

ROYAL OBSERVER CORPS - POSTS
CREW OPERATING PROCEDURES
NO 1 OBSERVER - DURING FALLOUT

FIVE-MINUTE DOSE-RATE READINGS

1. Dose-Rates greater than 300 centigrays/hour (cGy/h):
 - a. When warned by No 2 Observer that reading is approaching 200 cGy/h, prepare to retract probe by loosening clamp.
 - b. When informed by No 2 Observer that the reading displayed on the FSM is approaching 240 cGy/h assist No 3 Observer to retract probe unit of the FSM down the probe pipe until the reading falls to one-tenth of that shown when the probe was fully extended (ie, to 24).
 - c. Re-extend the probe unit and repeat the procedure, if necessary, at 260 cGy/h or at 280 cGy/h if the first attempt fails.
 - d. Clamp the probe unit in its retracted position.
2. When informed by No 2 Observer that the "shielded reading" has decayed to 28.0 indicated on the FSM (corresponding to an "out in the open" dose-rate of 280 cGy/h) assist No 3 Observer to extend the probe unit.
3. If, exceptionally, the dose-rate rises to 2800 cGy/h, a further withdrawal of the probe unit to a position where a one-hundredth reading is obtained, is to be carried out.

BPI AND GZI

4. If further bursts occur carry out the appropriate tasks (Part F Section 3.1).

DECONTAMINATION

5. If it is necessary to leave the Post for operational reasons during fallout, decontamination must be carried out before re-entering the monitoring room (Annex S).

INDIVIDUAL DOSIMETERS

6. Check each individual dosimeter in turn at 1200 daily.
7. Take no further action if the reading is less than one-half of the first small division on the scale (ie, according to a reading of 5r on the Type 4 dosimeter), except to carry forward the previous day's running total dose, in the "Running Total" column of the Radiac Dose Record.
8. If the reading is one-half of the first small division or greater, record the actual reading in the "Dose" column of the Radiac Dose Record and the running total dose in the "Running Total" column in respect of the member.

9. Restrict movement outside the Post to operationally essential occasions (Part F Section 9.1 paras 16 & 17).

10. Instruct No 2 Observer to report to the Post Supervisor if and when any crew member reaches the following limits:

- a. A dose of 100 cGy in any one day, or
- b. a dose of 200 cGy in total, except that
- c. a dose of 15 cGy per day may be received for up to 100 days.

NOTE: For all practical purposes 1 cGy is equivalent to 1r.

POST DIARY

11. Enter details of decision made and actions taken (eg, opening and/or closing of Post, sorties outside the Post by crew members etc).

REFERENCES

- 12. Annex D Post Diary
- Annex E Radiac Dose Record
- Annex L1 The Bomb Power Indicator
- Annex L2 The Ground Zero Indicator
- Annex L3 The Fixed Survey Meter
- Annex L7 The Individual Dosimeter
- Annex L8 The Charging Unit
- Annex Q Post Ventilation
- Annex S Decontamination at Posts

ROYAL OBSERVER CORPS - POSTS
CREW OPERATING PROCEDURES
NO 2 OBSERVER - DURING FALLOUT

COMMUNICATIONS

1. Maintain continuous contact with the Control by manning the loudspeaker telephone.

FIVE-MINUTE DOSE-RATE READINGS

2. After the reporting time cycle is set in operation (Part F Section 2.2 paras 6-9) readings will be taken and logged every five minutes but will be called for every even ~~ten~~ minutes.
FIVE.
3. Maintain a continuous watch on the FSM and read the display at the moment the READ signal (either pip tone or speech) is heard.
4. Report the dose-rate to the Plotter when called for:
 - a. Say the Group name, the Post number, followed by the word POST.
 - b. Say the words NO READING if the display shows a reading below 0.1 cGy/h followed by the word OVER.
 - c. Say the dose-rate shown on the digital display if it is 0.1 cGy/h or above, as follows:
 - (1) Up to 9.9 cGy/h inclusive, report the actual dose-rate shown on the display, including the figure after the decimal point. Each figure is spoken by its phonetic equivalent as two figures separated by the word POINT (eg, ZERO POINT TWO, SEVEN POINT FOWER etc, up to NINER POINT NINER), followed by the word OVER.
 - (2) From 10 to 300 cGy/h inclusive, exclude the figure after the decimal point and report the next higher whole number (eg 10.1 as ONE ONE, 112.8 as ONE ONE THREE, up to 300 as THREE ZERO ZERO), followed by the word OVER.
 - d. Release transmit button on loudspeaker telephone.
5. The Post Display Plotter will acknowledge reports collectively by saying "THANK YOU, OUT" after the reading from the last Post on each Cluster under his control has been reported.
6. The following entries are to be made in the FSM Section of the Post Log:
 - a. Once the reporting cycle is in operation and First Fallout has not yet occurred:
 - (1) Under 'Time' enter the time of the five-minute period.
 - (2) Under 'Dose-Rate' enter the words 'No Reading'.

(3) For each subsequent report of 'No Reading' under 'Time Report Made' enter the minutes of the five-minute reporting cycle in the same line as previously used (eg, 05, 10, 15 etc).

(4) Commence a new line at every hour and half hour ie, 1000, 1030, 1100 etc.

b. For each reading taken, whether reported or not:

(1) Under 'Time' enter the time of the five-minute cycle.

(2) Under 'Dose Rate' the COMPLETE reading as displayed on the FSM.

(3) Under 'Time Report Made' the time report made to the Control, or the letters 'NR' (Not Reported).

7. If, due to a landline failure, a report is not made the letters 'NR' (Not Reported) are to be written at the left-hand end of the appropriate space under 'Time Report Made'.

