

BRIEF FOR SIZEWELL SSG - RIMNET GAMMA DOSE RATE MONITORS

Link to SSG Action 2326

To provide information about RIMNET monitors, whether they monitor in real time, what radionuclides they monitored and whether they would remain in operation in the event of significant incident

The RIMNET monitors that have been deployed around Sizewell are a Gamma Dose Rate sensor that uses a Geiger Muller tube to detect counts and provide gross gamma radiation reading for all radionuclides. The device is not a spectrometric monitor, ie used to identify radiation levels for specific radionuclides. It is intended to record background dose levels and to give early warning of increases in background dose levels

The sensors monitor in real time, collecting counts over a 10 minute period and recording it. Such that every hour, 6 x 10 minute readings are returned to the national database managed by RIMNET.

In the event of readings exceeding a pre-set level, 0.2 uGy/h, an alert message is transmitted to RIMNET. Alert messages will be sent if the instantaneous (5s average) radiation level exceeds 0.25 uGy/h. So alarm and alert are two levels of detection limit. Alarm would happen at every 10 minute and alert instantaneously

The unit is designed and tested to operate in high levels of background radiation and would continue to work to levels in excess of 18mGy/hr. .Maximum reading is nominally 3mGy/h, but will operate up to 18mGy/h. There is no reduction in readings if the radiation level exceeds the maximum measurable range. The device is tested periodically in a Gamma cell where its calibration is checked.