

## **BOOK33R**

*Notes:*

"Daily Activity Log" on spine

Blank pages: inside front cover opposite page 1, 1, 2, 27-152, inside back covers

- 2 small sheets clipped to page 3
- 2 small sheets clipped to page 6
- 1 small sheet clipped to page 14
- 2 small sheets clipped to page 15
- 1 (8.5x6) sheet between pages 18 & 19
- sheet taped to page 20
- index card stuck between pages 56 & 57

*Scanned by:*

*Sheila Finch*

*RSICC /Oak Ridge National Lab.*

*August 6, 1999*

West Assembly Area Activity Log

11/207



PIONEERS SINCE 1831

# Account Book

## No. S 149

NO UNITS

Journal . . . . .

Ledger, Single Entry . .

Ledger, Double Entry .

Record Ruled (27 Lines)

Made in 150, and 300 Pages

MADE IN U. S. A.

TO REORDER, SPECIFY NUMBER,  
RULING AND THICKNESS INDICATED  
ON BACKBONE OF THIS BOOK.



818488

4000001

	g U/g
	g Ay/g
	g D/g
	g H/g
	g Mo/g
	g F/g
	SPEC.
	ASSAY

	REF. BY
11-25-70	DATE
	DEPT.

	RESP. TO
FESSE	BY OFFICER
	PHONE NO.

818488

4000001

	g U/g
	g Ay/g
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	g F/g
	SPEC.
	ASSAY

	REF. BY
11-24-70	DATE
	DEPT.

	RESP. TO
FESSE	BY OFFICER
	PHONE NO.

ABOUT 11/23/70

Raised HFIR "standard" element (2E3) with two sections welded together as necessary for the asymmetry tests.

11/24/70

Null found to be contaminated. Water supposedly new and unused. Heat burner pumped up very recently for checking newly installed valve (soleno) and for checking response times of valves to screw signal.

11/25/70

Null's water analysis showed <sup>684015</sup> 0.035 ppm U.  
Sid's water analysis showed <sup>684015</sup> 0.004 ppm U.  
Decided to put HFIR element in small tank in floor. Brought tank belonging to South from storage and installed in system in 201.

11/30/70

Found visible rust flange from bottom of storage tank in 101 (small system). Rest of system clean. ~~Then~~ Opened and cleaned all horizontal plumbing, including pump.

12/1/70

Found 64 ppm <sup>in flow</sup> of lead in 201. <sup>Nothing in 510s.</sup> Scrubbed.

12/2/70

Rinsed with hot tap water and dilute nitric. (Rust found and removed visible from blank flange for bottom of storage tank).

- 12/2/70 Filled system with demineralized water, transferred electrical services for valves & pumps, checked functioning of system, established front & drain valves. Saw HFIR Log #4 p. 113. Took sample for water analysis (U). #684617 .045 PPM
- 12/3/70 Found contamination on bottom (hot sides) of tank in 201. Cleaned tank, dumped water, rinsed entire system with hot tap water in quantity. Drained then partially filled with hot tap water, pumped up into 201, dumped, allowed tanks to dry. Contaminated on bottoms. Completely disassembled system. Found some lost valve diaphragms. Will replace all diaphragms & gaskets.
- 12/4/70 Completed disassembly of system.
- 12/7/70 Scrubbing, started reassembly. Since no new diaphragm for 3" dump valve available in stores and the present one could be cleaned only for sewer (dirty to direct reading) took the diaphragm from the new valve that will go in the solution system addition. Added valve and line on intake to