DOSE-RATES GREATER THAN 300 CENTIGRAYS/HOUR (cGy/h)

8. Warn No 1 and No 3 Observers when reading is approaching 200 cGy/h.

9. When the display on the FSM is approaching 240 cGy/h, advise other crew members and prepare to take 'shielded readings'.

10. Report 'shielded readings' in accordance with paras 4, 5 and 6, but multiply the actual display on the FSM by 10 so that, for example, a reading of 24.0 becomes 240, a reading of 180.4 becomes 1804. Report each figure separately by its phonetic equivalent, eg TWO FOWER ZERO and ONE EIGHT ZERO FOWER.

11. When the 'shielded reading' decays to 28.0 indicated on the FSM (corresponding to an 'out in the open' dose-rate of 280 cGy/h) advise the other crew members.

12. Thereafter, report the readings as indicated in paras 4-6.

13. If, exceptionally, the dose-rate exceeds 2,800 cGy/h, advise the other crew members and prepare to take 'double shielded readings'.

14. Report 'double shielded readings' in accordance with paras 4, 5 and 6 but multiply the actual display on the FSM by 100.

DOSE-RATE SITUATION REPORTS

15. On the left of the FSM digital display are rising and falling flags. At each even hour (eg, 1000, 1200, 1400 etc), report the reading on the FSM preceded by the word 'RED' if the rising flag is displayed or 'GREEN' if the falling flag is displayed, or if no flag is displayed.

16. Enter the reading in the Post Log, including the 'RED' or 'GREEN' prefix as reported.

RADIOACTIVE DECAY

17. As a result of radioactive decay the dose-rate reading will eventually fall to below 0.1 cGy/h. At this time, and as long as the reading remains below 0.1 cGy/h, report NO READING in accordance with para ~~5~~. 4 B.

SUBSEQUENT ARRIVAL OF FALLOUT

18. If the Post is subsequently affected by fallout (ie, when the FSM display rises again to 0.1 cGy/h), report this as follows:

- a. Say the Group name, the Post number, followed by the words POST OVER.
- b. Release the transmit button on the loudspeaker telephone and pause while the Post Display Plotter repeats the call as an acknowledgement.
- c. Say the words NEW FALLOUT, OVER.
- d. Release the transmit button and pause while the Post Display Plotter says "THANK YOU, OUT".
- e. Enter the time at which the FSM display shows a rise to 0.1 cGy/h in the 'Time' column of the FSM section of the Post Log, the words 'New Fallout' in the 'Dose Rate' column and the time the report was made in the 'Time Report Made' column.

EXAMPLE:

HORSHAM TEN POST OVER - (Plotter replies HORSHAM TEN POST, OVER) - NEW FALLOUT, OVER - (Plotter says "THANK YOU, OUT").

19. Action subsequent 5-minute readings as in paras 2-14.

BPI AND GZI

20. If further bursts occur carry out the appropriate tasks (Part F Section 3.2).

DECONTAMINATION

21. If it is necessary to leave the Post for operational reasons during fall-out, decontamination must be carried out before re-entering the monitoring room (Annex S).

INDIVIDUAL DOSIMETER

22. When instructed by No 1 Observer report to the Post Supervisor when any crew member reaches the following limits:

- a. A dose of 100 cGy in any one day, or
- b. a dose of 200 cGy in total, except that
- c. a dose of 15 cGy per day may be received for up to 100 days.

NOTE: For all practical purposes a cGy is equivalent to 1r.

REFERENCES

- 23. Annex A Instructions for writing/speaking information
- Annex B The Loudspeaker Telephone
- Annex C Post Log
- Annex L1 The Bomb Power Indicator
- Annex L2 The Ground Zero Indicator
- Annex L3 The Fixed Survey Meter
- Annex P The Carrier Receiver
- Annex Q Post Ventilation
- Annex S Decontamination at Posts

ROYAL OBSERVER CORPS - POSTS
CREW OPERATING PROCEDURES
NO 3 OBSERVER - DURING FALLOUT

FIVE-MINUTE DOSE-RATE READINGS

1. DOSE-RATES GREATER THAN 300 CENTIGRAYS/HOUR (cGy/h)
 - a. When warned by No 2 Observer that reading is approaching 200 cGy/h, prepare to retract probe by loosening clamp.
 - b. When informed by No 2 Observer that the reading displayed on the FSM is approaching 240 cGy/h, assist No 1 Observer to retract the probe unit of the FSM down the probe pipe until the reading falls to one-tenth of that shown when the probe was fully extended (ie, to 24).
 - c. Re-extend the probe unit and repeat the procedure, if necessary, at 260 cGy/h or at 280 cGy/h if the first attempt fails.
 - d. Clamp the probe unit in its retracted position.
2. When informed by No 2 Observer that the 'shielded reading' has decayed to 28.0 indicated on the FSM, corresponding to an 'out in the open' dose-rate of 280 cGy/h, assist No 1 Observer to extend the probe unit.
3. If, exceptionally, the dose-rate rises to 2800 cGy/h, a further withdrawal of the probe unit to a position where a one-hundredth reading is obtained, is to be carried out.
4. If further bursts occur carry out the appropriate tasks (Part F Section 3.2).

DECONTAMINATION

5. If it is necessary to leave the Post for operational reasons during fall-out, decontamination must be carried out before re-entering the monitoring room (Annex S). If GZI papers have been changed the light-proof satchel containing the exposed cassettes is to be passed through the doorway into the monitoring room.

REFERENCES

6. Annex L2 The Ground Zero Indicator
Annex L3 The Fixed Survey Meter
Annex Q Post Ventilation
Annex S Decontamination at Posts

