. CONTD. WITH THE U DISSOLVING WITH NaOH AT
BLDG. 3036.

10-13-55 1. Repaired extension to H_2O valve in pump
8-4 pit South of 3503 bldg.
Bailey 2. Started pumping from W5 to W8. W5 L.L. 8'5"
W8 L.L. 7'2". Checked P.H. hourly on W8.
3. P^{32} Pickup run boiling down in EV1.
4. Finished painting big steam turbine. Put it

back together. Replaced oil in bearings and started up for 24 hour test at 1:30 P.m.
5. Cleaned upstack area.
6. Changed oil in bearings of 75 H.P. electric blower.

10-13-55 1- Bldg. 3019 drained ~200 gal. of waste
4-12 through the floor drain to W.1 and
R.L.N. probably will trans. more on the 12-8 shift.
2- Shut down the large steam turbine at 5100 P. all ok. Started the 75 H.P. Elec. Fan.
3- Continued with dissolving behind Bldg. 3036 adding caustic as needed.
4- Continued pumping W-5 to W-8, checking PH of W-8 hourly.
5- Continued with tank farm and patrol.
6- P^{32} pick up run is filtering through S-2 to Ev*2 and boiling down in Ev#1 Run # 509 had 3620 MC's.

10-14-55 1. Washed down the Cottrell precipitator
12-8 2. Contd. the U dissolving with NaOH at 3036 Bldg.
Blevins. 3. Contd. pumping from W5 to W8 and Ph ing W8 once per hour. W5 PH dropped to 2 and M recovery sent 200 gals. of NaOH to W5 to bring the Ph to 11.
4. The two spot lights for the WC tanks south of 3503 are out. Also the north bulb on the stack is burned out. And at W12.
5. The phones for the evaporator and evergreen

BLDGS. ARE OUT OF ORDER THIS SHIFT.

6. 3019 HAS BEEN DECONTAMINATING THEIR TANKS AND SENDING THEIR WASTES TO WI THIS SHIFT.

7. P32 — PRODUCT IS EVAPORATING DOWN IN EV3 WITH THE H_2O WASH FILTERING THRU. S3 TO EV3.
S3 HEAD TANK READ 3.2 X R2.

10-14-55 ① Returned ladders to Bldg 3587
8-4 ② Placed an order to repair M10 L.L.
Schaich ③ Continued pumping W5-W8.
④ WC-5 sampler not operating.
⑤ Grading for lagoon No. 4 almost completed.
Might be due to air shut down in that area.

10-14-55 1- Cleaned the Pick up Truck, 130. Shipping
R.L.N. Door handles, and the crane switch box
4-12 all are OK.
2. Took off Gas Velometer Readings on the various off Gas lines.
3- The Air is shut off of the samplers at the HC Tanks behind 3603 Bldg.
4- Had the Drums sweaned behind Bldg. 3036. They are All hot. ~ 200 counts. They have been Re cleaned and Ready to Sweep.
5- Maint. Finished adding the antifreeze to the Cooling unit at the F.I. Coll. the Valves and Recirculating Pump are open and on.
6- H-18 Telemetering system is ~ 20% Low by the Chart at the Shop.

10-17-55 1. Drained Filter boxes at Stack Area.
12-8 2. Had Charts replaced on Brown inst. at Stack
Bailey Area + Evaporator.
3. Slight increase to WC-17 coming from Columns in Cell B #501.
4. Started Pump from W5 to W8 about 12:30 A.M. W5-LL 8'6" W8 LL. 10'4". Checked P.H. of W8 hourly.
5. Brought down 2 samples from L.I.T.R.
6. Brought down 16 slugs to I^{131} Cell.
7. Brought down pile units to Shipping.
8. Continued tank Farm + patrol duties.

10-17-55 1. Lagoon Readings #1 10 turns back to 9
8-4 #2 8.35' #3 11.2'.
R.L.N. 2. Maint. turned the Air supply back on to the WC. Tanks behind 3503 Bldg.
3. Turned the Steam on to the Coils for the Cottrell Wash Down Pump.
4. Cleaned the Rala Product Cannion down to 1 R/HR Inside, 200 HR Outside Threads.
5. Replaced the tubing at the D.B. Samplen and cleaned out the Outlet Weirs at the S.B.
6. Loaded 16 F.I. Slugs and started Dissolving. Readings on the hour.
7. Inst's Repained the W-18 Telemeter Chain and Re-calibrated.
8. Shut off the Pump from W-5 to W-8 W-5 LL 7'5" W-8 11'6", also Shut off the W-8 Air Sparger. Radiation Readings over the Pit 200 MR/HR.

9. The P.E. Filter #200 is Plugged. ~130 ml/min. is the max.

10-17-55 ① Check FI dissolving.
4-12 ② Continued Tank Farm + Patrol.
Schaich ③ Showed Los Alamos film and two safety films.
④ Started calibration of Al Tank using 20# increments. Straight line calibration to 200# and checks original calibration.

10-18-55 1. Washed down Cottrell precipitator.
12-8 2. Finished calibration of Al tank using 20# increments.
Bailey Checks original calibration up to 800# but from there on it is 20# to 30# higher than original.
3. Took hourly readings on slug dissolving at I[13] cell.
4. Turned on variac to sulphur melter.
5. Transferred sulphur can from pile bldg. to 3032 bldg.
6. Attended showing of film from Los Alamos and two safety films.
7. Continued tank farm + patrol duties.

B. 10-18-55 1- P32 E-1 Cools at 9:30 P.M. E-2 at 11:30 P.M.
8-4 2- Started pumping from H-8 to Lagoon
R.L.H. #3 at 8:35 A.M. pH and sampleing hourly
H-8 L.L. at start 11'6".
3- Ran the large steam turbine 4 hours
4- Cleaned the 125 H.P. Fan housing with the Pressure Jet using soap, water + steam. Readings inside now 35 MR/HR.
5. Had new safety rail made up and welded

to the chains on the 2½ Ton Truck bed.

6. Inst's Cleaned the Off Gas Velometer Probe Connections.

7. Put Duct Seal around the Exit Valve for the Hot off Gas blower it seems to have a bad gasket and leaks.

10-18-55. 1. THE LIGHT BULB ON THE NORTH SIDE OF THE OFF GAS
4-12 STACK IS BURNED OUT.
BLEVINS. 2. FOUND H_2O RUNNING INTO A HOT SINK IN RM. C1 BLDG. 4500 AND FILLING WC-13.

3. CONTD. PUMPING FROM W8 TO LAGOON #3 AND SAMPLING HOURLY FOR COMPOSITE AND PH.

4. TOOK UP P^{32} EXTRACTS FROM E1 AND E2 AND STARTED NEW EXTRACTIONS. E2 NEEDS TO BE CHECKED FOR LEAKS AND ETC. AT 12:05 AM.
THE EXTRACTS ARE BOILING DOWN IN EV1.

5. E1 HAD 2707 MCS. S.T.

10-19-55 1. E II had 2576 mc. S.T.
12-8 2. Finished boiling down extracts in EVI & cut off heaters.
Bailey

3. Turned off C-1 Agitator At 3515 bldg. At 2:30 A.m.

4. Flood Light out East Side 3026D.

5. LAGOON 3 reading 7:00 A.m. 11.57.

6. Continued pumping from W8 to Lagoon three. Checked P.H. & sampled hourly.

7. Continued tank farm & patrol duties.

12/19/55 1. Ran both small steam turbines 4 hours.
8-4 2. Backwashed all the transfer lines in
R.L.N. the New Pump Pit at the Tank Farm
Radiation Reading Now 50MR/HR at
top of the Pit.
3. Continued Pumping W-8 soln. to Lagoon
#3 Checking PH & sampleing hourly
Lagoon #3 L.L. at 3:00 P.M. 11.7'.
4. Maint. Repaired the Duct Work in the
Make up Room of 3026-D Bldg.
5. Took Pick up Truck to the Garage for
Repair brakes & lights.
6. Electricians Replaced the burned out
Light bulbs at the Stack of 3026-D.
7. Installed heat lamps in all M.H. Shacks
where needed.
8. P32 Run is boiling down in Ev. #1
No Water Wash has been Added.
9. Pipefitter Started Repair of the drain
line from the Nitric Tank to the Weigh
Tanks. this Job is Not Complete.
10. Washed A-9 Tank with a Large Volume
of HNO_3 Solution and filled the P.F.'s.
with HNO_3 to Stay Overnight.
11. Started Solution Make up for Resin Req.
in 3026-D. 9 M HNO_3 OK 3.5 M HCl OK
3.0 M $NaNO_3$ in the Lab.

10-19-55 1. BROUGHT THE PICKUP TRUCK FROM THE GARAGE.
4-12 2. P^{32} — THE PRODUCT IS IN EV2 BOILING DOWN. WITH
BLEVINS 2ND WATER WASH FILTERING THRU. S2 TO EV2. TOOK
UP EXTRACTIONS FROM BOTH E1 AND E2 AND STARTED
NEW EXTRACTIONS. THE EXTRACTS ARE BOILING
DOWN IN EV1. P1 DRY READ 3.5 X R1
3. LABELED THE 3.0 M $NaNO_3$ WHICH WAS 3.04 M & O.K.
4. TRIED JETTING FROM W15 TO EVERGREEN BUT ONLY
GOT ~ 10 LITERS IN THE Ca. TRANSFER TANK.
5. THE W8 TO LAGOON #3 PUMP QUIT PUMPING AT 9:55
P.M. THE COMPOSITE SAMPLE WAS SUBMITTED TO
THE LAB. W8 L.L. WAS 5'9.5" WHEN THE PUMP
QUIT. FLUSHED THE PUMP TO LAGOON LINE WITH
H_2O FOR 1 hr AND 15 MINS.
6. LAGOON #3 L.L. AFTER PUMPING AND FLUSHING
THE LINE WAS 11.82'. COULDN'T READ THE
L.L. GAUGE AT LAGOON #2 SO WE DIDN'T OPEN
THE OVERFLOW VALVE.

10-20-55 1. Finished P^{32} run took up product And delivered
12-8 to PACKING.
Bailey 2. SI & SII have been regenerated. Waste boiling
down in EVI.
3. Made up .5 M NA Acetate LAB .5K3.
4. Removed regenerated resin from FLASK And
Measured out A New batch And Started
regeneration. Ready For Step 10 1st cycle.
5. Opened VALVE in OVERFLOW LINE FROM

LAGOON 3 to LAGOON 2. L.L. ON 3-11.8
L.L. ON 2-8.2.
6. Continued tank farm + patrol duties.

10-20-55 1- Turned the air sparger W-5 Tank.
R.L.N. 2- Took Radiation Readings at the Inspection Plates on the Cottrell Precipitator.
8-4 Bottom = 200 MR/HR, Top East Side = 15 MR/HR, Top West Side = 25 MR/HR.
3. Jetted ~ 750 gal. from W-13 Tank over to W-15 for Rimshaws use.
4. Pipefitter finished with the drain lines from T-5 to the Weigh Tanks. It will deliver ~ 10# of water per min. Checked the lines for leaks all OK.
5- P^{32} Pick up Run is boiling down in EV#1 The first Run has ~2950 MC's.
6. Lead burners started patching the lead floor on 3rd level of 3026-D Bldg.
7- Continued with Resin Regeneration Just finished the first $NaNO_3$ step on the second cycle at shift change.
8- Sampled M.H. # 139 = 0 and #22 = 481 C/M/M
9- Lagoon # 3 is still overflowing to Lagoon # 2. L.L. at 3:00 P.M. # 2 9.0' #3 11.35'
10- Inst's. has been called to Repair the lower contact at M.H. # 25.
11- Pulled the lead block from over P.F. # 2 the Radiation Readings were over the Top 1 R/HR, 3" from filter 10 R/HR. Nitric

acid is on the filters at shift change

10-20-55 1. Jetted ~ 30 gals. of waste to Cs. transfer in
4-12 Evergreen bldg. from W15. The steam is broken
Blevins. inside the steam valve to the W15 jet but will
open a little and allow enough steam to go
thru. to jet ~ 1 min when it quits and has to
cool before it will jet again.
2. Stopped at step 7 of the 2nd cycle on the
Resin Regeneration HCl is next. 3.0m $NaNO_3$ is ok. 3.02
3. The lower contact for MH #25 is still out
of order.
4. Blowed the I^{131} off gas pot.
5. P^{32} Product is boiling down in EV2 the
2nd H_2O wash has been added to S2. P1 read
18 x R2. S1 has been regenerated.
6. Turned the steam on to the U. dissolving
at 3036. It is being dissolved with NaOH.