- pump to facilitate filling system.  
 12-9-70 Entire system clean, after scrubbing.  
 Purchased 2<sup>nd</sup> 55 drums and filled  
 head tank with deionized water  
 other drums had contamination in  
 seams of tank (bottom). Entire  
 plumbing system has been  
~~disassembled~~ <sup>dismantled</sup> and scrubbed.
- 12-10-70 After pumping water up, took a sample  
 for analysis. After tank was dry tank  
 now smooth on floor of tank. Results  
 clean.  
 Checked opening time of dump valve  
 in H.F.I.R. operating tank in 201.  
 Time: 250 MS.
- 12-10-70 H<sub>2</sub>O Analysis near REG. # 684418  
 .002 PPM
- 12-11-70 While pumping water up in (CE-3)  
 a gray thin film came to the surface.  
 Proceeded to ~~clean~~ pump all the  
 film from the water.
- Reg. No. 68421 - request to identify



- 12/16/70 Took H<sub>2</sub>O sample from west hold tank  
# 684619 0.041 ~~mg~~ <sup>μg</sup> ppm  
≈ 0.15 g U
- 1-7-71 Dumped west hold tank Reg. # 684619  
analysis: 0.15 g U total. I.O.C.
- 1-8-71 Wheel controller in room 101 for  
outside tank went to Pat. Found that  
the relay was not working properly.  
Installed new relay. Bought 1 extra  
relay for future use. (See R.R.)
- 1/11/71 Temp. high on Sic storage tank. Replaced  
battery in controller.
- 1/13/71 Received the following H.F.I.R. elements  
from X-10 94-0 94I, 95-0 95I, 96-0 96I, ~~97-0~~.
- 1/14/71 Received the following H.F.I.R. elements  
from X-10 97-0 97I, 98-0 98I, 99-0 99I.
- 1/15/71 Received the following H.F.I.R. elements  
from X-10 100-0, 100-I, 101-0, 101I
- 1-18-71 Took smears of tank in Room 201 and

REQUISITION

684619

70 DEC 17 PM 3:26

REPORT TO

Johnson

BUILDING NO.

5213

PHONE NO.

3-5237

REQUISITION

684620

70 DEC 17 PM 3:25

REPORT TO

Johnson

BUILDING NO.

5213

PHONE NO.

3-5237



the base that H.F.I.R. elements sit on. Found some contamination. Scrubbed and took more smears. Results clean. Also took a sample of H<sub>2</sub>O from hold tank in 101 for analysis. Proceeded at 1400 P.M. to run H.F.I.R. element.

- 1-20-71 Limit switch on west end access gate went out on 1-19-71. R.R. repaired it. It went out again on 1-20-71. R.R. removed switch and repaired again.
- 1-26-71 Finished running H.F.I.R. <sup>elements</sup> for <sup>criticality</sup>. Took smears, and all elements clean.
- 1-29-71  
14:30 Returned all 8<sup>th</sup> H.F.I.R. elements back to H.F.I.R. Bldg. X-10.
- 2-8-71 Calibrated Plastic cross
- 2-9-71 Floor of "Big Sid" slightly contaminated after scrubbing, results clean
- 2-10-71 Working on plastic cross and installing
- 2-16-71 in Sid.
- 2-17-71 Pumped solution into manifold and wiping of solution. Checked solution zero and water zero. added 250 l of ~ 9.109% H<sub>2</sub>O.

8

2-18-71  
0800

Started first experiment with plastic cross.

2-18-71

Added 75 l of  $\sim 910 \text{ g}^{\text{u}}/\text{l}$  of solution into manifold.

2-22-71

Took 2 samples of solution for analysis. One to X-10, and one to Y-12.

2-23-71

Drained solution ( $\sim 910 \text{ g}^{\text{u}}/\text{l}$ ) from manifold, and added  $\sim 96 \text{ l}$  of  $910 \text{ g}^{\text{u}}/\text{l}$  and  $\sim 207 \text{ l}$  of  $796.7 \text{ g}^{\text{u}}/\text{l}$  to manifold to get different concentration.

2-24-71

Found plastic cross floating in tank. Also developed leak in the bellows. Took smears in tank and found floor of tank contaminated. Scrubbed tank results clear.

