



Australian Government



Nuclear-based science benefiting all Australians



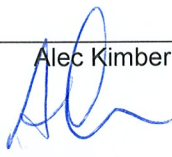
ANSTO Camperdown Decommissioning Licence Application
Document AC-D-LA-E6a Rev 1

ANSTO CAMPERDOWN FACILITY DECOMMISSIONING EFFECTIVE CONTROL PLAN

**Prepared By
Australian Nuclear Science and Technology Organisation**

August 2010

Australian Nuclear Science & Technology Organisation
ANSTO Camperdown Facility Decommissioning Effective Control Plan

REVISION SHEET		Document AC-D-LA-E6a Rev 1		
		Print name, date and sign or initial		
Revision Number	Description of Revision	Prepared	Checked/ Reviewed	Approved
0	Original issue	Basil Ellis	Alamgir Kabir	Alec Kimber
1	Revised the report to reflect SAC Assessors' comments.	Basil Ellis  24/8/10	Alamgir Kabir  24/08/10	Alec Kimber  30/08/2010

CONTENTS

1	PURPOSE AND SCOPE	4
2	ACCOUNTABILITY OF APPLICANT.....	4
3	ORGANISATIONAL ARRANGEMENTS	4
4	MANAGEMENT SYSTEMS.....	10
5	RESOURCES	10
6	REFERENCES	11

1 PURPOSE AND SCOPE

The purpose of this *Effective Control Plan* (document number AC-D-LA-E6b, hereafter called "the plan") is to outline the management arrangements that are in place within ANSTO's Engineering and Capital Programs (ECP) division for the purpose of decommissioning the IBA "Cyclone 30" 30MeV Cyclotron (known as the National Medical Cyclotron) – a Prescribed Radiation Facility and the Radiopharmaceuticals Operations (Camperdown) – a Nuclear Installation, at Camperdown, NSW. Both facilities are authorised under combined licence F0044-5A, 5B, 5C. For convenience, these two facilities are referred to as "the facility" in this plan.

The scope of this plan are accountability, organisational and management issues required by the ARPANS legislation [Ref 1, 2] and the ANSTO business arrangements. It specifically covers the issues referred to in the ARPANSA licensing guidelines relating to the review of plans and arrangements [Ref 3]. The effective control issues are addressed in the following headings in this plan.

This plan should be read in conjunction with the other plans and supporting documents comprising the decommissioning licence, specifically AC-D-LA-E6b *Safety Management Plan* [Ref 4].

2 ACCOUNTABILITY OF APPLICANT

The CEO of ANSTO is the applicant to ARPANSA for the decommissioning licence authorisation being sought. The responsibility for maintaining effective control and for ensuring compliance with the ARPANS legislation has been delegated to the Nominee who is the General Manager of Engineering and Capital Programs (ECP). The Nominee is assisted by the Facility Officer for the Camperdown Facility who is also the Works Co-ordinator for the decommissioning project.

The staff and monetary resources necessary to safely perform the decommissioning work and meet the ARPANSA requirements have been approved by senior management under the ANSTO project processes. These resources have been provided to the Major Projects Delivery Office (MPDO) in the ECP Division. A Project Manager and project team have been appointed, including the Works Co-ordinator, who together have control over the decommissioning.

There are several processes that will ensure ANSTO management remain informed and aware of safety during the decommissioning project. Management will be informed by review of this decommissioning licence application and by the safety approval process for the project which is described in AC-D-LA-E6b *Safety Management Plan*. The normal project reporting will include safety and this will be discussed at safety meetings. The event response system, described in the Safety Management Plan, will rapidly inform management of safety incidents and accidents.

ANSTO follows the ARPANSA legislation requirements for reporting including annual and quarterly reports and the requirement for immediate reporting in the event of a significant incident.