10-21-55 1. Washed down Cottrell precipitator.
12-8 2. Made up 12 L. 3.5M HCL. Lab 3.39. Mixed
Bailey this with 9L-3.47. Did not resample.
3. Finished P^{32} pickup run took up in 200 ml.
and delivered to packing.
4. Continued resin regeneration. Ready for step 8
3rd cycle.
5. Checked U dissolving back of 3036 bldg.
6. Still a fair stream flowing from lagoon
three to lagoon two.
7. Continued tank farm & patrol duties.

10/21/55 1- Finished With the Resin Regeneration
8-4 at 3026-D.
R.L.N. 2- P^{32} Pick up Run has 1539 MC's S.T.
3- Pipefitter Replaced the broken Steam valve for W-15 Jet.
4- Checked Oil levels & Cleaned out around all M.H. Samplers.
5 Continued With Decon. of the Process filters. Versene Soln. is on them Now.
6- Inst's. Repaired M.H. # 25 The switch is Now in the Lower Position.
7- The Roof of the Evap. Bldg. has been Repaired. It leaked down Inside the Galleny Walls.
8- Sampled NC-5 for Leuze. NC-6 is MT.
9. Lead burners Continued Patch Work on the lead floor of 3026-D. Job is Not Complete
10- Checked the PH of the Soln. in NC-1 Tank. It was Acid.
11. Gassed both Trucks.

10-21-55 1. TOOK OFF GAS VELOMETER READINGS AT VARIOUS OFF
4-12 GAS LINES.
BLEVINS. 2. LAGOON #3 WAS STILL OVERFLOWING TO #2 SO WE DIDN'T CLOSE THE VALVE BETWEEN THE TWO.
3. CONTD. PATROL AND TANK FARM DUTIES.
4. PUT THE GRATING OVER THE PUMP PIT SOUTH OF 3502.
5. CUT OFF STEAM AND COOLED THE [illegible] WHICH WAS DISSOLVING AT 3036 BLDG.
6. WC5 LL HAS BEEN RISING FOR MOST OF THIS SHIFT

BUT SEEMS TO HAVE LEVELED OFF. FOUND A LEAK INTO A HOT SINK IN RM 3 AT 3508 BLDG.

10/24/55 1- Drained both filter boxes at the
12-8 stack, drained the F.I. Pot North
R.L.N. of Bldg 3026-C.
2- Brought down samples from L.I.T.R. to Bldg. 3030.
3- Continued with Tank Farm and Patrol.
4- Continued with Decon. of the Process Filters. Radiation Readings. P.F. #1 10 R/HR @ 2" and 700MR ~~over~~ at Top of Cubicle. P.F. #2 4 R/HR at Contact and 200MR top of Cubicle. Valve Rack, 2 R/HR at Contact and 200 MR top of Cubicle. There is Nothing on the Filters at 8:00 A.M.
5- Brought Down the Pile units and F.I. Slugs.

10-24-55 1. TOOK LL. READINGS OF THE LAGOONS #1 - 11 TURNS
8-4. #2 - 9.19' #3 - 11.08'.
BLEVINS. 2. THE ELECTRICIANS MADE A SEMI-ANNUAL INSPECTION OF THE COTTRELL PRECIPITATOR. ONE OF THE WEIGHTS TO A DISCHARGE ELECTRODE WHICH HAD FALLEN OFF WAS REPLACED. THE COTTRELL WAS SHUT DOWN 6 hrs AND 25 MINS. FOR THE INSPECTION.
NEW FILTERS WERE INSTALLED IN THE AIR TO BLOWER VENT. DUCT.
3. I^{131} 20 SLUGS ARE DISSOLVING WITH READINGS ON THE HOUR.

4. SENT THE PICKUP TRUCK TO THE GARAGE FOR REPAIR OF THE LIGHTS.
5. CONTD. WITH DECONTAMINATION OF THE PROCESS FILTERS. Na. ACETATE IS TRAPPED ON THEM AT SHIFT CHANGE.
6. ASKED THE ELECTRICIANS TO REPLACE THE BURNED OUT LIGHT BULBS AT THE NORTH TANK FARM AND ALSO REPAIR THE LIGHTS AT WC5.
7. LABORERS CUT DOWN THE WEEDS FROM AROUND THE EDGE OF THE SETTLING BASIN BUT THEY HAVEN'T HAULED THEM AWAY AS THEY WERE ASKED TO DO.
8. PF. #1 READ 5 R/Hr AT CONTACT WITH VERSENE IN THE FILTER AND 350 mr/hr AT TOP OF CUBICLE
PF #2 READ 3.5 R/Hr AT CONTACT AND 700 mr/hr AT TOP OF CUBICLE. WASHED THE OUTSIDES OF THE FILTERS WITH VERSENE AND HNO_3.

10-24-55 1. CUT OFF STEAM TO CELL I FLOOR JET AT 3515 BLDG.
4-12 IT WAS CAUSING A SLIGHT BUILD UP IN W12.
BAILEY 2. LEFT WEAK HNO_3 ON P.F. AT SHIFT CHANGE.
3. CONTINUED V DISSOLVING BACK 3036 BLDG. (WITH NAOH)
4. TOOK HOURLY READINGS ON SLUG DISSOLVING AT I^{131} CELL.
5. CONTINUED TANK FARM + PATROL DUTIES.

10-25-55 1- WASHED DOWN THE COLTRELL PRECIPITATOR
12-8 AND RAISED THE K.V. TO 62 THIS IS THE MAX.
R.L.N. 2. CONTINUED WITH [illegible] DISSOLVING. THE SP.GR. WAS OFF SCALE AT [illegible] ADDED 10 L. OF H_2O.

3. Brought down a 5. can and turned the heat on the melter. The thermocouple for the melter seems to be out of order.
4. Continued with Tank Farm and Patrol.
5. Continued with Process Filter Decon. Worked on P.F. #1 only. Radiation Readings are 1.8 R/HR at contact, 180 MR at the top of cubicle.
6. Washed P.F. #200 with two large HNO_3 washes ~ 20% and filtered to the M.W. Tank at 600-800 ml/min. No water has followed this.

10-25-55 1. MADE A FILTER RATE TEST ON THE #200 CUB. PE. TO
8-4 MW. FILTER AND GOT 150.8 ml/min. USED H_2O.
BLEVINS. 2. SENT THE SPARE FILE FROM 3037 Rm 105 TO THE X-10 WAREHOUSE AND THE LOCKS TO BUFFINGTON IN BLDG. 5000.
3. RAN THE OFF GAS AND 4500 AREA STEAM TURBINES FOR 4 hrs TODAY.
4. PUT DUCT SEAL AT A LEAK FROM THE FLANGE OF THE STEAM TURBINE OFF GAS EXIT VALVE AND AT A LEAK IN THE IMPELLER HOUSING OF THE STEAM TURBINE.
5. MAINT. PUT NEW PACKING IN THE HNO_3 PUMP WHICH IS IN THE MAKE UP PIT IN 3026-D BLDG.
6. REMOVED THE 3 BLOCKS FROM THE P.F. CUBICLE IN 3026-D. THE MAX. RADIATION AT THE TOP OF THE CUBICLE AND WITHOUT SOLUTION IN THE FILTERS IS 400 mr/hr.

7. CONTD. DECONTAMINATING THE PROCESS FILTERS WHICH HAVE HNO_3 IN THEM AT SHIFT CHANGE. PF#1 – 1600 mr/hr AT CONTACT AND PF2 – 2400 mr/hr AT CONTACT.
8. P32 – E1 EXTRACTION COOLS AT 10:00PM AND E2 COOLS AT 11:00PM.

10-25-55 1. Checked P.F. MANIFOLD VALVES FOR LEAKS. ALL OK.
4-12 There is A LEAK IN P.F. I disconnect Are in Weld
BAILEY ON MANIFOLD LINE JUST UNDER it. UNABLE to determine just where it WAS.
2. P.F. I reading 1R At CONTACT P.F. II About 2.5R AT CONTACT. Left 2.5M NA ACETATE ON FILTERS OVER SHIFT CHANGE.
3. CONTINUED dissolving FOR TATUM BACK OF 3036 bldg. He is using HNO_3 tonight.
4. TOOK up extractions ON EI AND EII. SAMPLED AND STARTED boiling down in EVI. STARTED rextracts.
5. BYPASS VALVE ON EI is LEAKING Around the PACKING.
6. CONTINUED TANK FARM & PATROL duties.

10/26/55 1- Finished boiling down P32 Extracts. E-1
12-8 had 2961 E-2 3325 MC'S S.T.
R.L.N. 2. Continued With the Dissolving behind Bldg. 3036.
3- Process Filter Readings. #1: 1.2 R/HR #2 = 2.2R Valve Rack 1.5 R/HR. used hot HNO_3 & Versene and scrubbed the filters with cleanser

4- The Cottrell Precipitator kicked out and the K.V. was lowered to 60.
5- Continued with Tank Farm and Patrol.

10-26-55 1. Ran the Big Steam Turbine for 4 hrs today.
8-4 2. Cleaned up the excess oil from the motors and
Blevins. their frames at the stack area.
3. Cleaned out some of the algae from inside the S. Basin and Retention Pond Weir Boxes.
4. Maint. finished repairing the lead floor on 3rd level of 3026-D.
5. P^{32} — The first water wash is in EV1 with the product.
6. Sent the pickup truck to the garage for repair of lights.
7. Put Versene on the process filters.
8. Put paper over the P.F. cubicle to prevent material from falling into the cubicle.

10-26-55 1. The sawdust around shrubby outside bldg. 3032 was
H-12 discovered to be on fire about 4 or 6:30 p.m. Maples
Bailey called fire dept. to ~~extinguish~~ extinguish it.
2. Jetted WC-4 contents to W9. Float would not go below 300 gal. Seems to be a heavy ppt. in bottom of tank.
3. Took up extractions on EI + EII and started boiling down in EVI. Started rextracts.
4. P^{32} product in EVII. Both H_2O washes have been added.

5. SI has been regenerated.
6. Reading on PI before product removal 4.5 on R'.
7. Continued tank farm & patrol duties.

10-27-55 1. Shut down Trotters boiling loop at
12-8 9:00 A.M. it seemed to be plugged.
R.L.N. 2. Finished P32 Run and Delivered.
S-3 head tank reading 2.5 R' scale
S-2 & 3 have been re-generated.
3. Continued with tank farm and patrol.
4. hosed out the loading cubicle, lowered the radiation reading to 400 MR/HR at the top of cubicle.