3-1-3-5-71

Scrubbed floors in 101 + 102. Took smears in 101, 102, 201, 202, 203, 204. Everything clean. After examination of cross found bellows cracked. Removed ~~old~~ spool from cross, and waiting for new one from Y-12.

3-11-71

Waiting on spool from Y-12.

3-12-71

Received spool from shop, after inspecting

- 3-15-71 spool, had to return to shop for correction. Received spool from shop and proceeded to install for operation.
- 3-17-71 Started experiment on Plastic cross.
- 3-26-71 Continuing with Plastic cross.
- 3-29-71 Drained all solution out of manifold and pumped back in 275 l of different concentration.
- 4-2-71 Dismounted plastic cross and started on decontamination of cross. After scrubbing treatments Results clean, waiting for shop to pick up and work on cross.
- 4-4-71 Sent Plastic cross to 7-12 shop. Where they will take  $\frac{1}{4}$ " off dia.
- 4-13-4-19<sup>71</sup> X-rays were taken by J. O. C. thru-out entire bldg, office, locker, halls, steps, etc.
- 4-20-71 Received plastic cross from 7-12.
- 4-21-71 Calibrated plastic cross.
- 4-22-71 Assembled plastic cross in big sid. checked solution zero and water zero.
- 4-23-71 Ran experiment.
- 4-26-71 Pumped solution from tanks (9.06 g<sup>2</sup>/l), ~275 l.

10

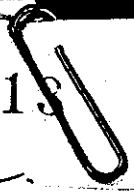
- 4-27-71 Pumped solution back into tanks, (857 g<sup>2</sup>/l.) ~ 275 l. Miped for a period and started experiment. 5
- 4-28-71 Repeated experiment done on 4-27-71. 5
- 4-29-71 Disassembled plastic cross. Decontaminated and scrubbed cross. Waiting for 7-12 to pick up, to take another 1/4 beam dia. 5
- 5-11-71 Received plastic cross - scrubbed and set up for calibration. 6
- 5-12-71 Calibrated plastic cross - 6
- 5-14-71 Started experiment with plastic cross (nom. 1.10" ID); after reaching ~~critical~~ critical took sample from vessel. 6
- 5-17-71 Drain solution from vessel (858 g<sup>2</sup>/l) and added ~ 275 l of 906.0 g<sup>2</sup>/l to manifold. 6
- 5-18-71 after reaching critical, drained solution and got sample. 6
- 5-19-71 Drained the ~ 906 g<sup>2</sup>/l from manifold and added ~ 300 l of ~ 825 g<sup>2</sup>/l to manifold. 6
- 5-20-71 Got system critical and drained. 6

- 5-21-71 Repeated experiment done on (5-20).  
Drained and took samples.
- 5-25-71 Begin to dismantle plastic cross.
- 5-26-71 Scrubbed plastic cross, waiting for y-12 to  
pick up cross and take another  $\frac{1}{4}$ " off dia.
- 6-7-71 Received P-cross from y-12. Filled in cracks  
and holes and sanded down.
- 6-8-71 Begin to put P-cross in "sid."
- 6-9-71 Checked solution + water zero's. Pumped cross  
full of water.
- 6-10-71 Started experiment of P-cross.
- 6-10-71 Took samples and added 10 l of  $H_2O$  to system.
- 6-11-71 Rinsed and ran experiment.
- 6-14-71 Repeated experiment and took sample, added  
10 l of  $H_2O$  to system.
- 6-15-71 Ran experiment and repeated on 6-14-71
- 6-18-71 added 10 l of  $H_2O$  to system.
- 6-21-71 added 1 l of 76.6 g/l solution to vessel.