3 ORGANISATIONAL ARRANGEMENTS

The high level ANSTO organisational arrangements are shown in AG2011 *ANSTO Organisation Chart* which is given here as Figure 1. Ultimate responsibility rests with the CEO who has delegated responsibilities to senior managers. The General Manager, ECP is both the delegated Nominee for the Camperdown Facility and is responsible for capital projects, including this decommissioning project. The Manager of Quality, Safety, Environment and Radiation Protection (QSERP) is responsible for safety standards and safety support, including radiation protection. The Manager, QSERP is also the Chair of the Safety Assessment Committee (SAC). The Nuclear Operations Division includes the Waste Operations group who will perform much of the decommissioning work and manage the equipment and waste. Other divisions important to the project include Human Resources, Security and Finance.

The ECP organisation chart is given here as Figure 2. In ECP, the MPDO is responsible for project staffing, planning and implementation. ANSTO has a matrix staffing arrangement whereby ECP and other staff are seconded to the project teams. Also in ECP, the Strategic Asset Programs Office (SAPO) set the project standards for governance and is central to the system of monitoring projects during execution by senior management. Other groups in ECP are the Nuclear Mechanical Services Unit which provides design and specialist services, for example staff in this unit are Approval Officers

for lifting equipment and transport packages. Systems Safety and Reliability section has safety specialists who will conduct the detailed safety assessment.

QSERP division is central to the safety arrangements for ANSTO. The division structure is shown in Figure 3. Ongoing liaison with the regulators, including ARPANSA is maintained by the Regulatory Affairs Officer in this division. The Radiation Protection Services (RPS) group has the specialist Radiation Protection Advisors (RPA) who developed the decommissioning AC-D-LA-E6c *Radiation Protection Plan* [Ref 6] and have input into the other plans. This group also provides the Health Physics Surveyors (HPS) who conduct the dose surveys and who will provide close support to the work teams. The dosimetry services are also within this group. The Occupational Hygiene and Safety Services (OHSS) section in QSERP provide specialist OHS advice and support for the project and the medical centre. This section also manages the medical centre and provides workers compensation and rehabilitation services. Safety training is also managed by this section.

The Manager of QSERP is also the Chair of the ANSTO Safety Assessment Committee (SAC) which is the review and approval body for all significant projects. The SAC approval process provides an independent review of the project plans and submission. The first step in this process is an assessment by other radiation, OHS and systems safety specialists who have not been involved in supporting the project planning and design. The submission and assessor reviews are then considered at a full meeting of the SAC.

These organisational arrangements are reviewed periodically. The most recent changes important to this decommissioning project have been an overhaul of the project processes by the establishment in ECP division of the Strategic Asset Programs Office which provides project governance standards and project monitoring processes. The MPDO has been established for the separate delivery of the projects.

The decommissioning project has been established within this framework using a matrix approach with staff drawn from ECP and other divisions. The project organisation is shown in Figure 4. The Project Manager has formed the project team and is executing the project following the MPDO procedures and with funds approved by senior management. The Works Co-ordinator is a key role with site responsibility for the decommissioning activities. The person in this role is also the Facility Officer and will report directly to the Nominee on ARPANSA licensing issues. Support and indirect supervision is provided by the RPA and other specialists. The Project Manager will deputise for the Works Co-ordinator and the Works Co-ordinator will deputise for supervisors. QSERP have reliable coverage arrangements for their RPA, HPS and OHSS support roles. Contractors will report through their supervisor / manager to the Works Coordinator.

Training of the key safety and works supervisory staff is discussed in the decommissioning *Safety Management Plan*. All staff have defined job roles and their performance is monitored through the ANSTO Performance Appraisal process.

Special organisational arrangements operate in response to a serious incident and these are described in AC-D-LA-E6f *Emergency Plan* [Ref 7].

