

COMPLIANCE CODE FOR CLASS S1 PERMITS

1. Compliance Code Version History

Version	Date of Effect	Description
1	31/03/2016	Compliance Code first issue
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Purpose

The purpose of this *Compliance Code* is to establish a standard set of requirements for Class S1 permits to possess *nuclear material* and *associated items* issued under section 13 of *the Act*. It also sets out forms for the submission of applications, notifications and reports.

Scope

This *Compliance Code* applies to permits to possess *nuclear material* and *associated items* issued under section 13 of *the Act* identified under paragraph 3 of the Permit as a Class S1 permit. The requirements of the *Compliance Code* applies to all *nuclear material* and *associated items* in the possession of the Permit Holder except that which is declared under section 11 of *the Act* as exempt from the application of Part II of *the Act*. The documents listed in the Annex to this *Compliance Code* relate to the requirements contained in the *Compliance Code*.

2. **Plans and Procedures**

- 2.1. The Permit Holder shall maintain documented plans (approved by the *Director General*) and procedures for implementing all of the objectives and conditions in Part A through to Part D of the *Compliance Code*.
- 2.2. The plans and procedures shall specify, inter alia:
 - 2.2.1. management arrangements as per paragraph 3 of the *Compliance Code*;
 - 2.2.2. control arrangements as per paragraph 4 of the *Compliance Code*;
 - 2.2.3. the scope of activities involving *nuclear material* and/or *associated items* to which they apply; and
 - 2.2.4. the roles, responsibilities and accountabilities of all personnel required to implement the plans and procedures.
- 2.3. The Permit Holder shall notify the *Director General* of all documented changes to previously approved plans and seek approval for changes to the plans prior to the changes being implemented, if such changes:



- 2.3.1. would have a significant effect on the implementation of the requirements of this Permit; or
- 2.3.2. would lead to a departure from the specifications in one or more *Facility Attachments* or from the information contained in one or more *design information questionnaires*.

Any application shall provide sufficient information to demonstrate that the relevant requirements of the *Compliance Code* will continue to be met.

- 2.4. The Permit Holder shall review all its plans and procedures for efficiency and effectiveness during the lifetime of this Permit, or at the specific request of the *Director General*, or as required to respond to changes in circumstances, whichever is the sooner.
 - 2.4.1. Specifically, the Permit Holder shall conduct a Periodic Safety and Security Review for the [Facility reactor], report its results and complete subsequent follow-up actions in accordance with terms of reference and guidance issued by CEO ARPANSA and the Director General.
 - 2.4.2. The Permit Holder shall report to the *Director General* on its review all the other elements of the plans described in paragraph 2.1 not covered by the Periodic Safety and Security Review at least once during the term of Permit PNXXX, in a *graded approach*, and implement follow-up actions to rectify any identified deficiencies. Such reviews may be reported progressively in annual reports specified in paragraph 28.
- 2.5. The plans and procedures shall be classified and protected in accordance with the relevant *Australian Government Standard* for protective security and any *Classification Guide* issued by the *Director General*. The Permit Holder shall ensure that access to information about the plans and procedures, or auxiliary information, is restricted to those with a need to know.
- 2.6. The plans and procedures may be produced specifically to address the requirements set out in this *Compliance Code* or may be incorporated into plans compiled for other purposes. In the latter case, a separate document or table is to be submitted clearly linking Permit requirements to sections and/or page numbers within the identified documents covering the requirements.

3. Management Responsibility and Authority

- 3.1. The Permit Holder's management system for the fulfilment of the requirements of this *Compliance Code* shall encompass:
 - 3.1.1. quality management, including change management;
 - 3.1.2. risk management;
 - 3.1.3. training and awareness;
 - 3.1.4. use of good/best practice and lessons learned from experience;
 - 3.1.5. internal audit and performance assessment;



- 3.1.6. review of suitability and effectiveness of the management system; and
- 3.1.7. organisational management structure that outlines the responsibility, authority and the interrelationship of its personnel relevant to the implementation of Permit conditions.
- 3.2. The Permit Holder's management system shall provide a means to achieve the following objectives:
 - 3.2.1. sustaining compliance with all Permit conditions;
 - 3.2.2. minimising the risk of sabotage, theft and non-conformance with *Agency* safeguards;
 - 3.2.3. maintain the currency of plans, procedures and arrangements;
 - 3.2.4. ongoing availability of sufficiently trained and qualified staff; and
 - 3.2.5. timely identification, evaluation and remediation of non-compliance with the conditions of this Permit.