10-27-55 1. P^{32} — PRODUCT IS BOILING DOWN IN EV1. THE
8-4 FIRST RUN HAD 2,585 MCS.
BLEVINS. 2. THE ELECTRICIANS REPAIRED THE COTTRELL BLOWER SAFETY SWITCH POINTS WHICH WERE STUCK AT THE OPEN POSITION AND LETTING THE BLOWER RUN AT ALL TIMES REGARDLESS OF THE POSITION OF THE BLOWER SWITCH ON THE P. BOARD.
3. THE PICKUP TRUCK WAS IN THE GARAGE MOST OF THE DAY FOR REPAIR OF LIGHTS. AND WHEN DAVIS STARTED TO LEAVE THE GARAGE THE TRUCK WOULDN'T START SO THEY PUT A QUICK CHARGE ON THE BATTERY AND IT STILL WOULDN'T START SO THEY PUT IN A NEW BATTERY AND IT STILL WOULDN'T START SO THEY GAVE HIM A PUSH TO GET IT AWAY FROM THE GARAGE. IT IS PARKED ON THE HILL NEAR COTTRELL. WE WILL SEND IT BACK TO THEM

TOMORROW.

4. MAINT. BROUGHT A LOAD OF DIRT TO THE S. BASIN AREA TO BE USED IN FILLING THE DRILL HOLES IN THAT AREA AS WELL AS BETWEEN THE EAST AND WEST PONDS.

10-27-55 1. Sprayed P.F. Cubicle with Versene Solution.
4-12 Reading Changed Very Little if Any.
Bailey 2. Checked V dissolving back 3036 bldg. And Added HNO_3 As Needed.
3. P^{32} product sparging in .05 N Acid ready to transfer to SIII head tank.
4. Continued tank Farm & Patrol.
5. Pile bldg. purged their canal some this shift.

10/28/55 1- Washed down the Cottrell Precipitator.
12-8 2- Continued with Tank Farm and Patrol.
R.L.N. 3- Trottens boiling loop was shut down at 6:40 A.M due to point #9 being off scale Trotten has not been called.
4- P^{32} Pick up Run is being taken out of Ev. #3 at shift change. S-1, 2, & 3 have been Re-generated. S-3 head Tank Reading 7 R²

10-28-55 1. P^{32} Pickup Run has 2,580 mcs.
8-4 2. Laborers filled the drill holes at the S. Basin
Blevins. Area with dirt.
3. Picked up hot shoe covers and gloves at various bldgs. and delivered to decon. bldg.

4. SAMPLED WC5 AND WC6 AND DELIVERED TO LEUZE IN 3508 BLDG.
5. MAINT. REPAIRED THE DAMAGED HOSE IN 3026-D AND IT WAS PUT AT THE OFF GAS STACK FOR USE AS A WATER HOSE AND THE GOOD HOSE WAS TAKEN FROM THE STACK AND PUT IN LOW STORAGE.
6. SENT THE PICKUP TRUCK TO THE GARAGE FOR REPAIR OF STARTER. HAD ANTIFREEZE PUT IN THE BIG TRUCK.
7. HNO_3 IS ON THE PROCESS FILTERS. HOTTEST SPOT AT CUBICLE TOP IS ~180 mr/hr PF1 MT READS ~675 mr/hr AT CONTACT PF2 m READS 1.0 R/hr AT CONTACT.
8. INSTS. REPAIRED P&S FOR WC9 TANK TELEMETER THEY ALSO REPAIRED THE D.B. CHART PLATE & PEN TO ALLOW THE PEN TO GO ACROSS THE CHART. WITHOUT HANGING UP.
9. TATUM PUT 171 LITERS OF NORMAL U. INTO W7 TANK. IT TOOK 100# OF FLAKE NaOH TO BUILD THE PH TO 8 FROM 4.

10-28-55 1. TOOK OFF GAS READINGS AT STACK AREA.
4-12 2. BLEW VERSENE OFF P.F. AND LEFT WEAK HNO_3
BAILEY SOAKING OVER WEEKEND.
3. CUT OFF H_2O VALVE IN BLDG. 3508 THAT WAS RUNNING INTO WC-5.
4. CUT OFF TATUM'S U DISSOLVING TANK 3036 AT 10:00 P.M.
5. CONTINUED TANK FARM & PATROL DUTIES.

10-31-55 1. DRAINED THE OFF GAS AND CELL VENT FILTER BOXES.
12-8 2. BLOWED THE OLD I^{131} OFF GAS POT.
BLEVINS. 3. BROUGHT THE PILE UNITS FROM THE PILE TO 3038.
4. LEFT THE PICKUP TRUCK PARKED IN FRONT OF 3030 BLDG. WITH 1 Na_2Co_3 AND 1 K_2Co_3 SAMPLES ON IT.
5. LOADED 25 I^{131} SLUGS INTO B. DISSOLVER AND TOOK THE CARRIER BACK TO THE PILE BLDG.
6. THE PICKUP TRUCK CARBURETOR NEEDS ADJUSTING.

10-31-55 1. Sent pickup truck to garage for repairs. It is
8-4 back.
Bailey 2. P^{32} Filling Sulphur Cans.
3. Gased up big truck.
4. Started cleanup & sandblasting 75 H.P. electric blower.
5. Bought a dozen pair of high top shoe covers from stores & stored in cabinet 3026D.
6. Loaded 50 slugs to B dissolver, removed coats & started dissolving. Readings on the hour.
7. Cut off H_2O at WC-1 tank underground.
8. Dumped 10 drums waste into W7 from Chem. Tech.

10/31/55 1. Continued filling sulphur cans in Blds.
4-12 3032. the drain line from the melter to
R.L.N. the can plugged so there was a time loss while cleaning out the line.
2. Continued with the U Dissolving behind

Bldg. 3036. Adding NaOH as Needed.

3- Finished Adding the HNO_3 to the F.I. Dissolving. The S.P.G.R. Was Off Scale at the 8:00 Reading so 5 Lit of H_2O Was Added.

4- Put the S.S. Cone under the C.H. and back Washed the P.E. # 200 Filter and Tank. Jetted the Washes out the A-16 line. it is Now Ready for a Rate Check.

5- Continued With Tank Farm and Patrol.

6- The Steam turbine is Running OK. The Cottrell had to be cut back to 45 K.V. to Operate.

11-1-55

12-8 BLEVINS.

1. CONTD. THE U. DISSOLVING WITH NaOH AT 3036 BLDG.
2. MADE A 200 CUB. P.E. TO M.W. FILTER RATE CHECK WHICH GAVE 326.5 ML/MIN. THEN PUT HNO_3 THRU THE FILTER TO THE P.E. AND HEATED — THEN JETTED OUT TO CHG. HEAD TO A16 AND FOLLOWED WITH H_2O. IT IS READY FOR ANOTHER RATE CHECK.
3. CONTD. FILLING SULFUR CANS AT 3032.
4. WASHED DOWN THE COTTRELL PRECIPITATOR AND RAISED THE POWER TO 60 KV.
5. KEPT A CHECK ON THE STEAM TURBINE WHICH HAS BEEN OK ALL SHIFT.
6. STARTED PUMPING FROM W5 TO W8 AT 12:20 A.M. W5 LL. AT START WAS 11' W8 LL - 5' 9 1/2". TOOK A Ph OF W8 HOURLY AND SPARGED W5 AND W8 ALL SHIFT.
7. THE PICKUP TRUCK HAS TO BE PUSHED BEFORE IT WILL START.

8. BROUGHT A SULFUR CAN TO 3032 FROM THE PILE AND TURNED ON THE MELTER VARIAC.
9. CONTD. WITH THE I 131 DISSOLVING. ADDED 3.0 LITERS OF H_2O TO THE DISSOLVER THIS SHIFT TO DILUTE THE SPGR IS 1.99 AND THE DISSOLVER LL IS 92%. ~ 65 LITERS.
10. WC17 TANK WAS FULL WITH THE FLOAT GAUGE HUNG AT ~ 525 GALS. THE U BOLTS WERE LOOSE AND ALLOWED THE FLOAT ROD TO SLIP THRU. THEM.

11-1-55 1. PUT A NEW U bolt ON WC-17 FLOAT.
8-4 2. GARAGE PUT A NEW battery IN PICKUP TRUCK.
BAILEY 3. CONTINUED PUMPING FROM W5 to W8 & CHECKING P.H. hourly.
4. SPARGED W7 & CHECKED P.H. WAS 3. Added NAOH to bring P.H. up to 7 or 8.
5. P^{32} EI COOLS AT 9:30 P.M. EII AT 11:00 P.M.
6. FILLING SULPHUR CANS AT 2032 bldg.
7. Replaced board WALK AROUND MI TANK.
8. BACKWASHED P.E. CONE to Ch. head AND RAN SEVERAL FILTER RATE test.
9. Removed HNO_3 FROM P.E. AND PUT NEW hot HNO_3 AND LEFT SOAKING.
10. FINISHED SAND BLASTING FAN. Ready to PAINT to-morrow MORNING.
11. Left CONE ON MANIPULATOR ARM. It reads up to 10R At 2 Feet.

11/1/55 1- Shut down the F.I. still at 7:00 P.M. the
4-12 Activity was only dropping one div. every
R.L.N. 15 min. on the 2 scale, still sample read 200MR.
2- Increased the water flow through the oil cooler on the steam turbine. The oil press had dropped to 3#.
3- Continued pumping from W-5 to W-8. Checking PH of W-8 on the hour.
4- Continued checking the Diss. behind 3036 Bldg. Tatum would like to have the steam shut off when three of the coils are visible.
5- Took up extracts from E-1 & 2 and started boiling down. Continued filling sulphur cans.

11-2-55 1. Finished boiling down the P^{32} extracts in EV1.
12-8 E1 had 1755 mcs E2 had 2849 mcs
Blevins. 2. Contd. filling sulfur cans at 2032 bldg.
3. Contd. pumping from W5 to W8 and checking the Ph of W8 hourly.
4. Contd. with the u. dissolving at 3036. Only one coil is visible so far.
5. The Cottrell kicked out twice this shift and is operating at 57 K.V. at present.
6. The water level in WC2 pump pit is high enough to cause the sump pump to work but hasn't.

11-2-55 1. Had a New FAN belt installed on Pickup.
8-4 2. Repaired 3500 M.H. Sampler.
Bailey 3. Removed WC-2 sump pump and installed a new switch. Reinstalled it. Seems to be operating OK Now.
4. Continued pumping from W5 to W8 Checked P.H. hourly.
5. P^{32} EI & EII extractions to take up γ ppt. in Carrier Free Cell.
6. P^{32} product ready to start through Glassware.
7. Removed Sand used in cleaning FAN to burial Ground.
8. Painters put several Coats of Paint on 75HP. blower. Two more Coats to Go.

11/2/55 1. Continued With U Dissolving behind Bldg.
4-12 3036. Adding HNO_3 as Needed.
R.L.N. 2. Was unable to Jet from W-13 on 15 to 3515 Bldg. there may not be enough steam Press. however the W-1 Sump Jet Works OK
3. P^{32} Run is filtering from S-2 to Ev # 2 Just about ready for the first Water Wash. Took up Extracts from E-1 & 2 to the C.F. Side. Precipitated and filtered. S-1 has been Regenerated and is boiling down in Ev # 1. Had Inst's Replace a couple of tubes in the Electrometer Inst. last the house vac. on both the Hood and Lab Table. Tapped on the header lines with a hammer and

they opened up ok. One of the bolts on E-1 Extraction was stripped. Replaced with a new bolt but a washer had to be used under it.

4-Continued Pumping W-5 to W-8. Checking PH on the hour. W-8 L.L. @ 11:00 P.M. 9'7"

5-Checked the big steam turbine several times. Seems to be ok.