12

- 6-22-71 mixing and running experiment
- 6-23-71 added 2 l of ~ 906 g<sup>wt</sup>/l solution to vessel mixing and then running experiment.
- 6-24-71 added 2 l of 906 g<sup>wt</sup>/l solution to vessel. mixing and running experiment.
- 6-28-71 Ran experiment and took solution sample.
- 6-29-71 Drain solution from manifold, and added 275 l of ~ 858 g<sup>wt</sup>/l to manifold and started mixing.
- 6-30-71 Ran experiment.
- 7-1-71 Drained the 858 g<sup>wt</sup>/l and added ~ 275 l of 906 g<sup>wt</sup>/l.
- 7-13-71 Ran experiment.
- 7-15-71 Finished running experiment and took sample.
- 7-19-71 took plastic cross out of lid and started to decontaminate, Experiments with plastic cross complete.
- 7-20-71 Finished scrubbing plastic cross, and



7-20-71 took smears on cross. Results clean.  
 Took smears in "lug sid". Results very contaminated  
 Since had tank water is also contaminated  
 decided not to scrub sid just now.  
 also took smears in cell (201) on floor surface.  
 Results slightly contaminated.

7-21-71 scrubbed floor in cell (201) took smears  
 results clean.

7-26-71 Plastic cross shipped to Jack Atkins  
 3-7659 for storage in Bldg 9720-32.  
 The flanges and lifting yoke remains  
 at Bldg 9213.

5L 7-23-71 Received 2 HFIR elements (108I+0 and  
 109I+0) from X-10.

7-28-71 Received 4 HFIR elements (104I+0, 105I+0,  
 106I+0, 107I+0) from X-10. all elements  
 smeared for contamination when received.

7-29-71 Received 2 HFIR elements from X-10 (102-I, 102-O,  
 103-I, 103-O). Smear clean. Started criticality  
 on 1st of 8 fuel elements.

8-4-71 Finished criticality on all eight HFIR's.

- 8-4-71 Ran CE-2 for reference.
- 8-5-71 Took smears on all H.F.I.R. elements ~~results~~ and handling tools. Results clean
- 8-13-71 Drain all solution out of manifolds
- 8-14-71 added 125 l H<sub>2</sub>O in manifold for cleaning.
- 8-19-71 Took sample from washings in manifolds. Reg. # 694420
- 8-23-71 Waiting for results of sample to drain washings out of manifold. 10-
- 8-23-24-25 Trying down SS shut on floor in cell by results.
- 8-31-71 On 8/6/71 shipped H.F.I.R. elements 108-0 + I, 109-0 + I to H.F.I.R. building. On 8/9/71 shipped 107I+O. on 8/30/71 shipped 104I+O, 105I+O, 106I+O. On 8/31/71 shipped 1020+I, 103-0 + I. 12-
- 9-10-71 Took smears in rooms 101, 102, + 201 found some cont. spots. scrubbed results clean 12
- 9-17-71 shipped to Y-12 m.l.1 Fuel elements. shipped 19 elements.
- 9-22-71 shipped to Y-12 H.F.I. H.T.R.E. Fuel elements 1-
- 1-

REQUISITION

694420 5

71 AUG 19 PM 12



REPORT TO \_\_\_\_\_

BUILDING NO. \_\_\_\_\_

PHONE NO. \_\_\_\_\_



REQUISITION # 694421 9

71 OCT 6 PM 3:05

REPORT TO

*B. K. Reedy Jr.*

BUILDING NO.

9213

PHONE NO.

3-5287

REQUISITION 694422 5

71 OCT 11 PM 3:50

REPORT TO

*B. K. Reedy Jr.*

BUILDING NO.

9213

PHONE NO.

3-5287



10-6-71 after more wiping of added  $H_2O$  in manifolds, sample taken and sent to Y-12 Reg # 694421. First sample taken 8-19-71 see p 14.

10-11-71 Drain the first remaining from manifold, and added ~125L of  $H_2O$ . After flushing each manifold sample was taken. Reg # 694422.

10-25-71 On 10-15-71 started dismantling plumbing system in room 102. Finished on 10-22-71. Scrubbed wall and floor and all parts of the system.

12-6-71 Received part of pipe fitting for plumbing system.