Figure 1 Organisational chart of ANSTO

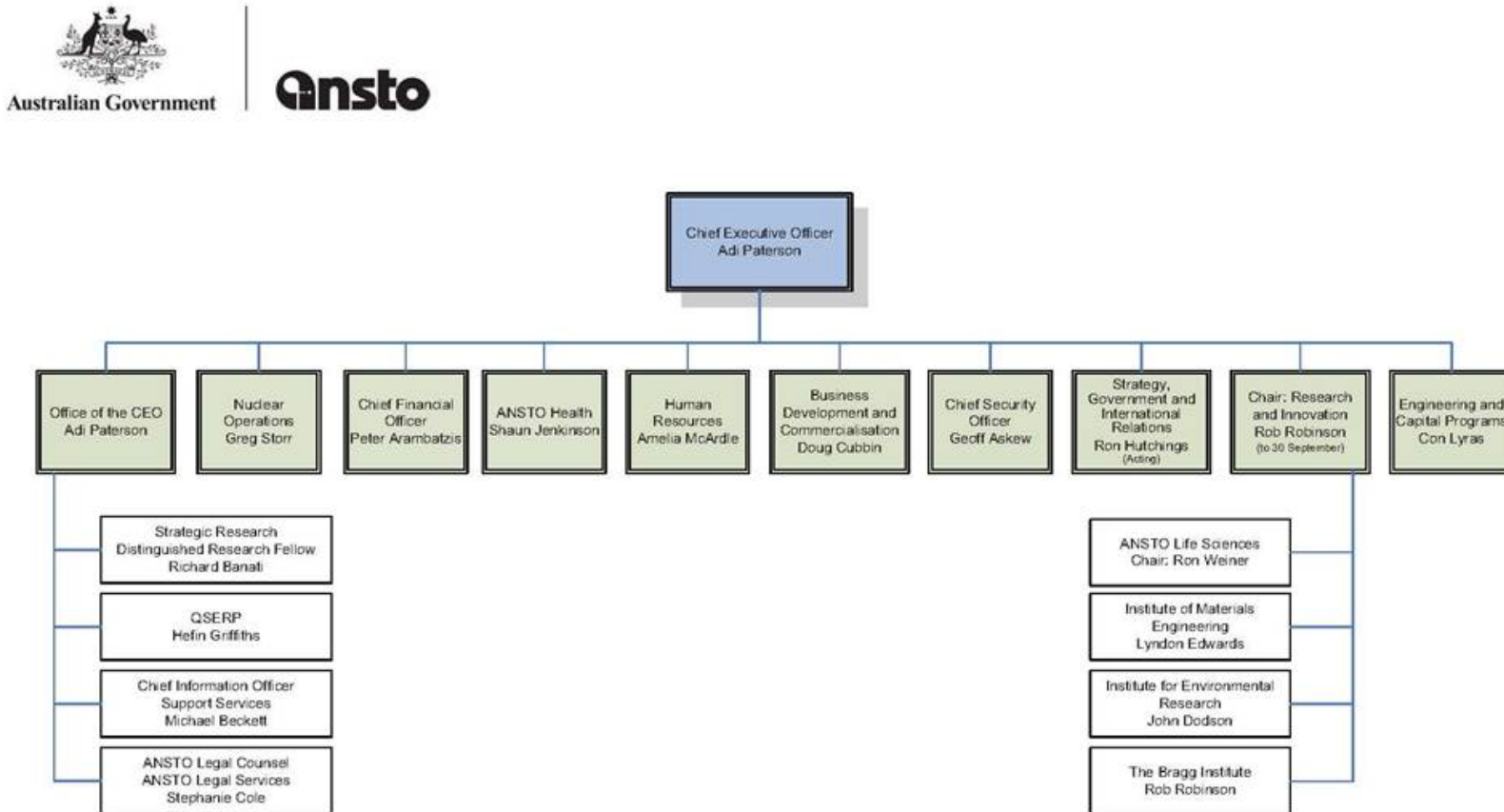


Figure 2 - Organisational chart of the Engineering and Capital Programs (ECP) Division