11-3-55 1. Contd. Pumping from W5 to W8 and Ph-ing W8 once/Hr.

12-8 2. Contd. With the u. Dissolving at 3036. Added

Blevins. HNO_3 as needed.

3. P^{32} Product is boiling down in EV3 with H_2O filtering thru. S3. S3 Head Tank Read 16 on R2. S2 has been regenerated.

4. The lower Brown Telemetering Inst. at the Evaporator has a stuck motor and the Inst. man didn't have time to change it.

5. Contd. checking the steam turbine.

11-3-55 1. Repaired extension handle to steam value to

8-4 jet at W-13 tank.

Bailey 2. Repaired Lower Brown instrument at evaporator.

3. Transferred 520 Gal. from W13 to W19. Transferred remainder of W13 contents to W15 making a total volume in W15 of 4'8" or 1960 Gal.

4. P^{32} product 4065 mc. S.T.

5. M-H. 3500 pump no good. Will replace tomorrow.

6. 75 H.P. Electric Blower is painted and ready for service in case of emergency, however there is too much oil in the bearings & also paint needs to dry until to-morrow morning.
7. P^{32} pickup run boiling down in EVI. 1st H_2O wash has been added.

11/3/55 1. P^{32} Pick up Run is filtering through S-2
4-12 to Ev. # 2, first water wash was added
R.L.N. 2. The pump in the Tile Pit behind 3503 is out of order. It will only run 2-3 min. and kick off.
3. Continued with Tank Farm and Patrol. Has the light switch for the lights around the stills in 3028 been changed? Was unable to turn them on at the switch box.
4. Shut down the pump from W-5 to W-8
W-8 L.L. 11'6" W-5 6'4"
5. Turned the heat lamps on at the manholes. also 3026-D Bldg.

11-4-55 1. The flood light on pole #151 at the WC tanks
12-8 South of Bldg. 3587 is burned out.
Blevins. 2. Washed down the Cottrell precipitator.
3. The tile sump pump south of 3503 now runs continously. The switch is in the off position
4. P^{32} product is evaporating down in EV3. The H_2O wash is in EV3 also. Regenerated S1 and S2. S3 head tank read 2 on R2 scale.

11-4-55 1. Sent big truck to garage for safety
8-4 lane inspection. Also gased it up.
Bailey 2. Gased up pickup truck.
3. P32 pickup run 180 mc. S.T.
4. Cleaned up oil around big steam turbine.
5. Put new oiler on big steam turbine.
6. Started up 75 H.P electric blower, and closed down big steam turbine.
7. Ran the two small steam driven turbines 4 hours.
8. Cleaned air masks used at stack area with alcohol.
9. Repaired sump pump in pit south of 3503.
10. Hosed out shipping cone. It reads 6R at 2 feet. Cone is still on manipulator arm.
11. Sampled

M.H.	-25	-313	c.m.
"	149	-24	"
"	190	-86	"
"	139	-3	"
"	22	-190	"
ODB		-178	"

12. M.H. 3500 still out of service. Millwrights changing pump at shift change.
13. Sampled WC5 & WC6 and delivered to bldg. 3508.

11/4/55 1- Took hot off gas velometer readings.
4-12 2. Sampled M.H. # 22 = 178 # 25 = 122 O.D.B. = 83
R.L.N. C/H/W/I.
3. Hosed out the loading cubicle using hot water. very little change in radiation readings.

4. Took a D-2 Iso. Carrier to the Pile for the K_2CO_3 sample to be put into. The D-3 Carrier for the Na was already there. these samples will be from the X Pile this week.
5. Changed the HNO_3 on the Process filters and Emptyed all Cell A-Tanks.
6. Shut off Water in Room #2 Bldg 3508 that was running into WC-5.
7. The heat lamps are on at the manholes. M.H. # 3500 is back in service

11-7-55 1. Drained off gas Cell vent. Filter boxes.
12-8 2. Blew the old I^{131} off gas pot North 3026c bldg.
Bailey 3. Brought down 1 Na_2CO_3 & one K_2CO_3 sample & left on truck by 3029 bldg.
4. Brought down pile units to 3038 bldg. & slugs to I^{131} Cell.
5. Continued tank farm & patrol duties.

11/7/55 1- Pipefitters Started Cleaning out the vacuum
8-4 lines in Bldg. 3032. this Job is Complete.
R.L.N. 2- Lagoon Readings #1 = 11 turns back to 1 #2 8.55' #3 = 10.82'.
3- Brought Gloves & Shoe Covers in to Bldg. 3036.
4- Loaded 20 F.I. and Started Dissolving Readings on the hour.
5- Started the big Steam turbine and it is to Run til the Painters have finished Painting the 3026-D & C building blower

housing and Impellers. They are NOW
Sand blasting.
6- Took the Pick-up truck to the Garage
for repair

11-7-55 1. CONTD. ADDING NaOH TO THE U DISSOLVER AT 3036
4-12 BLDG.
BLEVINS. 2. CLEANED AND REPLACED THE CHECK VALVE AT MH
#149. SAMPLER.
3. CONTD. WITH THE I^{131} DISSOLVING HOURLY CHECKS
ADDED 5 LITERS OF H_2O TO THE DISSOLVER THIS SHIFT
TO LOWER THE SP GR.
4. KEPT A CHECK ON THE STEAM, CELL VENT. TURBINE.
TO THE 3026 AREA.

11-8-55 1. No heat in operating area at I^{131} Cell.
12-8 2. Took hourly readings on slug dissolving at I^{131} Cell.
Bailey 3. Brought down sulphur can from Pike to 3032 bldg.
4. Turned on Variac to sulphur melter at 3032.
5. Continued U dissolving at 3036 bldg.
6. Washed down Cottrell ~~precipitator~~ precipitator.
7. Continued tank farm & patrol duties.

11/8/55 1- P32 E-1 extract cools at 9:30 P.M. E-2 at 11:00
8-4 2. Painters continued sand blasting the 125 H.P.
R.L.N. Fan housing and Impellers.
3 Changed the tubing on M.H. # 149 sampler
also changed the oil in the gear box under
the fingers.
4- Spanged the water in the Pond Pit

behind Bldg 3503. The Pump Will Pump but it seems to be slow. the Grass needs to be removed from the Sump When the Water level is lower.

5 Removed the Process Filter # 1 from the Cubicle to Dec. Room to have the gaskets and packing Replaced.

6. Started Pumping W-8 to Lagoon # 3. Checking PH and Sampleing on the hour. W-8 Lt. at Start 11'6" Lagoon # 3 10.8'.

11-8-55 1. TOOK THE JEEP TO THE PILE BLDG. FOR THAT DEPARTMENT'S
4-12 USE OVERNIGHT.

BLEVINS 2. TOOK A 3P CARRIER TO THE X, PILE FOR THE Na. SAMPLE TO BE LOADED INTO AT 7:30 AM. FOR BLDG. 3029. THE SAMPLE NO. IS 1161-72.

3. CONTD. PUMPING FROM W8 TO LAGOON # 3 AND SAMPLING FOR THE COMPOSITE AND PH HOURLY.

4. TOOK UP P^{32} EXTRACTIONS FROM E1 AND E2 THESE ARE EVAPORATING DOWN IN EV1. STARTED NEW EXTRACTIONS IN BOTH E1 AND E2. E2 NEEDS TO BE CHECKED FOR LEAKS AT 12:01 AM. E1 HAD - 2,631 mcs

5. CONTD. CHECKING THE U. DISSOLVING AT 3036, WHICH IS BEING REDUCED IN VOLUME. NOTHING IS TO BE ADDED TO THE DISSOLVER.

11-9-55 1. Finished boiling down P^{32} extracts & cut
12-8 off heater.
Bailey 2. E2 extract 2860 m.c. Total from both 5491 m.c.
3. Continued pumping from W8 to Lagoon 3. Sampled & P.H. hourly.
4. Inst. man set sensitivity on recorder to Coobs Furnace Rm 24A bldg. 2000. Seems to still need further adjustment.
5. Brought down sample from pile bldg. and left on truck at 3029 bldg.
6. Continued dissolving back of 3036 bldg.
7. Continued tank farm & patrol duties.

11/9/55 1. The painters are painting the doors
8-4 under the P^{32} Hood, Lab Table, and sink
R.L.N. and it will not be dry by 4:00 P.M.
2. Painters finished sand blasting the 3026 Hood & Cell Vent. Blower Housing and Impellers the first coat of paint is on. The Air line mask and hose has been cleaned and stored.
3. P^{32} Run is in EV #1 second water wash is boiling down. ~~[illegible]~~
4. Continued pumping from W-8 to Lagoon #3 sampling and checking PH hourly.
5. Cleaned out the grass from the pump pit behind Bldg. 3803.
6. The Big Truck is in the Garage for brake linings and front wheel bushings. The Jeep is also in the Garage for repair of radiator

11-9-55 1. P^{32} — PRODUCT IS EVAPORATING DOWN IN EV2. BOTH
4-12 H_2O WASHES HAVE BEEN ADDED TO S2. S1 HAS
BLEVINS BEEN REGENERATED. P1 DRY READ 4.5 ON R1 SCALE
2. TOOK UP EXTRACTIONS FROM E1 + E2 AND TRANSFERED TO THE C.F. HOOD AND PPted IN THE La. PRECIPITATOR. STARTED NEW EXTRACTIONS.
3. THE W8 TO LAGOON #3 PUMP QUIT AND THE PRIME H_2O WAS TURNED ON TO THE PUMP AT 11:00 PM. W8 LL - 5'9.5". SUBMITTED THE COMP. SAMPLE W8 TO LAGOON #3 — #15 TO THE LAB. WITH THE NEW REQUEST FORM X495.
4. HAD THE MASK AIR HOSE SMEARED - OK. THEN WRAPPED IT IN PAPER AND STORED ON TOP OF THE CABINET ON 3RD LEVEL OF 3026-D.

11-10-55 1. Checked Line From W8 to LAGOON 3 At 12:15 A.m. it WAS Clear.
12-8 Shut down pump At 12:25 A.m.
BAILEY 2. Regenerated SII And Continued to boil down WASTE in EVI.
3. Took up P^{32} product And delivered to PACKING. Reading on head tank 12.5 X R^2.
4. LAGOON 2 reading 8.46 LAGOON 3-11.46. Opened overflow Valve From LAGOON 3 to 2.
5. Continued tank Farm + patrol duties.

11/10/55 1. INST'S Replaced the L.L. Manometer for
8-4 M-10 TANK.
R.L.N. 2. Painters finished the Paint Job ON 3026-D & C Fan housing and Impellers. the Steam turbine is still [redacted] Operating.

3- Both the Big Truck and the Jeep are in the Garage.
4. Pipefitter Repacked the Valves on both Process Filters and the Manifold Valves also Installed New Gaskets. these have a 25# Press. test over Night using Water.
5- P^{32} Pick up Run: first Water Wash is boiling down in EV# 1. The first Run had ~ 2100 MC'S S.T.
6- Lagoon # 3 is Still overflowing into Lagoon # 2.

11-10-55 1. FOUND H_2O RUNNING INTO THE HOT SINK IN THE NORTH
4-12 END OF BLDG. 3020 AND FILLING WCI.
BLEVINS. 2. THE PULLEY SHAFT TO MH #3500 GEAR REDUCER IS SHEARED OFF. MOTOR IS UNPLUGGED.
3. P^{32} — PRODUCT IS EVAPORATING DOWN IN EV2. P1 DRY READ 2.5 ON R1. THE FILTER ON TOP OF S1 WAS ALMOST COMPLETELY PLUGGED AND WOULD ONLY LET THE SOLUTION DRIP THRU. WHEN TRANS-FERING FROM EV1 TO S1. REGENERATED S1.
4. W. PHILLIPS WOULD LIKE C1 AGITATOR AND THE BLDG. H_2O SUPPLY TO BE CUT OFF AT 1:00AM AT EVER GREEN BLDG.

