

**ARPANSA Regulatory Assessment of the Replacement Reactor Construction Application**

9 July 2001 - Reactive Review Comments, Questions and Issues

PSAR Chapter 20 Emergency Planning And Preparedness

Question reference	Section number and name	Topic	ARPANSA Comment, Issue or Question and ANSTO's Response
20.1.	20.1 Introduction	An outline of Emergency Preparedness is not identified as being an objective for this chapter even though preparedness activities are listed under the areas discussed.	Please clarify the objectives of this chapter with respect to emergency preparedness.
			Response: The chapter provides a description of the emergency planning and emergency arrangements for the reactor facility, as appropriate at this early stage of the project. It does not detail the emergency preparedness arrangements as these will be the subject of an application for an operation authorisation. However please include in the second objective "and emergency arrangements" after "emergency plan".
20.2.		Item b) under areas discussed states 'The emergency actions to be taken in the event of an emergency including:' and then goes straight onto item c).	Please clarify this section. What (if anything) is missing from item b)?
			Response: Nothing is missing – this is a formatting problem. Item c) should be (i) and the others renumbered.
20.3.		Referencing out to other chapters - 'Specific systems (eg communications) are discussed in other chapters of the PSAR.'	Please specify exactly what systems related to emergency planning and preparedness are referred out to other chapters and state the appropriate references.

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			<p>Response: Many chapters include information relevant to emergency preparedness but the principal chapters are: Chapter 4, that contains building system details and layouts; Chapter 12, that contains details of radiation controlled areas and monitoring equipment; Chapter 10, that describes communication systems, fire protection, emergency ventilation responses; and Chapter 8, that contains details of instrumentation and control room functions. In addition Chapter 9 provides information on electrical systems, both for normal operation and in emergencies.</p>
20.4.	20.1.1 LHTSC Emergency Plans	A Construction Emergency Plan (Con EP) is referred to but has not been appropriately referenced or provided. Use of the future tense implies that the Con EP does not currently exist.	Please provide a copy of the Construction Emergency Plan.
			<p>Response: This is a standard Construction (non-radiological) emergency plan, which is being produced following discussions with NSW WorkCover and ComCare. A copy will be provided to ARPANSA by 16/8/01.</p>
20.5.		It is stated that 'ANSTO arrangements will be altered to include notification to the contractor of any incident on the LHTSC site that might affect the reactor facility construction site'.	Which specific arrangements will be altered? How will contractors notify ANSTO of any incident on the reactor facility construction site that may affect the rest of site?

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			<p>Response: The ANSTO operating procedures specify the requirements to notify people within the buffer zone. These will be modified to include the construction site personnel. All interactions between ANSTO and the contractor will be through the person acting in the role of the contractor's Emergency Coordinator and the ANSTO Emergency personnel (as described in the ANSTO plans).</p>
20.6.	20.1.1 LHTSC Emergency Plans (continued)	<p>During Stage A commissioning, the LHSTC EP arrangements will apply. At Stage B commissioning (active commissioning), a Commissioning Emergency Plan (Com EP) will apply and will evolve during the subsequent stages of commissioning. The Com EP is a sub-plan of the LHSTC Plan.</p> <p>For Operation a Reactor Facility Emergency Plan will apply and equivalent to the current arrangements for HIFAR.</p> <p>This section the goes on to say that 'This Chapter summarises the emergency planning and preparedness foreseen for the operation of the Reactor Facility' and that 'a brief description of the Commissioning Emergency Plan covering Stage B and C hot commissioning is also provided here and its relation to commissioning is discussed in Chapter 15</p>	<p>Where is the brief description of the Commissioning Emergency Plan?</p> <p>Stage C commissioning is not discussed in the preceding paragraphs and is suddenly introduced. Is there a separate plan for Stage C commissioning? Does this evolve from Stage B commissioning? Please clarify.</p> <p>Considering that this Preliminary Safety Analysis Report is in support of a Licence for an authorisation to construct the RRR, ARPANSA requires more details on the plans and arrangements relating to the Construction EP and Commissioning EP. Please provide.</p>

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			<p>Response: A description of the transition between the current arrangements and the final arrangements when the replacement reactor is operating is in the Application (LBD-03) and Section 20.1.1. For construction and Stage A commissioning, there will be no radiological or nuclear hazards.</p> <ol style="list-style-type: none"> <li>1. A brief description of the Commissioning Plan is in Section 20.2.5.</li> <li>2. As stated in Section 20.1.1, the plan will evolve through the various stages.</li> <li>3. The Construction EP (which applies to non-radiological hazards) will be supplied. The Commissioning EP will be developed for active commissioning and will be submitted as part of the application for an operation authorisation.</li> </ol>
20.7.	20.1.2 The Reactor Facility Emergency Plan	The PSAR states that 'The Reactor Facility Emergency Plan will cover all foreseeable accident conditions .... including accidents analysed in Chapter 16, and other non-nuclear events for emergency planning purposes.'	<p>Please clarify the use and/or relationship of the Reference Accident used in the Application to prepare a site for the RRR with the accidents used in the Emergency Plan.</p> <ol style="list-style-type: none"> <li>1. Which other 'non-nuclear events' will be covered in the Emergency Plan?</li> </ol>
			<p>Response: The EP for the operating reactor facility will provide for all identified accidents, as assessed in the safety analysis. The Reference Accident was developed in the context of the siting application, but is superseded when the actual design is known. Please see the chapter 16 discussion of this issue.</p> <p>Other non-nuclear events covered are as in the current ANSTO plans and encompass events such as fire, bushfire, gas escape, heavy object drop, bomb threat etc.</p>

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20.8.	20.10 Referenced documents for Emergency Planning and Preparedness	IAEA TECDOC 940 is referenced.	Please review and clarify the references used in this chapter for accuracy and completeness. For example, should TECDOC 940 be TECDOC 953? Other IAEA TECDOCS such as IAEA-TECDOC-955 Generic Procedures for monitoring in a nuclear or radiological emergency and IAEA-TECDOC-1092 Generic assessment procedures for determining protective actions during a reactor accident would be relevant to this section.
			Response: We agree that TECDOC 940 should be TECDOC 953. This is included in the errata. These references were not meant to be comprehensive, but only relate to documents directly used in developing the chapter. ANSTO considered the other documents, IAEA-TECDOC-955 Generic Procedures for monitoring in a nuclear or radiological emergency and IAEA-TECDOC-1092 Generic assessment procedures for determining protective actions during a reactor accident, but these are rather general.