12-7-71 Painters started painting west wall in solution room (102). Finished same day.

12-10-71 Received more fittings for plumbing system.

1-3-72 Pipe fitters started to work on storage system Room 102.



- 1-26-72 Received from X-10 one H.F.I.R. fuel element # 117-I, 117-O.
- 1-27-72 Received from X-10, one H.F.I.R. fuel element # 116I, 116-O.
- 2-2-72 Starting to run H.F.I.R. fuel elements.
- 2-4-72 Received from X-10 H.F.I.R. element # 115-O, 115-I.
- 2-4-72 Shipped H.F.I.R. # 117-O, 117-I back to H.F.I.R. Bldg. X-10.
- 2-7-72 Received from X-10 one H.F.I.R. element # 114-O, 114-I.
- 2-7-72 Shipped H.F.I.R. element # 116-O, 116-I to X-10.
- 2-10-72 Received from X-10 one H.F.I.R. fuel element # 113-O, 113-I.
- 2-10-72 Received from X-10 one H.F.I.R. fuel element # 112-O, 112-I.
- 2-14-72 Received from X-10 one H.F.I.R. fuel element # 110-O, 110-I.
- 2-14-72 Shipped H.F.I.R. element # 113-O, 113-I back to X-10 H.F.I.R.
- 2-14-72 Received from X-10 one H.F.I.R. element # 111-O, 111-I.

- 2-15-72 Finished running H.F.I.R. elements.
- 2-16-72 Started calibration of new P.V.C. storage system.
- 2-18-72 Shipped the last H.F.I.R. fuel elements back to H.F.I.R. Bldg. # 110-0, 110-I, 111-0, 111-I.
- 2-28-72 Finished calibrating new P.V.C. storage system.
- 3-2-72 Started to install tank in the cell for upcoming experiments.
- 3-7-72 Begin to pump solution to check for leaks, and feed rate + dump rates.
- 3-8-72 mixing  $UO_2F_2$  solution. (no rods).
- 3-8-72 Started cleaning and greasing all 5% thro' rods. Also inventoried all rods.
- 3-17-72 Inventory checked out O.K.
- Total number of all rods -
- |       |   |       |
|-------|---|-------|
| .092" | = | 7,840 |
| .30"  | = | 644   |
| .50"  | = | 204   |
| .80"  | = | 143   |
| 1.0"  | = | 81    |
| Total | = | 8,912 |

- 3-20-72 Started first experiment with 5% rods in solution.
- 3-21-72 After inspection of rods found solution was attacking rods. (See photo's of rods.)
- 3-27-4-72 Experimenting and trying to determine the best cladding to use for protection of rods from solution attacking.
- 4-10-72 Cladding rods (.30" + .50") with polyolefin (clear) .15 mil. wall thickness. This is drinkable type tubing.
- 4-27-72 After cladding of rods started experiment with 10(3) rods.
- 5-16-72 Experiment running .30" rods  $\text{UO}_2$   $\text{F}_2$  solution
- 6-1-72 Starting to weigh and seal <sup>25 liter</sup>  $\text{UO}_2$   $\text{F}_2$  solution in Room 101
- 6-16-72 Finished solution inventory.
- 6-19-72 Started experiments with  $\frac{1}{2}$ " rods
- 7-25-72 5% rods .30" rods 3.25 atm. reaction c.c

4-11-72 Tabulation of readings to record water levels in Well.

A) Preliminary - comparison of probe readout with sight glass.

SIGHT GLASS (cm)	$\Delta h$ (cm)	Probe (in) [Average of five]	$\Delta h$ (in)	$\Delta h$ (cm)
0.00	20.2	21.44	7.97	20.24
20.2	20.0	29.41	7.79	19.79
40.2	2.1	37.20	6.84	2.13
42.3		38.04		

\* Reading recorded when contact broken as probe fogged up.

Comparison of probe readout (avg. of five with spread noted in parentheses) & sight glass with direct measurement of water height using meter stick held against bottom of tank beside submerged in chamber.