11-11-55 1. Washed down Cottrell precipitator.
12-8 2. Changed Gear box on M.H. 3500. It is
Bailey back in service. Gear box with sheared shaft is in battery room.

3. Cut off C-1 [illegible] & H_2O valve at 3615 bldg.
4. P^{32} pickup run boiling down in EV III. H_2O wash has been added. Reading on head tank 7 X R^2.
5. One of Coobs furnaces cooled down between 3 & 6 Am. Electrican & inst. man were unable to locate trouble.
6. Continued tank farm & patrol duties.
7. Lagoon 3 still overflowing.

11/11/55 8-4 R.L.N.
1. Millwrights finished with the 125 H.P. fan also checked the south bearing, drained the oil from the oil mist lubricator and added new oil. Checked the West bearing on the Hot off gas steam turbine.
2. Ran both small steam turbines 5 hours.
3. Sampled MC-5 & MC-6 for Leuze.
4. P^{32} pick up run had 904 MC's S.T.
5. Took a R.P. spec. sample at 1:00 P.M. 219 C/M/ml. Sampled North Tank Farm R.P. line at 2:15 P.M. 341 C/M/ml.
6. Lagoon # 3 is still overflowing.
7. Replaced the plugs and ext. rods in P.F. cabicle. Removed the lead from the blow tank drain valve and tightened the packing.

11-11-55 4-12 Blevins.
1. Took the I^{131} product up in 450 ml. Delivered to packing and sampled for the lab. The samples read 3600 mr/hr each. Had to put the I^{131} bottle behind the barricade with tongs as the crane was locked

OUT AT THE SWITCH. BOTTLE READ 10 R/HR AT ~ 2.5'.

2. SAMPLED THE SOUTH TANK FARM DRY WELLS.

W5 —	2.0	C/m/mL	W9 —	0	C/m/mL
W6 —	0	"	W10 —	33	"
W7 —	0	"	W16, 17 & 18 STACK —	0	"
W8 —	2,244	"	W16, 17 & 18 FLOW INTO W9 DW. —	6	C/m/mL.

3. TOOK VELOMETER READINGS AT VARIOUS OFF GAS LINES.
4. HOSED THE SAND FROM THE STACK AREA PAD.
5. MH #3500 SAMPLER IS DOWN FOR REPAIRS.
6. FILLED TWO LIQUID N_2 CANS AT THE PILE BLDG. AND PUT IN RM 15 BLDG. 3550 FOR BROWNING'S PATROL JOB.
7. CUT OFF THE WATER TO THE NASH HYTOR VACUUM PUMP WHICH IS SHUT DOWN IN BLDG. 3034.
8. FOUND H_2O RUNNING INTO A HOT SINK AND ON TO WC7 IN 3504 BLDG.
9. MADE FILTER RATE TESTS ON PF1 — 3.8 GPM AND PF2 — 4.0 GPM.
10. CUT OFF THE STEAM TO THE W. DISSOLVER AT BLDG. 3036.

11/14/55 1. Drained both filter boxes at the Stack.
12:8 2. Placed lead shot around the ext. Radios
R.L.N. for the Process Filters.
3. Brought Down two K_2CO_3 and one H_2 samples from L.I.T.R. to Bldg. 3029.
4. Continued With Tank Farm and Patrol.
5. Brought Down the Pile units and left on the Metal Rec. Track. also brought down the F.I. slugs.

11-14-55 1. LEADBURNERS REPLACED THE LEAD SHIELD AROUND THE BLOW
8-4 TANK TO P.F. VALVE.
BLEVINS. 2. I^{131} — 20 SLUGS WERE LOADED INTO A1 DISSOLVER WHERE THE JACKETS WERE REMOVED AND DISSOLVING STARTED. READINGS ARE ON THE HOUR.
3. TOOK LAGOON L.L. READINGS #1. — 11 TURNS AND BACK 1 #2 — 9.02' #3 — 11.11'.
4. MAINT. REPAIRED THE H_2O HEADER VALVE, WHICH HAD A BROKEN STEM, AT THE WC TANKS SOUTH OF 3587 BLDG.
5. THE BIG TRUCK HAS BEEN REPAIRED BUT IS STILL AT THE GARAGE.
6. MH# 3500 GEAR REDUCER TO THE SAMPLER WAS REPLACED AND IS IN OPERATION.

11-14-55 1. Brought big truck back from GARAGE.
4-12 2. Checked level in WC1. L.L. went up .8" from 4:30 p.m.
Bailey to 11:00 p.m. Lab dumped some hot samples and hosed down sink.
3. Took hourly readings on slug dissolving at I^{131} Cell.
4. Checked U dissolving for Tatum back of 3036. No acid to add. Just drain off gas pot and add back to dissolver.
5. Continued tank farm & patrol duties.

11/15/55 1- Brought down a S. can and turned on
12-8 the melter.
R.L.N. 2. Washed down the Cottrell Precipitator.
3- Continued with F.I. Dissolving.
4- Pulled the Plugs out of C.F. 1 & 2 Radiation Readings 2 R/HR C.F. #1 at the top of

Cubicle 10 R/HR 6" from the Filter. Leaks around the Inlet Valve Packing and a very slight leak around the backwash Valve Packing. No leaks were Noticed around C.F. # 2. Radiation Reading 75 HR top of Cubicle 5. Continued with Tank Farm and Patrol.

11-15-55 1. SENT THE PICKUP TRUCK TO THE GARAGE WHERE THEY
8-4 REPLACED THE BUTTERFLY INTO THE CARBURETOR.
BLEVINS. 2. INSTS. INSTALLED NEW CHARTS ON THE TWO TELEMETERING INSTS. AT THE EVAPORATOR AND THE WET AND DRY BULB CHART AT THE STACK AREA.
3. A SIGN PAINTER HAS STARTED RE LETTERING TAGS AT #200 CUBICLE IN 3026D, WC TANKS SOUTH OF 3602 AND THE GAUGE BOARDS AT THE TANK FARM.
4. RAN THE STEAM OFF GAS TURBINE FOR 5 hrs TODAY.
5. MAINT. CLEANED OUT THE OIL MIST LUBRICATOR TO THE OFF GAS TURBINE BEARINGS. THE STRAINER WAS ALMOST COMPLETELY BLOCKED.
6. P^{32} E1 EXTRACTION COOLS AT 10:00PM—E2 COOLS AT 11:30 PM.
7. PUT ~20% HNO_3 ON CF1 AND LET IT SOAK FOR $4\frac{1}{2}$ hrs. THEN CHANGED THE SOLUTION BY LETTING IT SIPHON FROM A11 TO THE FILTER. 1100 mr/hr TOP OF CUB. >10 R AT 6" OF FILTER.
8. SOME FELLOW PUT ~500 GALS. OF WATER INTO WC15 FROM A HOT SINK AT SEMI-WORKS.
9. 3029 WASHED DOWN THEIR Co CELL THIS P.M. INTO WC1.

11-15-55 1. Cottrell kicked off twice this shift. Cutback to
4-12 58 K.V.
Bailey 2. Changed Acid solution on C.F. 1 and left
Soaking over shift change. Reading at top 1R.
2" or 3" from filter 10R.
3. Took up extraction on E1 and started boiling
down in EVI. Started reextraction.
4. E1 extraction had 2741 mc.
5. Started EII cooling at 11:30 p.m.
6. Continued tank farm & patrol duties.

11/16/55 1. Took up Extract from E-2 and boiled
12-8 down in Ev #1. E-2 Results Mass 2940 MC.S.T.
R.L.N. 2. Continued with Tank Farm and Patrol
3. Continued with C.F. #1 Decon. using HNO_3,
versene, and caustic but very little success.
Reading over the top ~1 R/HR, at the filter
10R @ 2" there is a rattling noise in the
filter while filtering to A-17 sounds like
one of the stars is broken. Ran a rate check
that gave 4.66 gal/min.

11-16-55 1. THERE WAS A POWER FAILURE OF ~ 7 MINS. DURATION
8-4 THIS AFTER NOON DURING A SHUT DOWN OF THE STEAM
BLEVINS. OFF GAS TURBINE FOR REPLACEMENT OF BEARINGS
SO THERE WASN'T ANY OFF GAS EXCEPT FOR THE
A4 EMERGENCY SYSTEM WHICH WAS PUT INTO
OPERATION. DURING THIS FAILURE THE 4500 AREA
CELL VENT. AND THE BIG STEAM TURBINE FOR BOTH
3026 AND ISOTOPE AREA CELL VENT. WERE OPERATED.

2. TOOK A VELOMETER READING OF THE A4 EMERGENCY OFF GAS SYSTEM WHICH WAS 120 C.F.M.
3. PAINTERS PAINTED THE BARE SPOTS ON THE CELL VENT DUCTS AND THE EXTENSION HANDLES TO THE LOUVERS EXCEPT THE HANDLE TO THE BIG STEAM TURBINE DUCT.
4. RAN THE BIG STEAM TURBINE FOR 4 hrs AND THE 4500 AREA STEAM TURBINE ~ $2\frac{1}{2}$ hrs TODAY.
5. 3029 WASHED THEIR Co^{60} CELL DOWN AND SENT H_2O TO WC1
6. P^{32} PRODUCT IS IN EV1 AND IS READY FOR THE SECOND H_2O WASH.
7. PUT HOT 60% HNO_3 ON CF1 AND CF2 AND LEFT TO SOAK MOST OF THE DAY. CF1 IS M.T. AND READS 540 mr/hr AT THE TOP OF THE CUBICLE CF2 HAS 60% HNO_3 ON IT.
8. PAINTER CONTD. RETOUCHING THE L.L. MARKS ON THE TANK FARM L.L. GAUGE BOARDS.

11-16-55 1. PULLED PLUG ON C.F. 2. HIGHTEST READING WAS 1R ON C.F. 2.
4-12 2. PUT 60 HNO_3 IN ALL HEATED IT UP & PUT ON C.F. 1.
BAILEY LET IT SOAK ABOUT 3 HOURS AND CHANGED IT. READING DIDN'T SEEM TO CHANGE. HNO_3 ON C.F. I AT SHIFT CHANGE.
3. MILLWRIGHTS FINISHED WORK ON STEAM TURBINE. STARTED IT UP AND RAN IT A FEW MINUTES. SEEMED OK. CLOSED IT DOWN & LEFT ON AUTOMATIC. CLEANED UP STACK AREA.
4. TOOK UP EXTRACTIONS ON EI & EII AND STARTED BOILING DOWN IN EVI. STARTED RXTRACTS.
5. P^{32} PRODUCT BOILING DOWN IN EVII. READING ON PI DRY WAS 8 X R'. AFTER PRODUCT REMOVAL READING WAS 45 X R'.

6. Regenerated SI and boiling down waste in EVI.
7. Checked Tatum's ✓ dissolving back 3036 bldg. did not add any HNO_3 this shift.
8. Continued tank farm & patrol.
9. First H_2O wash has been added to EVII.
10. Cut off H_2O running into hot sink in bldg. 3030.

