

SUBSECTION NO: 3.3.1 - AIRBORNE DISCHARGES

1. APPLICABILITY

These Limiting Conditions apply at all times.

2. OBJECTIVE

The objective of these Limiting Conditions is to protect people from the harmful effects of ionising radiation.

3. LIMITING CONDITIONS

3.1 Tritium emissions from HIFAR (combined stacks) shall not exceed the values given below for any one period.

<i>Annual</i>	52 250 GBq
<i>Quarterly</i>	26 125 GBq
<i>4-weekly</i>	10 450 GBq

4. SURVEILLANCE REQUIREMENTS

4.1 Stack monitoring is read on a weekly basis.

4.2 Instruments shall be calibrated annually.

5. ACTIONS

5.1 If the Limiting Condition is not met, action shall be taken immediately to bring the discharges within acceptable levels if practicable.

5.2 The event shall be reported to ARPANSA within 24 hours.

5.3 If the annual, quarterly or 4-weekly notification levels (see below) are exceeded, the situation shall be investigated and reported to ARPANSA.

6. BASIS

It is essential to protect members of the public from the potentially harmful effects of radiation. The statutory limit for members of the public is 1 mSv /y. This is the safety limit. The limit on emissions above is derived from the constraint. The public dose constraint could be met or exceeded if all airborne discharges from all stacks were emitted at ten times the notification level. These values in the LC in part 3.1 above are values of 5 times the notification level and therefore provide additional margin of safety. These values are also consistent with paragraph 6 and 7 of the Discharge Authorisation. Conformance with the constraint ensures the statutory limit will not be exceeded.

Informative note: This LC is monitored by conformance with the airborne discharge authorisation which requires that unexpected releases (i.e. levels exceeding the notification levels) be investigated and reported to ARPANSA. The notification levels correspond to ALARA optimisation levels (if emitted for all nuclides from all stacks at the LHSTC). The discharge authorisation is issued by ARPANSA as Section 2.4 (Authorisations Applying to the Organisation), Part 2 (Organisational Licence Conditions, ANSTO), Licence Conditions Handbook, RB-STD-24-01 (Rev.1, 31 May 2001). The notification levels for tritium for HIFAR are Notification Levels for HIFAR Stacks

ANSTO HIFAR QMS	<i>LIMITS AND CONDITIONS</i> RADIOACTIVE DISCHARGES	LC 3.3 Rev 0 Page 3 of 3
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	<i>Stack 15A</i>	<i>Stack 15M</i>
<i>Annual</i>	<i>10,000 GBq</i>	<i>450 GBq</i>
<i>Quarterly</i>	<i>5,000 GBq</i>	<i>225 GBq</i>
<i>4-weekly</i>	<i>2,000 GBq</i>	<i>90 GBq</i>

7. REFERENCES

- [1] HIFAR OLC 4.15, Rev 3, Radioactive Discharges, 2006 (to be superseded)

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