B) Water drained back

SIGHT GLASS (cm)	(cm) $\Delta h$	(in) Probe	(in) $\Delta h^*$	(cm) $\Delta h$	(cm) Meter Stick	(cm) $\Delta h$
33.3	13.3	[MAKE] 34.44 (±.01)			51.3	13.2
		[BREAK] 34.47 (±.01-00)	5.28	13.21		
20.0	10.0	<del>34.47</del> 29.24 (±.01)			38.1	
		<del>34.47</del> 29.27 (±.01, 00)	4.01	10.19		
10.0	10.0	25.23 (±.02-01)				
		25.25 (±.02)	4.00	10.16		
0.0		21.23 (±.01)				20.3
		21.27 (±.01-00)			17.8	

- 7/21/72 Operators examination written
- 8/3/8/9 Oral examination.
- 8-9-72 5% rods in "well".
- 8-28-72 Received two F.I.R. element from X-10 # (126-I, 126-0, 125-I, 125-0).
- 8-29-72 Received four F.I.R. elements from X-10 (124-I, 124-0, 123-I, 123-0, 122-I, 122-0, 121-I, 121-0).
- 9-6-72 Received F.I.R. # 120-I, 120-0, On 9/7 received # 119-I, 119-0.
- 9-12-72 Having problems of repeating H<sub>2</sub> & H<sub>2</sub>O in well with 5% rods. This test is being performed to determine source of non-reproducibility. Removed 11 rods from array, so as to have a sub. crit. array. This check for trouble being done by R. R. & D. W. C. checked K-1 & Log-2 for source response. Inserted source & proceeded to pump up water for purpose of checking H<sub>2</sub> O. H<sub>2</sub> H<sub>2</sub>O ht. on manometer = 40.1 cm.

Phase 1

Monometer	40.1	40.1	40.05	40.1	40.1	40.1	40.1	40.1	40.1	40.1
Direct reading in well	58.2	58.2	58.0	58.1	58.2	58.1	58.2	58.15	58.2	58.2

Drain to zero between readings.

9-12-72 Phase #2 Pump up water to 20 cm. on sight glass. Take reading from manometer and direct reading in well. Then go to a H<sub>2</sub>O ht of 40 cm. take reading and direct reading from well. Dump and repeat.

Manometer	20.1	40.1	20.1	40.1	35.7
Direct reading in well	38.1	58.2	38.1	58.2	53.6

9-12-72 Received H.F.I.R # 118-I, 118-O from X-10

9-13-72 Installed motor drive assembly in West wall of "well" to operate probe.

9-14-72 The following test was done to check reproducibility

C) Water feed:

Each step, set probe & added water until contact made. Sight glass, probe, & meter stick were read. As in (B) 4h. Make readings

SIGHT GLASS (cm)	Probe	Probe Set	Probe (make)	Probe (break)
9.7	10.2	25.22	25.23 (+.00, -.03)	25.26 (±.01)
19.9	10.3	29.25	29.24 (+.01, -.03)	29.28 (+.01, -.06)
30.2	5.1	33.26	33.26 (+.01, -.03)	33.30 (±.01)
35.3	5.1	35.25	35.25 (+.01, -.02)	35.29 (±.01)
40.4	5.2	37.25	37.25 (±.01)	37.29 (+.00, -.01)
45.6	5.1	39.25	39.26 (+.00, -.02)	39.29 (±.01)
50.7	5.0	41.24	41.25 (+.00, -.01)	41.28 (+.02, -.01)
56.0	46.0	43.25	43.26 (±.01)	43.29 (+.01, -.00)

C) Waterhead:

Each step, set probe & added water until contact made with probe; then sight glass, probe, & meter stick were read. As in (B) sh is difference between make readings