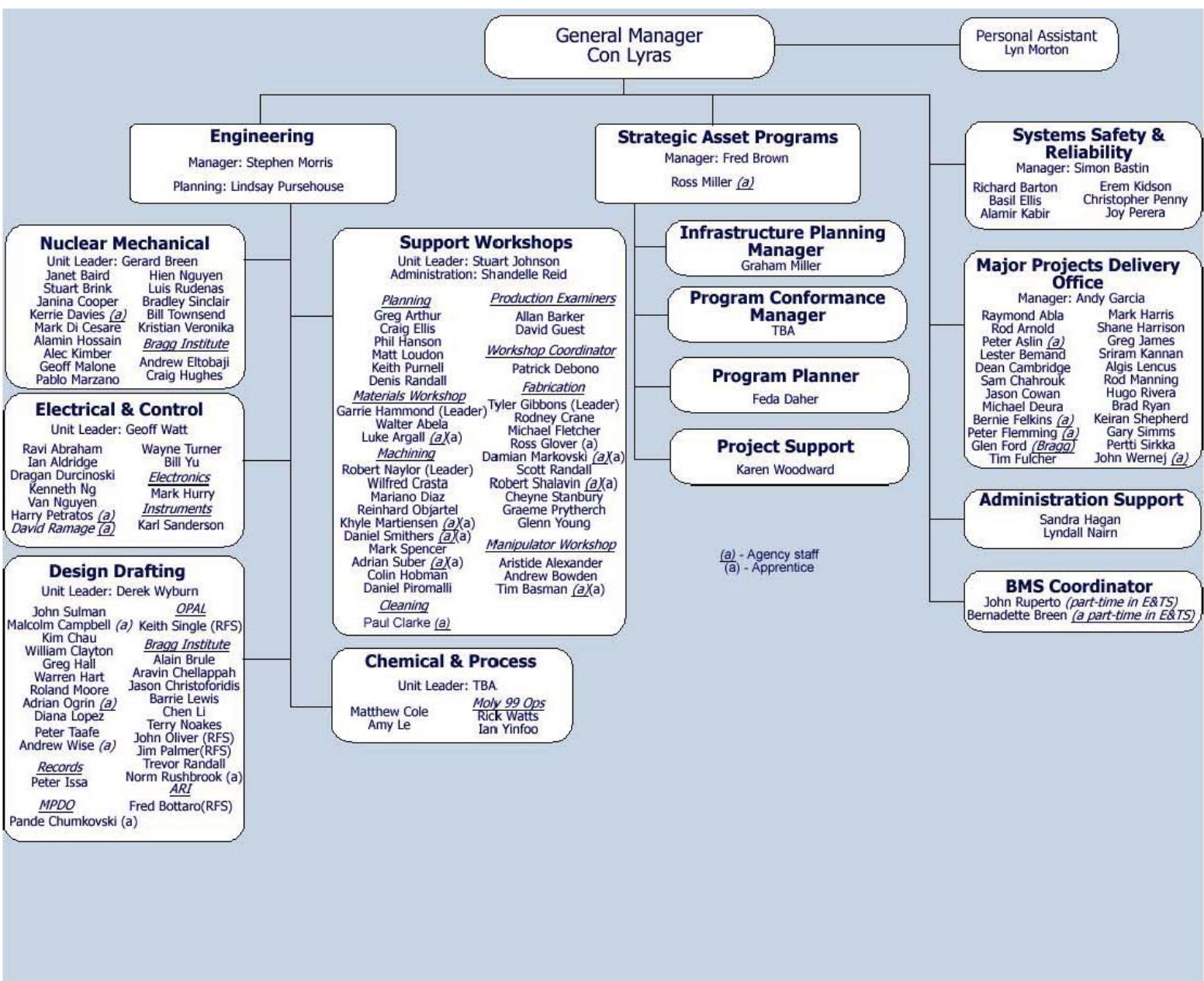
