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HIFAR Facility Licence Application Part B(6)

ANSTO/06/749/FP-6



EMERGENCY PLAN FOR THE HIFAR FACILITY

(REV. 0)

Prepared By

Australian Nuclear Science and Technology Organisation

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Emergency Plan for the HIFAR Facility (rev. 0)

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1 PURPOSE AND SCOPE

The purpose of this Emergency Plan is to describe the arrangements to respond to any incident or emergency at the HIFAR facility during the period that this licence remains in force.

This Plan has been prepared for the safe management of the facility (particularly during any incident or emergency) and as part of the "Possess or Control" Licence Application to replace the existing HIFAR Operating Licence, following the permanent shutdown of the reactor (refer to Part A of the Licence Application for further details).

This plan should be read in conjunction with the other plans and arrangements for the management of safety in the facility.

2 RESPONSIBILITIES

ANSTO, as the licence holder, has responsibility for the management of the HIFAR facility. The Executive Director of ANSTO has delegated responsibility for the safe management of HIFAR to the General Manager, Technical Services and Facility Management (TS&FM) during the period that this licence remains in force. The Operating Organisation for this phase with roles, responsibilities and lines of communication of key personnel is described in detail in the Effective Control Plan.

The General Manager, Technical Services and Facilities Management is the Licence Nominee for HIFAR and has overall responsibility for the maintenance of and safety of activities undertaken in HIFAR at all times, consistent with ANSTO policies and general arrangements. The Nominee is delegated to make, amend or vary the application in the name of ANSTO, pursuant to paragraph 34(a) of the ARPANS Act 1998 and regulation 39 of the ARPANS Regulations 1999.

The General Manager, Technical Services and Facilities Management has delegated responsibility for implementing these Plans to the Facility Manager. The Facility Manager is responsible for planning and managing resources to ensure the safety of activities undertaken in HIFAR and the effective maintenance and control of HIFAR (TSFM Procedure DHF 001 – "Quality Management Planning – De-fuelled HIFAR Facility" [1] and Procedure NHP 1.2 – "Organisation, Responsibilities and Authority". [2]

3 EMERGENCY ARRANGEMENTS

The Emergency Arrangements at HIFAR include the ANSTO Response Plan and the facility-specific arrangements. These are described below.

3.1 ANSTO Response Plan

The ANSTO Site emergency arrangements include the ANSTO "Response Plan for Accidents and Incidents at ANSTO/LHSTC" [3] and other supporting ANSTO OHSE Standards and Practices such as Emergency Planning Standard, General Arrangements, Standing Operating Procedures (SOP's) and Exercises.

The ANSTO Response Plan identifies responsibilities of the Site Emergency Organisation and the Emergency Services Organisations in responding to accidents and incidents at the LHSTC. Response to the on-site component of any accident or incident is dealt with in this Plan, together with the support from ANSTO to the Emergency Services Organisations if off-site radiological advice, technical assistance and monitoring are required.

The ANSTO Response Plan was developed to ensure that there are arrangements in place to manage all hazards, to minimise injuries to persons, to minimise loss of life and/or property, to prevent or minimise the spread of any on-site incident to off-site, and to restore LHSTC to normal operations in a timely and orderly manner.

The ANSTO Response Plan:

- identifies responsibilities of various personnel in the ANSTO emergency organisation and provides arrangements to co-ordinate the response by ANSTO and Emergency Services Organisations to on-site incidents at the LHSTC;

- provides arrangements for ANSTO to provide support in the form of advice, technical and practical assistance, and availability of facilities and systems to Emergency Services Organisations for incidents with off-site consequences; and
- provides arrangements to keep the public, the Sutherland Shire Council, the media, the Australian Radiation Protection and Nuclear Safety Agency and other organisations fully informed of significant incidents that require a co-ordinated response by NSW Emergency Services Organisations.

Site event response staff are required to investigate alarms and assess the safety for staff to return after an alarm. The local (HIFAR) emergency procedures interface with the ANSTO Response Plan for any Accidents and Incidents at ANSTO/LHSTC to address any emergency at the HIFAR facility (see section 3.2).

3.2 HIFAR Facility-specific Emergency Procedures

In addition to the ANSTO-wide site arrangements (i.e., the ANSTO Response Plan and supporting SOPs), there are local facility-specific emergency procedures under HIFAR Procedure NHP 9.2.25 – “Response to Incidents in the HIFAR Area” that were applicable during the operational phase of the HIFAR facility which call for the above site emergency arrangements, if required, depending on the severity of an emergency.

With the completion of the initial Closure Activities (which included unloading/removal of the fuel elements and D₂O from the former reactor and their subsequent removal from the RCB), a significant portion of the hazards have also been removed, with fuel element safety and criticality no longer being relevant (see the Safety Analysis Report for the HIFAR Facility in Part C of this licence application).

During the period that this licence remains in force, there will be no significant hazards that could credibly cause a risk to people outside the facility. The emergency procedure requires that the facility be evacuated if (a) there is a tritium alarm (b) if the ventilation system fails; or (c) if there is a fire. This is implemented in accordance with QMS NHP 9.2.25 – “Response to Incidents in the HIFAR Area” [4].

During the period that this licence remains in force, the HIFAR emergency procedure will be used, as applicable, but will be progressively amended to suit changing conditions. The approval of the CEO of ARPANSA will be sought for any amendments to that procedure which have significant implications for safety.

The existing emergency arrangements are more than adequate for the de-fuelled HIFAR facility during the period that this licence remains in force.

4 INTERNATIONAL BEST PRACTICE

The existing HIFAR emergency procedure which will remain in force during the Possess and Control period is consistent with international best practice as noted in the International Atomic Energy Agency (IAEA) guidance documents [5]. The ANSTO response plan which includes the SOPs, periodic exercises, co-ordination with the NSW Emergency Service Organisations is consistent with the IAEA’s Emergency Operating Procedure (EOP) [6].

5 REFERENCES

- 1 TSFM Procedure DHF 001 (Rev. 0) – “Quality Management Planning – De-fuelled HIFAR Facility”
- 2 HIFAR Procedure NHP 1.2 (Rev. 11) – “Organisation, Responsibilities and Authority”
- 3 ANSTO Response Plan for Accidents and Incidents at ANSTO/LHSTC, September 2005
- 4 HIFAR Procedure NHP 9.2.25 (Rev 6) – “Response to Incidents in the HIFAR Area”
- 5 International Atomic Energy Agency (IAEA), Safe Enclosure of Nuclear Facilities During Deferred Dismantling, Safety Reports Series No 26, IAEA Vienna 2002
- 6 International Atomic Energy Agency (IAEA), Development and Review of Plant Specific Emergency Operating Procedures, Safety Reports Series No 48, Vienna 2006