11/17/55 1. The Cottrell precipitator kicked out a
12-8 couple of times and would only operate
R.L.N. at 90 KV. Washed it down and it is now operating at 50 KV this was maximum.
2. Changed the acid on CF #1 a couple of times but not much change in radiation readings. 500 MR at the top, 10 R/HR at the filter.
3. Continued with U- Dissolving behind Bldg. 3036.
4. P^{32} Run is just about ready to take out of EV. #3. S-3 head tank read 2 x R' scale S-2 has not been regenerated. The Brown Inst. for the extraction temp. recordings uses 10 min. of the chart every 4 min.
5. Drained the old F.I. Off Gas Pot as it had not been drained Monday.

11-17-55. 1. RAN THE OFF GAS STEAM TURBINE FOR 4 hrs. TODAY. THERE
8-4 IS STILL YET AS MUCH VIBRATION AS THERE WAS
BLEVINS. BEFORE THE BEARINGS WERE CHANGED.
2. SAMPLED THE OLD D. BOX – 84 c/m/mL AND MH #22 –

WHICH HAD 107 c/m/mL.

3. SAMPLED THE RETENTION POND FLOW FROM THE NORTH TANK FARM – 327 c/m/mL AND W8 DRYWELL – 4,841 c/m/mL.

4. MAINT. REPACKED THE VALVES TO CF#2 AND REPLACED WITH NEW GASKETS. THERE IS A LEAK TEST ON CF2 WITH 82# OF H_2O PRESSURE. CF1 STILL HAS HNO_3 ON IT.

5. REMOVED THE PLUG FROM ATOP THE C.F. MANIFOLD VALVES AND AFTER WASHING THE MANIFOLD CUB. WITH H_2O THE RADIATION DROPPED FROM 4.0 R/Hr TO 375 mr/hr AT THE VALVES AND IT READS 65 mr/hr AT THE TOP OF THE CUBICLE OVER THE MANIFOLD VALVES.

6. P^{32} PRODUCT IS BOILING DOWN IN EV1 – NO H_2O WASH HAS BEEN ADDED. THE 1ST RUN HAD ~ 3100 MCS. INSTS. WORKED ON THE P^{32} TEMP. CHART TO SLOW IT DOWN.

7. CLOSED THE 706D-A16 OFF GAS SLIDE VALVE AND BLEW THE POT SEVERAL TIMES BUT THE A16 MANOMETER IN 3026-D ONLY SHOWS 28" TOP AND 28" BOTTOM.

8. MADE A VACUUM CHECK ON THE ISOTOPE AREA CELL VENTILATION WHICH GAVE ~ 8" H_2O VAC.

11-17-55 4-12 BAILEY

1. SAMPLED M.H. 22 4:30 P.M. 333 CM/ML. SAMPLED SOLUTION INSIDE TILE WHERE LINE FROM TRANSFER PUMP ENTERS W8 – 91 CM/ML. NO SOLUTION IN PIT BESIDE W8 FLOAT.

2. CONTINUED TATUM'S UDISSOLVING BACK 3036 BLDG. Added HNO_3 AND BOTTLE OF M. NITRATE

3. SAMPLED M.H. 22 AGAIN AT 8:15 P.M. 416 CM/ML. M.H. 3500 – 103 CM/ML. 190 – 5 CM/ML. ODB – 34 CM/ML

4. Checked C.F. 2. No leaks detected.
5. P^{32} pickup run boiling down in EV II. First H_2O wash is on column. Reading on PI 3X R' 8X R^3 after product removal. SI has Not been regenerated.
6. Continued tank farm & patrol duties.

11/18/55 1- Had the Water Shut off of 2N Aspiraton
12-8 at the L.I.T.R. Which they had forgot to
R.L.H. turn off after using. it was filling W-1 Tank.
2- Sampled M.H. #22 = 287 O.D.B. = 31 3500 = 11
WC-5 Pump Pit = 4828 c/m/ml. directed the flow from the Pit to WC-9 Tank.
3. Continued Checking Dissolving behind Bldg 3036.
4- Washed down the Cottrell Precipitator.
5. Took the Water Press. off of C.F. #2, No leaks was noticed. Ran several Shots of $KMNO_4$ soln. through C.F. #1 and followed With Oxalic Acid. No Change in Radiation Readings.
6. P^{32} Pick up Run is boiling down in Ev. #3 S-1 and S-2 has been Regenerated. Reading on S-3 head Tank was 6X R^2 Scale.

11-18-55. 1. MAINT. REPAIRED THE LEAKING STEAM HEADER TO TRAP
8-4 VALVE AT THE EAST SIDE OF THE EVAP. BLDG.
R.B. 2. MADE A WATER PRESSURE TEST ON THE C.F. MANI-
-FOLD VALVES AND THE ONLY LEAK WAS AT THE CF TO
A17 VALVE PACKING.
3. THE P^{32} PICKUP RUN HAD 997 MCS.
4. SAMPLED MANHOLES #25 — 37 c/m/ml

OLD DB — 27 c/m/mL #117 — 12 c/m/mL
#190 — 0 .. #210 — 1 ..
186 — 452 .. #3500 — 3 ..

5. SAMPLED WC5 AND WC6 FOR LEUZE.
6. GASSED UP BOTH TRUCKS.
7. 3029 SENT H_2O TO WC1 VIA A HOT SINK.
8. 3019 SENT H_2O TO W1 DURING DECONTAMINATION.
9. SAMPLED MH #186 N AT 3:30 PM.
10. CF1. HAS 60% HNO_3 ON IT SOAKING. ALL HAS 60% HNO_3
12. THE RADIATOR TO THE BIG TRUCK IS LEAKING. AND CAN'T BE REPAIRED UNTIL MON. COULD GO DRY OVER THE WEEK END.

11-18-55 1. PATROL FOR WEEK END. CHECK RM. C-33 BLDG. 4500.
4-12 IF there should be A STEAM OR POWER FAILURE
BAILEY NOTIFY MR. BRUCE KETELLE OAK RIDGE PHONE 5-5272.
2. SAMPLE RESULTS ON M.H. 186 SAMPLE TAKEN AT 3:30 P.M. 2787 C.M./ML.
3. SAMPLED M.H. 186 AT 6:00 P.M. 822 C.M./ML.
4. CHANGED ACID ON C.F.I AND PUT NEW ACID ON. READING ON FILTER empty 5.1R FULL 5.6R.
5. TOOK OFF GAS READINGS AT STACK AREA.
6. SAMPLED M.H. 186 AT 10:30 P.M. 3971 C.M./ML.
ALSO SAMPLED PIT SOUTH W19 — 142 C.M./ML.
7. CONTINUED TANK FARM & PATROL duties.

11-21-55 1. DRAINED THE OFF GAS AND 3026 CELL VENT. FILTER BOXES.
12-8 2. ONE Na_2CO_3 AND ONE K_2CO_3 SAMPLES WERE BROUGHT
ELEVINS. TO 3030 BLDG. FROM THE LFTR. THESE ARE ON THE TRUCK WHICH IS PARKED IN FRONT OF THE BLDG.

3. THE LIGHT BULB INSIDE THE COTTRELL FENCE AND THE BULB TO THE COTTRELL GATE INTERLOCK ARE BOTH BURNED OUT.
4. PUT HOT 60% HNO_3 ON CF #1. THE FILTER READS > 10 R/Hr AT THE SIDE 540 mr AT CONTACT AT THE FILTER TOP AND 310 mr/hr AT CUB. TOP.
5. BLOWED THE OLD I^{131} OFF GAS POT.
6. WASHED DOWN THE COTTRELL PRECIPITATOR AFTER IT CONTD. TO KICK OUT AT 37 K.V.
7. STARTED PUMPING FROM W5 (LL- 10'10") TO W8 (LL 5'10") AT 12:10AM W8 IS SPARGING.
   TOOK A Ph OF W8 HOURLY. NO VISIBLE LEAK INTO THE TILE FROM THE W8 LINE.
8. BROUGHT PILE UNITS TO 3038 FROM THE PILE.
9. I^{131} — LOADED 30 SLUGS INTO B. DISSOLVER TO WHICH THE VALVE IN THE SLUG SHUTE IS STILL OPEN
   LOADED 4 SLUGS INTO A DISSOLVER. THE SLUG CARRIER OVER A DISS. SHUTE IS MT.
   THE SLUG CARRIER ON THE BIG TRUCK HAS 26 SLUGS IN IT.

11-21-55 1. Replaced light bulb inside Cottrell fence, also
8-4 At interlock Gate.
Bailey 2. Gased up pickup truck.
3. P^{32} Melted out 4 sulphur cans and started extractions. E1 cools at 10:00 P.M. EII cools at 12:00 Midnight.
4. Removed C.F.I to decontamination room and shielded it off so pipefitters can pack valves.

5. Bought 6 heat lamps from stores. Replaced one at M.H. 22 & stored the rest at evaporator.
6. Took lagoon readings. I - 11 turns + 10
II - 8.90
III - 11.18
7. Sent big truck to garage for repair of radiator.
8. Put clean paper around bearing of both off gas turbines.
9. Continued pumping from W5 to W8 and checking P.H. hourly.
10. Loaded 30 slugs to each dissolver at I 1st cell. Removed coats and started dissolving. Readings on the hour.
11. 3019 sent 1400 liters to W5.

11/21/55 1- Drained off gas line for metal Rec. also
4-12 drained the old F.I. Pot.
R.L.N. 2- Took up extract from E-1 and started boiling down in Ev. #1.
3. Started Decon. of the F.I. Cell. The Drain valve from the still to waste has the pin for the universal joint lost. Diluted both Dissolvers with 25 lit. of water and cooled to 50°, Drained the C.D. to still and out to waste, Drained B.S and B.C.C. to waste. flushed C.T. & B.C.C. with water. Reading at the top of cell is 1 R/hr. 2 R/hr 3' inside the cell.

4. Sampled M.H. # 3500 = 29 #22 = 280
O.D.B. = 62 #186 = 1217. H. Phillips is to
shut down their equipment at 12:00 the
3:00 sample on #186 M.H. was 7450 c/m/ml.
5. Continued with Tank Farm and Patrol
6. Continued pumping from W-5 to W-8. Checking
PH at W-8 on the hour.

11-22-55 1. P^{32} — Took up E2 extraction and boiled down in
12-8 EV1 E1 had 3341 mcs E2 had 3669 mcs.
Blevins. Started a new extraction in E2.
2. Contd. pumping from W5 to W8 and taking a
Ph hourly of W8.
3. Sampled manholes at 4:30 AM
#25 — 32 c/m/ml #3500 — 6 c/m/ml
#186 — 2809 " #149 — 3 "
old D.B. 65 "
4. Contd. decontaminating the I^{131} vessels.
The highest reading is near the bottom of
the still 3.0 R/Hr General background
is 2.5 R/Hr The still is mt The SC has
35 liters of H_2O and the CT has H_2O and is
80% full.

11-22-55 1. Ran the large steam driven turbine 4 hours.
8-4 2. Attended safety meeting and safety film
Bailey at safety bldg.
3. Packed valves to C.F.I filter & put
in new gaskets. Placed filter back in
cubicle and put H_2O pressure on it

About 10:30 A.M. Checked several times for leaks. Seems to be OK.
4. Removed cone from manipulator arm, cleaned and repainted markings inside.
5. Continued pumping from W5 to W8 and checking P.H. hourly.
6. Installed another new heat lamp at M.H. 22 and put a metal bonnett over it to prevent condensate from breaking it.
7. P^{32} boiling down in EVI. 2nd H_2O wash has been added.
8. Cleaned up around tanks south of 3605.
9. Sampled M.H. 186 at 12:15 P.M. 66 C.M./M.L.
" " " at 3:00 P.M. — 347 "

11/22/55 1. Checked C.F. #1 filter at 6:30 P.M. No
4-12 leaks noticed around the valves or disconnect
R.L.H. but there was water on the floor in the sump that had backed up to C.F. #1. There is probably a small leak under the valve rack.
2. Continued pumping from W-5 to W-8. Checking PH on the hour.
3. Added a small amount of HNO_3 to the dissolving behind Bldg. 3036. Discarded the condensate from the pot.
4. P32 run is being taken out of Ev. #2 at shift change. S-1 has been regenerated and all the waste is being boiled down in Ev #1 along with the [illegible] from E-1 & 2

5. Finished with the F.I. still, took a sparging cut off of "A" + "B" Dissolvers and started another still. Diluted and cooled the Dissolvers and boiled the first Dist. from the still down to ~10% in the Evap. Was unable to get a sample of the still waste. C.T. Reading on "A" sparging was 40' scale, on "B" 8.5' scale. B.C.C. is NT.