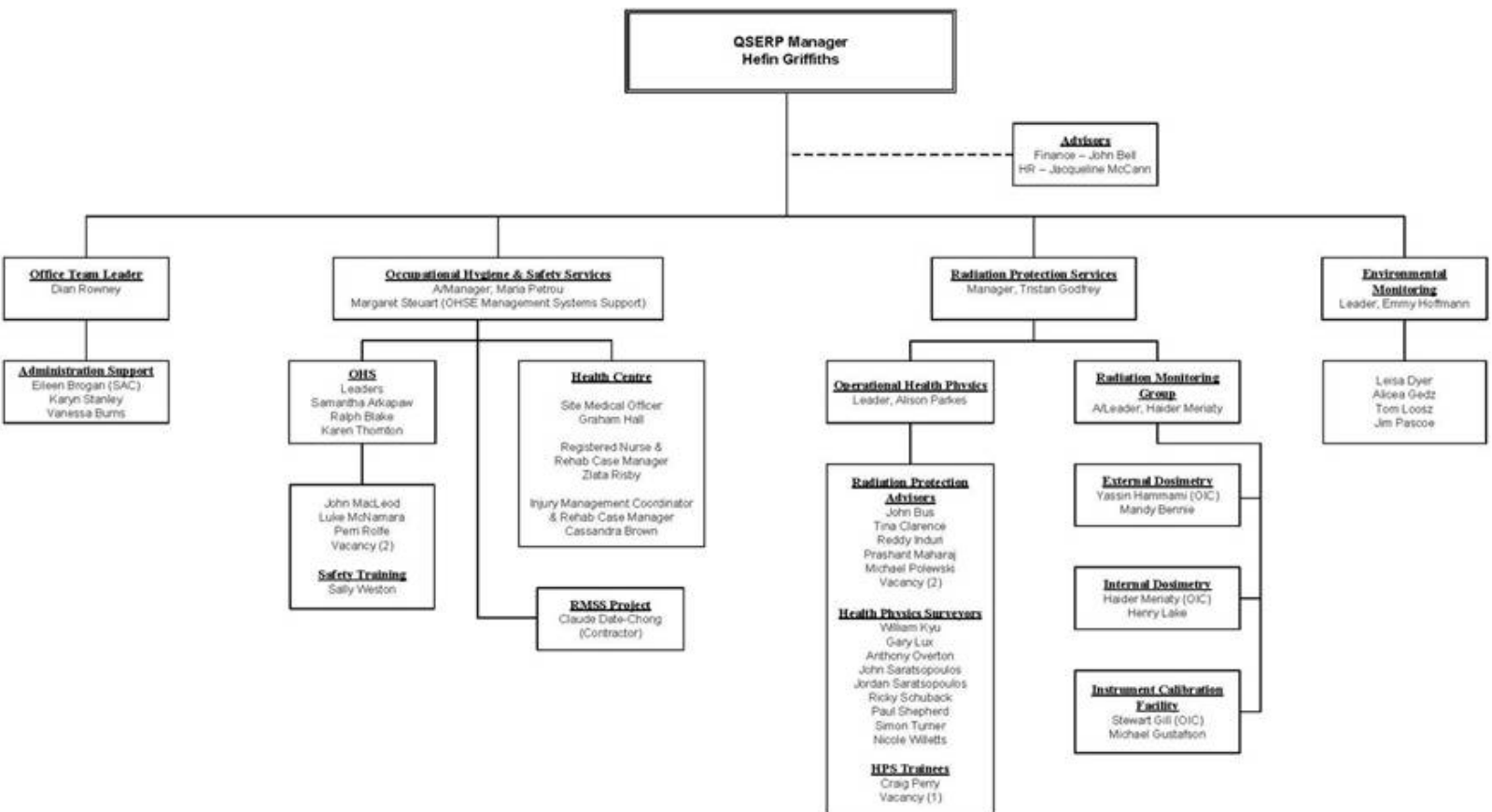
