

**IRR99 Requirements**

**HSE NOTIFICATION LEVEL:** for work ..... **100 MBq**  
 for inadvertent release or spill .....**100 GBq**  
 for loss or theft .....**1 GBq**

**CONTROLLED AREA** needs to be considered if activity exceeds .....**420 MBq**  
 (see below for consideration of supervised area limits)

**SUPERVISED AREA** will be required if activity exceeds ..... **100 MBq**

**Supervised Area Limits**

Grade C lab - non-volatile work - up to 1.7 GBq  
 - volatile work in FC - up to 420 MBq

Grade B lab - non-volatile work - up to 17 GBq  
 - volatile work in FC - up to 4.2 GBq

**ANNUAL LIMIT OF INTAKE (ALI)** ..... **14 MBq**  
 (Most restrictive one given, equivalent to dose of 20 mSv)

**Special Considerations and Monitoring**

As P-33 is easily shielded by ordinary glassware and plasticware, and because gloves, clothing and the dead layer of skin will stop most of the betas, it can be argued that the instantaneous dose rates can always be kept below 7.5 μSvh<sup>-1</sup> for the whole body and 75μSvh<sup>-1</sup> for the hands considering the small quantities likely to be used in the University. As an added precaution dispensing of stock material should be carried out behind a perspex screen. Because of the low dose-rates and low toxicity the amount that can be handled at any one time in a non-designated area will be 100 MBq. However, always remember to segregate work with trace amounts from work with large quantities of material.

All areas where radioactive work takes place, including non-designated areas, must be registered with Safety Services. Irrespective of the amounts being handled, precautions must be taken, as there is the responsibility to keep doses as low as reasonably practicable. In order to meet this requirement, strict adherence to the laboratory rules is essential, and monitoring for contamination should be performed on a regular basis to ensure that contamination is being kept below 70 Bq cm<sup>-2</sup>. Expected monitor responses at this level are as follows:-

Approx Counts above bg (70Bq cm <sup>-2</sup> )	Old Mini E	New E	EL	EP15
	33	56	123	101

It is intended that each monitor will have advised action levels marked on it.