11-23-55 1. Run the 2nd I^{131} still and transfered the D.R.
12-8 Contents to the evaporator and boiled
Blevins. down to 9%. The highest reading on the D.R. was 95 on R1 scale. Couldn't sample the still residue.
2. The lock to the 4500 bldg. O_2 room is broken.
3. Contd. pumping from W5 to W8 and PH ing W8 once an hour
4. P^{32} took up the product in 400 ml delivered to packing and sampled for the lab. The samples read 1.0 R/Hr each. S3 head tand read 2.5 on R1. Regenerated S2. The wastes are boiling down in EV1.

11-23-55 1. P^{32} product 4440 mc./S.T.
8-4 2. Ran the two small steam turbines 4 hours.
Bailey 3. Replaced all gaskets to C.F. manifold valves and replaced plugs to C.F. II & manifold.
4. Put shipping cone in product carrier.

5. Continued pumping from W5 to W8 and checking pump ~~[illegible]~~ and P.H. hourly.
6. Manifold valve All to C.F. leaks at manifold. Small pin hole leak in pipe.
7. P^{32} pickup run.

11/23/55 1. Finished boiling down the F.I. and sampled
4-12 F-1. 10 R/HR @ 1" 2000 ml.
R.L.N. 2. Continued with P^{32} pick up run. It is in P-1 trans. vessel ready to go to S-2 column.
3. Shut down the pump from W-5 to W-8 at 11:00 P.M. W-8 L.L. 11'2". Also shut off the sparger at W-8.
4. Continued with tank farm and patrol.

11-25-55 1. Washed down the Cottrell precipitator.
12-8 2. Contd. pumping the tile south of 3508 with the
Blevins. Whirley pump this shift.
3. P^{32} — The product is boiling down in EV3 the H_2O wash has been put thru. the head tank. The head tank read 5.5 on R2 scale. Regenerated S1. EV2 waste read 40 mr/hr.
4. The big truck is running hot.
5. I^{131} — F1 sample had 36,662 mcs. Ran the product thru. the glass ware. The product is in the sterilizer in 650 ml vol. The highest reading on the dr. was 25 on R2 scale.

11-25-55 1. Replaced plug over C.F.I.
8-4 2. Sent big truck to garage for a check for
Bailey overheating. They seem to think it is ok.
3. Patrol - for weekend continue servicing
Mucken thaler's cold trap Rm-H9.-4500.
4. Patrol - 4501 Martins vacuum tank once
per shift.
5. Room G-1 4500 Pleasonton's cold trap
once per 4-12 shift.
6. Dumped 6 drums of U. waste solution into
W7 from Chem. Tech. division.
7. Started up pump from W5 to W8 and
brought W8 L.L. up to 11'6" and closed down
pump.
8. P^{32} pickup run 880 mC.
9. Pulled sump pump in tile south of 3503
for repairs. It was running at 3:30 but
seems to be kicking out & want run
until switch is thrown. Left Whirly
there in case it is needed over weekend.

11-25-55 1. Replaced the Whirley pump into the tile
4-12 sump back of 3503. The electric pump is
R.L.N. still out of order.
2. Took off gas velometer readings at the
stack area. and behind 3026-C Bldg.
3. Shut off dist. water running into a hot
sink in the Lab. Bldg. 3038.
4. Continued with tank farm and patrol.
5. The L.I.T.R. due to air activity will

be using their aspiration intermitly through tonight. this water will go to N-1 tank.

6- The Cottrell Precipitation kicked out a couple of times this shift it will only operate at 42 K.V.

7- Ran a filter rate check on both crud filters C F #1 5.41 gal/min. ave. C.F #2 4.13 gal/min.

11-28-55 1. Drained filter boxes at stack area.

12-8 2. Drained I^{131} pot ~~out~~ back of 3026c bldg.

Bailey 3. Battery on pickup truck is weak.

4. Brought down 2 samples from L.I.T.R. and left on truck beside 3029 bldg.

5. Top soil has been spread around M.H. 139 and no walk way left to it.

6. Cut off whirly in the south of 3503. Hose was leaking at coupling & spraying H_2O on electric motor.

7. Need box charts for D.B. Bristol recorder 55121.

8. Brought down pile units to shipping room.

9. Brought down 18 slugs for I^{131} & left on truck parked by bldg.

10. Continued tank farm & patrol duties.

11-28-55 1. Lagoon Readings. #1 11 turns back to
8-4 #2 8.85' #3 11.24'
R.L.N. 2. Loaded the F.I. Slugs and started the
Dissolving Readings on the hour.
3. The Whirley Pump is still in the tile
Pit back of 3503 Bldg.
4. Had the Emergency Brake on the Pick
up Truck Replaced.
5 Brought Gloves & Shoe Covers in for Decon.
6. Bought Charts for the D.B. Inst.
7. Checked that all the various Water line
~~points~~ drains on the T.F. & HC. Tanks were
open. also around the Stack area.

11-28-55 1. TOOK HOURLY READINGS ON THE I^{131} DISSOLVING.
4-12 ADDED 3 LITERS OF H_2O TO DISSOLVER AT 8:00PM
BLEVINS. TO LOWER THE SP. GR.
2. CONTD. PUMPING FROM THE TILE PIT SOUTH OF 3503
WITH THE WHIRLEY PUMP.
3. THE OIL MIST LUBRICATOR HAS BEEN OK THIS SHIFT.
4. SLAUGHTER'S HYDROGEN DRIER HAS DEVELOPED A LEAK
WHICH HE THINKS HE SHOULD TAKE CARE OF HIMSELF.
HE IS ON HIS WAY OUT HERE AT SHIFT CHANGE.

11-28-55 1. WASHED DOWN COTTRELL PRECIPITATOR.
12-8 2. SLAUGHTER CAME IN & CHECKED THE HYDROGEN
BAILEY LEAK. UNABLE TO REPAIR IT SO HE CLOSED DOWN
FURNACES & STARTED PURGING WITH HELIUM.
3. TOOK HOURLY READINGS ON ~~I131~~ SLUG

dissolving At I^{131} cell.
4. Brought down sulphur can to 3032.
5. Turned on valve to sulphur melter.
6. S.B. Sampler seemed to freeze up. was working At 7:30 Am.
7. Whitey pump At the South 3503 is off. H_2O was About 3' below Motor.
8. Continued tank Farm & patrol duties.

11/29/55 1- D32 Extractors Cools. E-1 at 9:30 P.M.
8-4 E-2 at 11:00 P.M.
R.L.N. 2- Kill Knights Repacked the Bearings on the Steam Driven Hot off gas turbine. the Oil Mist Lubricator has been disconnected.
3- Pipefitter unplugged the drain line from the sink on 3rd level of 3026-D Bldg. the Mercury that was removed from the trap was delivered to bldg. 3032.
4- The Electric Pump is back in operation in the tile Pit behind Bldg. 3503.
5- Had Water shut off in a cell in Bldg. 3025 that Has filling HC-3 Tank.
6- Pipefitter thawed out the discharge line for the Pump in the Pit behind Bldg. 3026-C.
7. The drain line from the Cottrell Wash down tank is closed. trying to locate the small leak into HC-1 Tank.

~ 4:45 PM

11-29-55 1. 3019 SAID THEY SENT 122 LITERS (49.7 GALS) WE RECD.
4-12 2" INTO W13 WHICH IS 90 GALS. ALSO AT 7:00PM THE LL.
BLEVINS. OF W15 WAS 4'10½" (2035 GALS) WHICH WAS AN INCREASE OVER
THE 3:00PM INVENTORY WHICH SHOWED 4'9" OR 2000 GALS.
THE VALVE TO W15 AT VC #2 WAS CLOSED DURING THE
JETTING. AT VC2 THE RADIATION WENT FROM 0 TO 100 mr/hr WHILE JETTING
2. METAL RECOVERY SENT 200 GALS. OF NaOH TO W5 TO
BRING THE Ph FROM 5 TO 11.
3. THE SUMP PUMP, IN THE TILE AT WC TANKS SOUTH OF
BLDG. 3503 RUNS CONTINOUSLY. PUT THE SWITCH
IN THE OFF POSITION AT 10:40 P.M.
4. P^{32} TOOK UP EXTRACTIONS FROM E1 + E2 AND
THESE ARE BOILING DOWN IN EV1. STARTED NEW
EXTRACTIONS IN BOTH E1 + E2. E2 NEEDS TO
BE CHECKED FOR LEAKS AT 12:05 A.M. E1 HAD 2334 MCS
5. THE OIL MIST LUBRICATOR FOR THE OFF GAS TURBINE
HAS HAD A PRESSURE OF FROM 8# TO 10# ALL SHIFT.
6. TOOK A SAW HORSE FROM THE HOT CAN SHED AND PUT UP
IN FRONT OF A DITCH WHICH HAS BEEN CUT ACROSS
THE ROAD BETWEEN THE S. BASIN AND R. POND.

11-30-55 1. FINISHED boiling down P^{32} extracts And cut
12-8 OFF heater.
BAILEY 2. E II hAd 2250 M.C.
3. SUMP PUMP IN tile South of 3503 WAS ON AND
PUMPING AT 7:30 A.M.
4. Checked pressure on oil mist Lubricator
several times this shift. It has remained
Steady At About 8#

5. Continued tank Farm + patrol duties.

11/30/55 1- Operated the two small steam turbines
8-4 4 hours. the bearings on the Hot off
R.L.N. Gas turbine failed. Maint. will work on the 4-12 Shift Replacing these bearings & Shaft.

2. The Oil Mist Lubrication had an adjustment made to the Air Press. inside the filter.

3- Stored some New Vacuum Cleaner bags for the 3026-D Vacuum Cleaner in the Cabinet on 3rd level of 3026-D.

4- The Pump in the Tile Pit behind Bldg. 3503 is pumping at Shift Change. it was off this morning.

5. The P32 Run is filtering through S-1 Column at Shift Change. E-1 + E-2 Extracts are to be taken over to the C.F. Side and Precipitated.

6. The Steam being discharged out of the float manhole at H-5 is partly from the steam tracer line for the caustic addition line from M.R. Bldg.

7. Thawed the discharge line from the Pit Pump back of Bldg. 3026-C.

11-30-55 1. MAINT. IS STILL ASSEMBLING THE STEAM TURBINE
4-12 AT SHIFT CHANGE.
BLEVINS. 2. THE TILE SUMP PUMP SOUTH OF 3503 RAN FOR MOST OF THIS SHIFT AND WOULDN'T CUT OFF AUTOMATICALLY

THE SWITCH WAS PUT IN THE OFF POSITION AT 11:00 PM

3. THE OIL MIST BEARING LUBRICATOR HAS HAD A STEADY PRESSURE OF 8# THIS SHIFT.

4. PUT SWEEPING COMPOUND ON THE ICE IN THE ISO. AREA STREET AT THE REQUEST OF BILL GISSEL.

5. TOOK UP EXTRACTIONS FROM E1 & E2 AND PPTED BOTH IN THE C.F. HOOD. LEFT THE PPTE IN ~250 ML OF SOLUTION. STARTED NEW EXTRACTIONS IN E1 & E2.