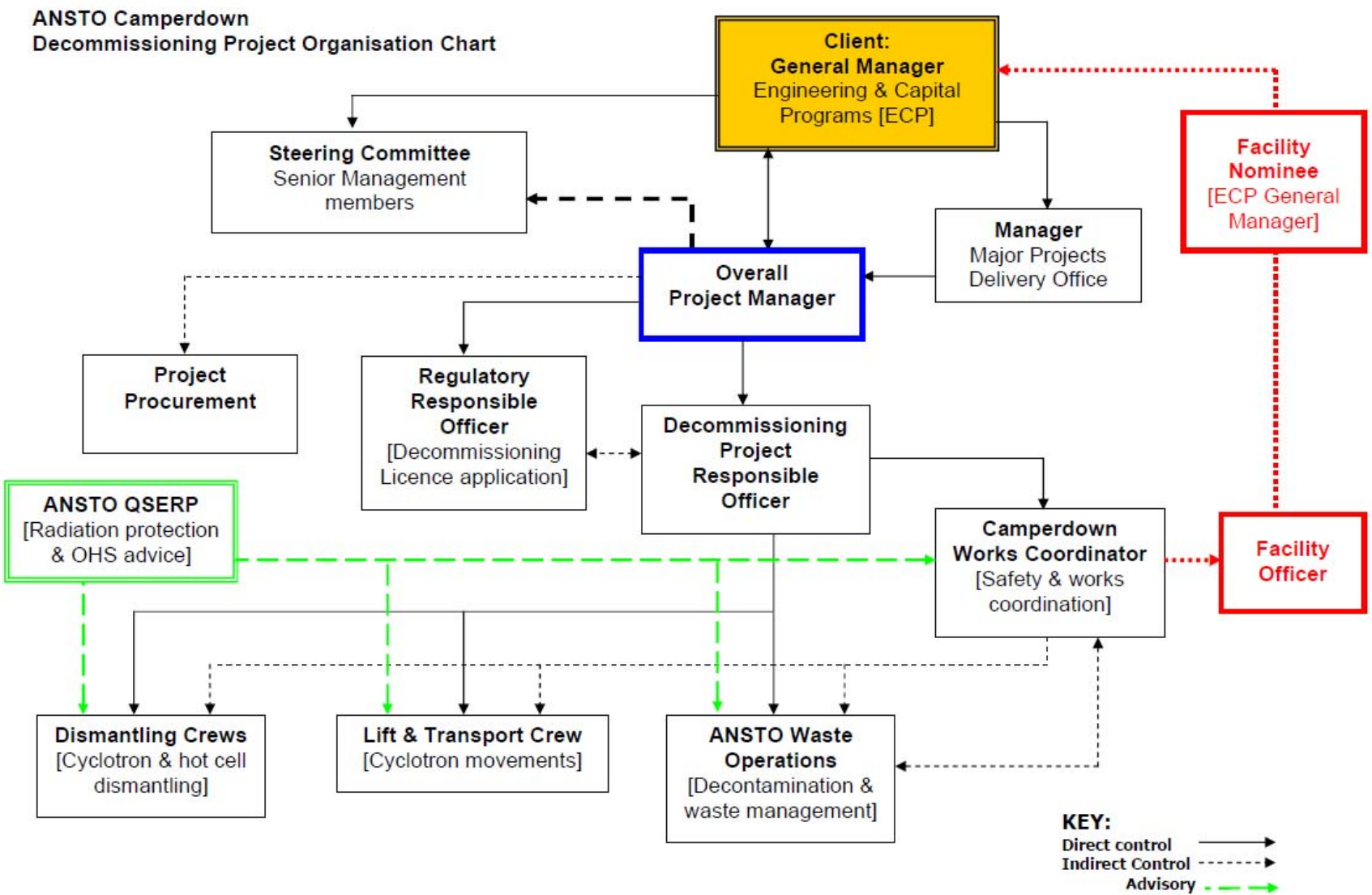