SIGHT GLASS (cm)	sh(in)	Probe Set	Probe (make)	Probe (break)	ah (in)	sh (cm)	meter stick	sh
9.7		25.22	25.23 (+0.0, -0.0)	25.26 (+0.0)			29.9	
19.9	10.2	29.25	29.24 (+0.1, -0.0)	29.28 (+0.0, -0.0)	4.01	10.18	38.1	10.2
30.2	10.3	33.26	33.26 (+0.0, -0.0)	33.30 (+0.0)	4.02	10.21	48.3	10.2
35.3	5.1	35.25	35.25 (+0.0, -0.0)	35.29 (+0.0)	3.9	5.65	53.4	5.1
4	5.1	37.25	37.25 (+0.0)	37.29 (+0.0, -0.0)	2.00	5.02	58.5	5.1
45.6	5.2	39.25	39.26 (+0.0, -0.0)	39.29 (+0.0)	2.01	5.11	63.55	5.05
50.7	5.1	41.24	41.25 (+0.0, -0.0)	41.28 (+0.0, -0.0)	1.99	5.05	68.6	5.05
51	5.0	43.25	43.26 (+0.0)	43.29 (+0.0, -0.0)	2.01	5.11	73.75	5.15
	<u>46.0</u>					<u>45.79</u>		<u>45.85</u>

12-8-72

- 4-25-72 On 8/11/72 K<sup>2</sup> was removed from "neil"  
into the shop to be dried out. On 9/25/72  
it was returned to "neil".
- 10-2-72 Received one H.F.I.R. fuel element from X-10 (129-I, 1270)
- 10-5-72 Suspicion that lead blocks on 1 face of  
array in Neil was moving by vibration, and  
also air being trapped in cracks of bricks.  
Results being that cut. Ht. could not be reproduced.  
To correct above used elastic 731 RTV  
Adhesive / sealant to stop up cracks and  
also to seal bricks to plate.
- 10-11-72 Built a ~~to~~ 8" x 10" x 26" lead reflector  
wall around array.
- 10-13-72 Removed lead brick from around array.
- 10-16-72 Cleaned adhesive sealant from bricks.
- 10-23-72 Built a 8" x 10" x 28.3" lead reflector  
around array in "neil".
- 10-30-
- 10/31/72 Inventory of fissible material.
- 11/3/72 Received 1 H.F.I.R. fuel element from X-10  
#128-0 128-I.
- 11-13-72 Started running H.F.I.R. fuel elements.
- 11-17-72 Shipped Element #124-0, 124-I to X-10 H.F.I.R. array
- 12-6-72 Shipped Element #121-0, 121-I to H.F.I.R. X-10.
- 12-6-72 Shipped Element #118-0, 118-I to H.F.I.R. X-10.
- 12-8-72 Shipped Element #119-0, 119-I to H.F.I.R. X-10.
- 12-8-72 Shipped Element #129-0, 129-I to H.F.I.R. X-10.



12-11-72 Shipped Element # 127-0, 127-I to H.F.I.R.X-10  
 12-11-72 Shipped Element # 125-0, 125-I to H.F.I.R.X-10  
 12-11-72 Shipped Element # 120-0, 122-I to H.F.I.R.X-10

12-20-72 Shipped Element  
 # 122-0 & 120-1  
 # 126-0 & 126-1  
 # 123-0 & 123-1  
 # 128-0 & 128-1

12-13-72 5% rods + solution experiments  
 2-10-73 " " " "  
 3-10-73 " " " "  
 3-16-73 " " " "

4-23-73 Received from y-12 (Per. Tom Fox) 8 ea  
 12 liter bottles of  $U^{235}$  solution. The surface  
 of bottles slightly contaminated. After scrubbing  
 found bottles to be clean. at contact  
 the bottles read 10 mkr.

5-8-73 Started working with concrete blocks  
 (from y-12) for next experiments with  
 5% rods.

5-21-73 Started experiment with 5% rods  
 and concrete blocks.