6. P^{32} — PRODUCT IS BOILING DOWN IN EV3. THE HEAD TANK READ 10.5 ON R2 SCALE P1 DRY READ 3.5 ON R1.
S1 HAS BEEN REGENERATED.

7. THE PILE BLDG. HAS BEEN PURGING THEIR CANAL ALL SHIFT.

8. WC1 L.L. RAISED ½" AT 6:30 P.M. THE LAB. SAID THEY DIDN'T SEND ANY WASTE TO WC1.

12-1-55 1. FINISHED P^{32} RUN. TOOK UP IN 300 ML. delivered
12-8 TO PACKING & SAMPLED. SAMPLES IN TO LAB AT 6:00 A.M.
Bailey 2. REGENERATED SII AND CONTINUED boiling down WASTE IN EVI.

3. TURNED ON SUMP PUMP SOUTH OF 3503 AT 6:15 A.M. IT WAS STILL PUMPING AT LAST CHECK.

4. THAWED OUT LINE TO M.H. 149. FROZEN AGAIN AT 7:30 A.M.

5. OLD DIVERSION BOX SAMPLER ~~WA~~ LINE WAS FROZEN UP AT 5:00 A.M. COILED IT AROUND BULB INSIDE BOX TO THAW OUT.

6. CHECKED PRESSURE ON OIL MIST LUBRICATOR TO OFF GAS blower. REMAINED STEADY AT 8#.

7. MILLWRIGHTS CONTINUED WORK ON STEAM driven OFF GAS turbine.

8. Continued tank farm patrol duties.
9. Sump pump had cut itself off at 7:30 A.M. Check.

12/1/55 1- The P32 Pick up Run is ready to transfer to S-1 at 9:00 P.M. the first Run had 2289 MC'S.
2. There was a steam shut down in the Iso. Area at 2:00 P.M. and the Cottrell Precipitator was shut down. The steam was back on at 3:05 P.M.
3- Drained the air line trap for M.H. #190 Inst. the Inst. seems to be working ok at 3:00 P.M.
4- Turned in a work orders to insulate the water lines to the Hot Off Gas Steam turbine, and to Reroute the air line to the Automatic Water Valve.
5- Cleaned out all Manhole Sheads and checked the oil level in the Gear boxes.
6. Bob Sizemore hosed down the hot cell in Bldg. 3029 a couple of times today water drains to MC-1 Tank.
7- The drain line from the Cottrell Wash down Tank is still closed.
8- The Hot Off Gas Steam turbine ~~was~~ has been Repaired and is back in Service.

12-1-55 1. Started up the Cottrell Precipitator at 4:25 P.M.
4-12 2. Checked the oil mist lubricator pressure
Blevins. Regulator. The pressure changes immediately

WHILE TURNING THE VALVE OPEN AND CLOSED BUT WOULDN'T GO ABOVE 10# PRESSURE.

3. JETTED 1" FROM W15 TO EVERGREEN THIS SHIFT. ~40 GALS.

4. AT VALVE GROUP III THE EXTENSION HANDLE TO VALVE B HAS A SHEARED PIN AT THE UNIVERSAL JOINT. THE RADIATION AT VALVE B IS ~ 2500 mr/hr, THE VALVE IS CLOSED.

5. OPENED THE COTTRELL WASH DOWN DRAIN VALVE AT 8:00PM AND WC1 LL RAISED FROM 17.1" TO 18.3" OR ~37 GALS. LEFT THE VALVE OPEN.

6. DID SOME CLEAN UP OF TRUCKS, STACK AREA, 3026-D PLATFORM AND TANK FARM.

7. P^{32} PRODUCT IS BOILING DOWN IN EV2 BOTH H_2O WASHES ARE IN EV2. S1 HAS BEEN REGENERATED.

12-2-55 1. Washed down cottrell precipitator.
12-8 2. Regenerated ST.
Bailey 3. Checked oil mist lubricator to off gas blower several times this shift. pressure remained steady at about 8#.
4. P^{32} pickup run has the 1st 125 m.h. sparging in E.V. III ready to suck up to hold up pot.
5. Continued tank farm & patrol duties.

12/2/55 1- Sampled MC-5 & MC-6 for Leuze.
8-4 2- Finished the P^{32} Pick up Run 970 MC's
R.L.N. S.T. the C.F. Run had 56 MC's.
3- Pipefitters Re-Routed the Air line to the Hot Off Gas Steam turbine Automatic Water

valve but the ½ Round of tubing has Not been Installed where the line crosses the Concrete Pad.

4- Millwrights Cleaned the Oil Mist Lubricator Air Filter.

5- Put up all the Chains around the Tank Farm area.

6- The Valve extention Rod at the Valve Group #3 Will be Repaired Monday Per Joe Shanks.

12-2-55 1. TOOK VELOMETER READINGS AT VARIOUS OFF GAS LINES.

4-12 2. THE PILE BLDG. HAS BEEN PURGING THEIR CANAL ALL

BLEVINS. SHIFT TO CLEAR IT UP. SAMPLED MH #22 - 155 c/m/ml.

3. PUT UP DANGER SIGNS AT ALL PLACES IN THE RED AREA.

4. THE STEAM HEADER VALVE IN WC1 JET PIT IS LEAKING THRU. > 90# ALSO THE STEAM VALVE TO THE NORTH JET IN THE SAME PIT IS LEAKING THRU. ~20#.

5. THE OIL MIST LUBRICATOR PRESSURE DROPPED TO 5# TO 6# AFTER IT WAS ADJUSTED EACH TIME BY OPENING AND CLOSING THE REGULATOR VALVE UNTIL 11:00pm WE CUT DOWN THE AIR HEADER PRESSURE AND SET THE LUBRICATOR PRESSURE ON 10# WHERE IT HAS REMAINED THRU. SHIFT CHANGE.

6. JETTED 1" FROM W15 TO EVERGREEN BLDG. ~40 GALS.

7. TURNED ON THE MH HEAT LAMPS. REPLACED THE BURNED OUT BULBS AT THE R. POND SAMPLER. & MH #25.

12/5/55 1- Drained both Off Gas Filter boxes at the Stack

12:8 2. The Whinley Pump is Still in the tile Pit

R.L.N. behind Bldg. 3545. The electric motor will Not Run.

3- Jetted the Water from WC-1 Valve Pit to S.B.

4- Took a Ret. Pond Special Sample at 3:00 A.M. 112 C/M/M the high Result Sunday is Probably from the W-8' area.

5- Continued With Tank Farm and Patrol.

6- The Riggens Was Called IN to handle the Pile unit Carriers. All of the 440 V lines at the Pile are burned out, the fuse box exploded.

7- Cleaned off the ISO. Shipping displays except for the Inst.

8- The Pile [redacted] Foreman said they would Not be able to Push the F.I. Slugs due to the 440 V lines out.

12-5-55 1. LAGOON LIQUID LEVELS #1 – 10 TURNS AND BACK TO 10.
8-4 #2 – 8.95' #3 – 11.40'
BLEVINS. 2. STARTED PUMPING FROM W8 TO LAGOON #3 AT 9:10AM AND SAMPLING HOURLY FOR PH AND COMPOSITE #16. W8 LL. AT START OF PUMPING WAS 11'6".

3. MAINT. CHECKED [redacted] THE STEAM TURBINE IMPELLER FOR BALANCE AND FOUND THAT IT WAS OK. THE VIBRATION WAS FROM THE STEAM TURBINE BEARINGS WHICH WERE REPLACED LAST WEEK.

4. MAINT. REPAIRED THE 3001 VELOMETER PROBE TO ALLOW IT TO MOVE IN AND OUT FREELY.

5. THE TILE SUMP PUMP IS BACK IN OPERATION. THIS IS SOUTH OF 3503 BLDG.

6. MAINT. REPAIRED THE VG III VALVE "B" EXTENSION HANDLE.

7. MAINT. REPAIRED THE WC1 JET PIT STEAM HEADER VALVE.

8. LOADED 20 I^{131} SLUGS INTO B" DISSOLVER AND THE DISSOLVING IS GETTING UP TO TEMP. AT SHIFT CHANGE.

12-5-55 1. TOOK HOURLY READINGS ON SLUG DISSOLVING AT I^{131} CELL.
4-12 2. PUT OIL IN LAGOON PUMP.
BAILEY 3. CONTINUED PUMPING FROM W8 TO LAGOON three. P.H. & SAMPLED HOURLY.
4. CHECKED U DISSOLVING BACK OF 3036. ADDED HNO_3 AS NEEDED.
5. CONTINUED TANK FARM & PATROL DUTIES.
6. SUMP PUMP BACK OF 3503 SEEMED TO BE OK THIS SHIFT.
7. MADE TWO TRANSFERS FROM W15 TO 3515 BLDG.

12-6-55 1. DRAINED THE 3026-C BLDG. F.I. OFF GAS POT
12-8 2. CONTINUED WITH U DISSOLVING BEHIND BLDG. 3036.
R.L.N. 3. WASHED DOWN THE COTTRELL PRECIPITATOR.
4. BROUGHT DOWN A SULPHUR CAN AND TURNED THE HEAT ON THE MELTER.
5. THE TILE PIT PUMP BEHIND 3503 SEEMS TO BE OK.
6. ADDED 10 LIT. OF WATER TO THE F.I. DISSOLVING TO LOWER THE SP. GR. FROM OFF SCALE READING.
7. CONTINUED WITH TANK FARM AND PATROL.

12-6-55 1. RECD. INTO W7-166 GMS OF $UO_3 \cdot H_2O$ CONTAINING .154
8-4 GMS. OF U-235 FROM A.R. JONES OF CHEM. TECH.
BLEVINS. & P^{32} E1 EXTRACTION COOLS AT 9:00 PM AND E2 COOLS AT 10:30 P.M.

3. STARTED MELTING FLOWERS OF SULFUR INTO CANS.
4. RAN THE OFF GAS AND 4500 AREA STEAM TURBINES FOR 4 hrs. EACH TODAY.
5. MAINT. PUT ½ ROUND PIPE OVER THE AUTO. WATER VALVE, AIR LINE AT THE STEAM TURBINE.
6. H.R.E. SENT ~ 35 GALS. CONTAINING ~ 22 Gms. U. TO W7.
7. JETTED 3" FROM W15 TO EVERGREEN THIS SHIFT.
8. THE TILE SUMP PUMP SOUTH OF 3503 IS OUT OF ORDER AND THE SWITCH IN THE OFF POSITION SO IF NEEDED THE WHIRLEY PUMP IS STILL THERE NEAR THE SUMP.
9. CONTD. PUMPING FROM W8 TO LAGOON #3 & SAMPLING FOR PH & COMP.

12-6-55 1. Electrican replaced Light bulb East of block
4-12 wall At Cottrell precipitator.
Bailey 2. Continued filling Sulphur CANS.
3. Placed Whirly back in tile South of 3503 & pumped out H_2O.
4. Finished pumping from W8 to LAGOON Three. W8 L.L. 5'10". Submitted sample to LAB And started flush H_2O At 11:10 P.M.
5. Took up Extractions on EI And EII And started rextracts. EI - 2452 M.C./S.T. EII - 2774 M.C./S.T.
6. Continued tank farm & patrol duties.

(New Log book started)