Figure 3 - Organisational chart of the Quality, Safety, Environment and Radiation Protection division



Quality, Safety, Environment and
 Radiation Protection
 as at 1 February 2010

Figure 4 - Organisational chart of the ANSTO Camperdown Decommissioning Project



4 MANAGEMENT SYSTEMS

ANSTO has policies in place relating to all aspects of its operations. The safety and environmental policy APOL 2.1 *Occupational Health, Safety and Environmental (OHSE) Policy* [Ref 8] states ANSTO's commitment to occupational health, safety and the environment and sustainability. It outlines ANSTO's actions to meet those commitments. There is also a policy which provides the framework for managing ANSTO's radioactive waste APOL 2.2 *Radioactive Waste Management Policy* [Ref 9]. Other policies, including those for security, quality, human resources and business, provide a comprehensive framework. These policies are periodically reviewed.

There are several measures in place to ensure these policies are available and understood. They are available on the ANSTO intranet which is accessible to all staff. There are regular staff forums held by the CEO and within the divisions at which safety is discussed and emphasised and this reinforces the intent of the policy. The safety training programs further expand and explain the intent of the policy.

Supporting the safety policies are the radiation safety objectives. The standard AS 2310 *Radiation Safety* [Ref 10] commits to the As Low As Reasonably Achievable (ALARA) principle to optimise radiation protection and safety. It sets dose objectives in applying the principle including an ANSTO worker annual dose constraint of 15 millisieverts and an ANSTO public annual dose constraint of 0.3 millisieverts. These constraints are below the required levels recommended by ARPANSA given in ARPANSA RFS No. 1 *Recommendations and National Standard for Limiting Exposure to Ionizing Radiation* [Ref 11].

There are objectives for general safety performance and the key performance indicators are monitored. ANSTO also has an environment monitoring program.

The documents supporting the OHSE and other policies are within certified ISO 9001 systems and the ISO 14001 system and this ensures there are procedures for document control and records management. The safety standards and requirements are contained in the OHSE Management System which is within the QSERP division's ISO 9001 system. Further information on the OHSE system and the management of safety records is given in the *Safety Management Plan*.

The effectiveness of these management systems is monitored and maintained by the audit programs required by the ISO certifications. These include both internal audits by ANSTO staff and external audits by the certifying organisation. Audit records are maintained and non-conformances and corrective actions are managed through these processes.

Training and authorisation of staff is discussed in the *Safety Management Plan*.

5 RESOURCES

The ANSTO processes for identifying the safety resource requirements are at several levels. For each potentially hazardous process or activity, a hazard identification and risk assessment following AS 2301 *Risk Management* [Ref 12] is performed which identifies the required equipment, including Personal Protective Equipment (PPE). The decommissioning licence application AC-D-LA-SA *Safety Assessment* [Ref 13] meets this need.

The *Radiation Protection Plan* identifies the necessary involvement by radiation specialists and it also sets limits to the allowable involvement of radiation workers. The risk assessments and plans are reviewed internally by the ANSTO Safety Assessment Committee (SAC).

The details relating to the employment of all safety related resources are developed during the detailed work planning. This includes the preparation of the Safe Work Method Statements (SWMS) which will identify any further resources needed. This detailed planning will ensure there are sufficient workers assigned to each task.

The ANSTO project management and approval processes for projects including this decommissioning ensure there is sufficient funding available for the necessary equipment and people resources. This is described in AR 2682: Capital Process. The funding is allocated by the ANSTO Capital Investment

Committee (CIC) comprising senior management and the projects are monitored throughout their lifecycle by the CIC.

On approval, the funds are made available to the project manager and staff. All external purchases of items and services, including additional training, are through the ANSTO Procurement section and follow the requirements of the Government Procurement Guidelines.

6 REFERENCES

1. Australian Radiation Protection and Nuclear Safety (ARPANS) Act 1998
2. Australian Radiation Protection and Nuclear Safety (ARPANS) Regulations 1999
3. ARPANSA RB-STD-15-03 *Regulatory Guideline on Review of Plans and Arrangements*, August 2003
4. ANSTO Camperdown Decommissioning Licence Application AC-D-LA-E6b *Safety Management Plan*, June 2010
5. AG2011 *ANSTO Organisation Chart*, May 2010
6. ANSTO Camperdown Decommissioning Licence Application AC-D-LA-E6c *Radiation Protection Plan*, June 2010
7. ANSTO Camperdown Decommissioning Licence Application AC-D-LA-E6f *Emergency Plan*, June 2010
8. ANSTO APOL 2.1 *Occupational Health, Safety and Environment Policy*, March 2010
9. ANSTO APOL 2.2 *Radioactive Waste Management Policy*
10. ANSTO OHSE AS-2310 *Radiation Safety*, August 2009
11. ARPANSA RFS No. 1 *Recommendations and National Standard for Limiting Exposure to Ionizing Radiation*
12. AS 2301 *Risk Management*, August 2009
13. ANSTO-T-TN-2010-9 rev 0 *Safety Assessment for the Decommissioning of ANSTO Camperdown Facility*, June 2010