

University Reviews

19 January 1980
— to —

Stage 2

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6/2/80 - March 1980

ARL(U) Stage 2

6/2/80:

- 1) Contamin. ducting removed from Ra repair room has been cut so it will fit into a drum which can be sealed. Efforts to remove the contaminant failed. [Much of it would have been Ra - ~~it~~]
- 2) parts of floor in Ra repair room have been removed. monitoring shows active material has gone through floor or to beams & has dripped on to ground beneath. [This would be Ra - ~~it~~]

21/2/80

s 47F - privacy [redacted]

ARL(U) + met officer from Well Unit about building. Decided to remove S. end of S. wing - including strong room, Ra pump room & Ra repair room + restore walls & roof to leave rest of S. wing usable.

March +

s 47F - privacy [redacted]

using 'full protection*' cut out & removed ducting from Ra repair room (see above) + from Ra cutting room. Also cleared up roof dust. Activity in roof dust decreases with increasing distance from 'Ra pump' end. Decided (2/6/80) that cut off by cleaning roof was ^{to be} 10 cps (A+B) above background. During the work I.M. was

(* see *p2)

full face respirator & used vacuum cleaner to remove dust from inside ducting before cutting it up. The cutting was done with a 'nibbler' machine from the Tech. Service workshop. This work continued into evening.

3/6/80

I went to ARL(U) s 47F - privacy
Purpose was to assist in 'cleaning up' by removing the hot spots reported to lie on ground under floor of the repair room (see note 6/2/80) while s 47F - privacy continued with ducting.

1/2 Ra
Repair
Room

Ground was littered with bits of brick, cement, wire and ~~metal~~ glass.

Wore full protection* (overall full face respirator, ^{old leather gloves,} boots, & shoes). Used shovel to lift debris from ground (\approx 1 m. below floor level) into tray on floor of pump room & thence into 44 gal. drum. Little dust raised. Monitoring located 'hot' areas: 1) near doorway; L.H.S. (when entering); 2) on ground under spots previously marked on floor; 3) along E. wall, esp. in N.E. corner. Removed all successfully & drum was \approx half full of debris. Monitoring showed nothing left above background (\approx 4 to 5 cps (2 + B)). No active material had gone under rest of building. The wooden

3/6/80 (c)

Joists still left - are slightly contam. in a few places. No further action necessary in this room.

ii Under Roof

While above was going on [redacted] was working under the roof, above the area, removing dust from insulating material and beneath it. This has now reached the situation where the activity has decreased to 10 cps or below. [redacted] collected samples of the dust for analysis. I also took two photographs of [redacted] with vacuum cleaner - 'for the record'.* (collecting) swept the floor of the old 'tea room' (where entry to the roof is made) + the stairs. I monitored the floor of the room, + the stairs: one small 'hot spot' (50 cps $\alpha + \beta$) in 'tea room' and several 'hot spots' on stairs: all easily removed using 'DECON'. All sweepings + swabs were collected in a single plastic bag + kept for analysis.

Sample 1 See Note 2

iii Floor, Hairs, Samples

Sample 2 See Note 3

iv Rm Packing Room

[redacted] had prev. monitored the room when we stored transport boxes + had marked 'hot spots' on shelves. I cleaned all these + placed swabs in same bag as floor sweepings, etc.

General (3/6/80) Monitor used for detecting contamination was NE Ratemeter PCMS 5/442 Probe DP2R 5/4907

Background outside building = 3 cps ($\alpha + \beta$)
 " inside " = ± 1 4 cps ($\alpha + \beta$)
 " in H.P. area Yallambae = ± 1 4 cps ($\alpha + \beta$)

See Note 4

* [redacted] Took several photos of me in or close to Ra Repair Room - 'for the record'. See Note 1

Note 1

3/6/80

Photographs 'Instantatic' with flash.

1. [redacted] : in roof with vacuum cleaner (area above Rn area)
2. " " " " " " " " " " " "
3. Rn in Rn repair room shovelling soil etc! into bins - material from ground level floor level in Rn repair room
4. R at entrance to Rn pump room
5. " " " " " " " " " " " "
6. " near " " " " " " " " " " " " with monitors, respirators - on bench.

Note 2

Sample 1. Dust from roof (12' from top of ceiling above Rn area) (See II, p3) γ spectrum. (P. Burns) revealed, in this sample of dust, 779 Bq ^{210}Pb and ^{226}Ra 1.7kBq Ra mass dust $\approx 62\text{g}$. Conc Ra $\approx \frac{1700}{60} = 28 \text{Bq/g}$; $\approx 0.75 \text{nCi/g}$.

1.7k Bq $\approx 46 \mu\text{Ci}$

Note 3

Sample 2 Sweepings from floor + stairs, + 'swabs' from cleaning 'hot' areas on stairs + shelves in Rn transport box room (See III, p3) (See IV p3) γ spectrum. (P. Burns) revealed in two samples, 7.2 kBq ^{210}Pb and 6.6 kBq ^{226}Ra

Note 4

Monitor used for detecting contamination, was Nuclear Enterprises Linternite PCMS, S/N 442. Probe DP2R S/N 4907. Used on $(\alpha + \beta)$ mode; Mon. used for exp. rate was Berthold Ratof S/N 195496. B'kg'd H'base yellowie $\approx 4 \text{cps}$ and 9.01 MRK (110 CPS) respectively