- 5-22-73 Received 11 boxes of internal parts contaminated U-235 - from NA SA - Lewis Research Center, Cleveland Ohio, (Per Tom Taf)
- 6-1-73 Started experiment with unclad concrete blocks.
- 8-15-73 Shipped 3.85% Enriched Billets to Y-12. Orientations: 5, 2" x 30.0" with a 2.6" dia. hole in center. Shipped an unenriched 3-9 from Dept. 84 to 88. total of 25 Billets.
- ~~8-15-73~~ 8-9-73 Finished running experiments with 5% rods with 4.0" concrete blocks as reflector and concrete blocks encased in plexiglass.
- 8-20-73 Started inventory of all fissible material in west end and vault.
- 8-31-73 Finished inventory on west end.
- 9-1-73 Started clearing up on west end.
- 10-2-73 Separating plastic spacers and general cleanup.
- 10-18-73 Maintenance from Y-12 changed P.M. take in rad. alarm system Room 103 "Abli".

- 10-19-73 General clean-up.
- 12-27-73 Filled outside tank (Big Sid) with clean water.
- 1-18-74 Started physical inventory -  
Put yellow tape & type of all ~~uranium~~ depleted Uranium in cell.
- 1-21-74 Received from X-10 one HFIR fuel element # 130-0 - 130-I
- 1-21-74 Received from X-10 one H.F.I.R. fuel element # 131-0, 131-I.
- 1-21-74 Received one HFIR fuel element from X-10 # 132-0, 132-I.
- 1-22-74 Received from X-10 HFIR fuel elements # 133-0, 133-I, 134-0, 134-I, 135-0, 135-I, 136-0, 136-I
- 1-23-74 Received from X-10 HFIR fuel elements # 137-0, 137-I, 138-0, 138-I, 139-0, 139-I, 140-0, 140-I
- 1-24-74 Received from X-10 HFIR fuel elements # 141-0, 141-I, 142-0, 142-I, 143-0, 143-I, 144-0, 144-I

- 1-28-74 Finished taking physical inventory.
- 1-29-74 Started running H.F.I.R fuel elements.
- 2-19-74 Under Reedy's supervision I.D.C. took H.F.I.R. fuel element critical.
- 3-4-74 Received from X-10 H.F.I.R fuel elements # 145-0, 145-I, 146-0, 146-I.
- 3-5-74 Received from X-10 H.F.I.R fuel element # 147-0, 147-I.
- 3-5-74 Shipped the following H.F.I.R. fuel elements to X-10. 132-0, 132-I, 133-0, 133-I, 134-0, 134-I, #136-0, 136-I.
- 3-6-74 Shipped the following H.F.I.R. elements to X-10 - 137-0, 137-I, 138-0, 138-I.
- 3-26-74 Shipped the following H.F.I.R. elements to X-10. 142-0, 142-I, 140-0, 140-I, 146-0, 146-I, 139-0, 139-I.
- 3-27-74 Shipped the following H.F.I.R. elements to X-10. #146-0, 146-I, 144-0, 144-I, 143-0, 143-I, 141-0, 141-I, #147-0, 147-I.

- 3-29-74 Shipped the following fuel elements to X-10. # 145-0, 145-I, 135-0, 135-I.
- 4-9-74 Ruedy & Conner on temporary assignment in Y-12 plant.
- 4-11-74 All seals on bottles in 101, 102, 201, Vault D.K. No leaks apparent. Little water in dehumidifier pan.
- 8-6-74 Electrician changed Pen. tube channel B room #102.
- 1-24-75 Started running H.F.I.R. fuel elements.
- 2-5-75 Ruedy & Conner ran the last circuitry on H.F.I.R. Core # 156. This completes a total of 15 H.F.I.R. Cores. Elements will be shipped to Y-12 and 9213 - will be pad locked and the end comes to the cut lab of Y-12.

REEDY

Plastic Cross To

Jack Adkins -3-7659

for storage in bldg 9720-32

Sample # C 47