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Australian Submarine Agency

ASA

Emergency Management

Controlled Industrial Facility (HMAS *Stirling*)
ARPANSA Construction Licence
Technical Overview

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List of Acronyms

ARPANSA	Australian Radiation Protection and Nuclear Safety Agency
ASA	Australian Submarine Agency
AUKUS	The trilateral security partnership between Australia, United Kingdom and the United States of America
CIF	Controlled Industrial Facility
HMAS	His Majesty's Australian Ship
IAEA	International Atomic Energy Agency
SRF-West	Submarine Rotational Force - West

Emergency Management

Section 1 - Introduction

- 1.1 This Technical Overview provides general information on emergency management as it applies to the Controlled Industrial Facility (CIF) at HMAS *Stirling*.
- 1.2 This Technical Overview addresses the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) requirements detailed in Section F of the ARPANSA – Form -1797 v11.1 dated November 2022.
- 1.3 This Technical Overview contains information submitted to ARPANSA developed using the Regulatory Guide - Plans and Arrangements for Managing Safety (ARPANSA-GDE-1735), ARPANSA's *Guide for Radiation Protection in Emergency Exposure Situations (2019)*, Radiation Protection Series (RPS G-3) and the International Atomic Energy Agency's (IAEA) *Preparedness and Response for a Nuclear or Radiological Emergency (GSR Part 7)*.
- 1.4 This Technical Overview outlines emergency preparedness and response procedures during construction of the CIF. This Technical Overview also includes the concepts considered for the development of the HMAS *Stirling* Emergency Preparedness and Response Plan as part of future licence and regulatory requirements, including the operational license for the CIF. The HMAS *Stirling* Emergency Preparedness and Response Plan is part of a framework that will be revised as part of a broader emergency management strategy. The outcome of the assessment is that an emergency incident at the CIF will have no impact to workers, the public or the environment.
- 1.5 This Technical Overview is not a standalone document and is to be read in conjunction with the other ASA technical overview documents.

Section 2 – Emergency Legislation, Plans, Procedures and Preparedness

Emergency Legislation

- 2.1 The CIF Emergency Management Plan incorporates a number of Federal and State emergency radiation and work health and safety legislative requirements as well as integration with local, district and state emergency management plans, including:
 - a. *Work Health and Safety Act 2011*
 - b. *Western Australia Emergency Management Act 2005*

- c. *Western Australia Emergency Management Regulation 2006*
- d. *Western Australia Radiation Safety Act 1975*
- e. *Western Australia Radiation Safety (General) Regulations 1983*
- f. *HMAS Stirling Emergency Management Plan*
- g. *Defence Operations Manual (OPSMAN1): Visits to Australia by Nuclear-Powered Warships (Edition 11)*
- h. *[Western Australia] State Hazard Plan – HAZMAT Annex A Radiation Escape from a Nuclear Powered Warship*
- i. *[Western Australia] State Emergency Management Plan*
- j. *[Western Australia] State Emergency Management Plan for Nuclear Powered Warships – April 2010.*

Hazard Assessments

- 2.2 Hazard assessments for scenarios including normal operations and abnormal/accident conditions are covered in the technical overview for the *Safety Analysis Report*. This includes reference accident modelling.

Overarching Emergency Preparedness and Response Framework

- 2.3 The existing *HMAS Stirling* Emergency Management Plan is comprehensive, well established, and includes emergency preparedness and response arrangements across the full spectrum of planned operations in a hazardous environment. The extant *HMAS Stirling* Emergency Management Plan will be updated to support effective response arrangements for the CIF, and wider requirements in support of SRF-W and visiting submarines.
- 2.4 *HMAS Stirling's* emergency preparedness and response framework will be revised as part of a broader general emergency management strategy. To deliver this outcome, an Emergency Management Strategy for *HMAS Stirling* is being developed as well as the following suite of emergency preparedness and response documents and plans:
- a. Emergency (Nuclear) Management Strategy
 - b. Emergency Preparedness and Response Policy document
 - c. Emergency Preparedness and Response Concept of Operation
 - d. Emergency Preparedness and Response Manual and supporting Standard Operating Procedures
 - e. Site specific plans and procedures (updated *HMAS Stirling* Base Emergency Management Plan).

- 2.5 The Emergency Preparedness and Response Concept of Operation (currently in draft) will be a trilaterally agreed document highlighting key emergency preparedness and response principles. This document will outline the emergency preparedness and response arrangements, infrastructure, organisational structure, and supporting policy for Submarine Rotational Force – West (SRF – West), which will include CIF operations.

Emergency Response Organisation Structure and the Emergency Control Centre

- 2.6 The HMAS *Stirling* Emergency Control Centre will be the primary location to prepare for and manage any major emergency event occurring at the CIF.

Emergency Procedures

- 2.7 During the construction of the CIF, there will be no radioactive waste produced or stored at the facility. Emergency procedures for construction are detailed in Section 4 - Controlled Industrial Facility Emergency Preparedness and Response Design Characteristics of this Technical Overview.

Emergency Preparedness – Operations and Training

- 2.8 Permanent members of the Emergency Preparedness and Response Planning Team will design and deliver the future suite of exercises and associated training for staff and participants across a range of emergency scenarios. The Emergency Preparedness and Response Planning Team will ensure all training and exercises meet Work Health and Safety legislative requirements.

Section 3 - Controlled Industrial Facility Emergency Preparedness and Response Design Characteristics

- 3.1 CIF emergency preparedness and response design characteristics and performance requirements were developed to identify emergency preparedness and response elements requiring incorporation into the CIF's design.
- 3.2 CIF Emergency Preparedness and Response Design Characteristics and derived design elements will support achievement of the following:
- Planning for a radiological emergency
 - Preparing for a radiological emergency
 - Declaration of an emergency
 - Responding during a radiological emergency
 - Transitioning from a radiological emergency
 - Termination and recovery from a radiological emergency.

- 3.3 The process of factoring emergency response arrangement into CIF design utilised ASA technical expertise as well as other suitably qualified experienced personnel in the ASA to derive associated design elements.
- 3.4 This process now includes robust governance arrangements to ensure non-related design changes considered emergency preparedness and response, and will also include testing and inspecting processes to validate systems function to their required standard in due course.

Section 4 - Emergency Plans, Procedures and Preparedness during Construction Activities

- 4.1 In the event of an abnormal/accident or emergency requiring an escalation in response, HMAS *Stirling*'s emergency response arrangements detailed in the HMAS *Stirling* Emergency Management Plan will apply.
- 4.2 HMAS *Stirling*'s emergency management organisation has existing interfaces with local and state emergency services. HMAS *Stirling* maintains close links with local emergency services through the Rockingham Local Emergency Management Committee and Bushfire Management Committee. Emergency Services regularly conduct familiarisation tours of the base and participate in base wide emergency exercises as detailed in the HMAS *Stirling* 3 Year Emergency Management Exercise Plan. The relationship between Defence and Department of Fire and Emergency Services, Western Australia, has been formalised through a Memorandum of Understanding.