4. Control of Nuclear Material and Associated Items

- 4.1. The Permit Holder shall establish and maintain lists of persons granted unescorted access to *nuclear material, associated items,* and/or *associated facilities* (authorised persons). Furthermore:
 - 4.1.1. the suitability of authorised persons shall be assessed commensurate with their level of access and the sensitivity of *nuclear material* or *associated items* they will be allowed access to; and
 - 4.1.2. the number of authorised persons and the scope of their access shall be limited to that necessary to maintain approved projects or activities to which they are involved.
- 4.2. The Permit Holder shall establish measures and procedures to ensure access to *nuclear material, associated items* and *associated facilities* is only granted to:
 - 4.2.1. authorised persons;
 - 4.2.2. non-authorised persons escorted by a person authorised to escort;
 - 4.2.3. ASNO inspectors and Agency inspectors; or
 - 4.2.4. persons responding to an emergency or *security* event consistent with the Permit Holder's contingency plan.
- 4.3. The Permit Holder shall establish a system of authorised persons who will be responsible for the day-to-day control of *nuclear material* and *associated items* in approved projects or activities at *associated facilities*.
- 4.4. The Permit Holder shall identify diversion or unauthorised access scenarios for *nuclear material* and *associated items* by insiders, taking into account the sensitivity of the material and establish measures to prevent or detect such diversion.



4.5. The Permit Holder shall display signs marking out *prohibited areas* at all normal access/exit points and at intervals around the perimeter of designated *prohibited areas* such that a person approaching the perimeter from any external aspect could reasonably be expected to see the signs. Signs shall also be displayed in accordance with AS 1319-1994 (as revised or updated).

PART A – SAFEGUARDS OBJECTIVES AND REQUIREMENTS

5. The plans and procedures referred to in paragraph 2.1 of this *Compliance Code* shall include a Material Control and Accountancy (MC&A) Plan covering *nuclear material* and *associated material* during use, transport and storage that meets the specifications in Codes 3-7 of the *Facility Attachments* for each *material* balance area and meets the objectives specified in paragraph 6 of Part A of this *Compliance Code*.

6. Implementation Objectives for Material Control and Accountancy Plan:

Objective A: Assess Nuclear Material and Associated Material Flows and Locations Identifying Key Measurement Points (Flow and Inventory)

- a.1. For every project involving *nuclear material* or *associated material* including actions and materials associated with it (e.g. any transport of material to or from control of the Permit Holder), establish a formal documented process to:
 - a.1.1. assess the key measurement points for flows of nuclear material or associated material and physical inventory taking;
 - a.1.2. assess the expected losses from any anticipated handling or processing of *nuclear material*; and
 - a.1.3. categorise *nuclear material* and *associated material* in accordance with the requirements of the *Agency Agreement*;

that meets the specifications in the relevant *Facility Attachments*.

a.2. Ensure that the *inventory change* code and associated *key measurement point* have been identified for each material flow and meet the specifications of the relevant *Facility Attachments*. The plan shall require that the accounts of these *inventory changes* are maintained consistent with these *Facility Attachments*.

Objective B: Establish and Maintain Measurement System

- b.1. Establish a measurement system to measure *nuclear material* and *associated material* flows at the flow *key measurement points*, identified in Objective a.1. of this Section, adequate to determine the information operators are required to hold according to the *Agency Agreement, Subsidiary Arrangement,* and *Facility Attachments*. The measures making up this measurement system will include a mixture of:
 - b.1.1. hardware (e.g. scales, mass spectrometers, IR spectrometers, gamma spectrometers);



- b.1.2. procedures (including measurement and analysis techniques and calculation of derived values); and
- b.1.3. detailed design (ensuring all material flows are controlled and able to be measured, monitored and recorded) of the *nuclear facility*.
- b.2. Records kept for the measurement system shall meet the specifications of Code 5.2 of each *Facility Attachment*.
- b.3. Ensure that for every flow *key measurement point* identified in Objective a.1. the measurement uncertainties meet the current target values outlined in section 6.35 of the *Agency* Safeguards Glossary (2001 edition), as applicable, or otherwise provided by the *Agency*.
- b.4. Identify, review and evaluate shipper/receiver differences.
- b.5. Evaluate accumulations of unmeasured *inventory* and unmeasured losses.
- b.6. Ensure that the measurement system (including individual components) is manufactured (where applicable), installed, commissioned and fully implemented within a certified quality system incorporating acceptance testing and calibrations.

Objective C: Recording and Reporting of Inventory Changes

- c.1. Be based on a centralised database to keep records of, and produce reports on, all *nuclear material* and *associated material inventory* and *inventory changes* as specified in Objective c.3 and c.4 below.
- c.2 Include procedures for investigating and correcting any discrepancies discovered between the *inventory* and the accounts of the MC&A Plan in a timely manner.
- c.3. Record all *inventory* and *inventory changes* in accordance with the following:
 - c.3.1. the quantity of *inventory* by *batch*, and where possible by item, for each material category;
 - c.3.2. *inventory changes* or corrections recorded, in accordance with the specifications in Code 10 of the *Subsidiary Arrangement* and Code 5 of each *Facility Attachment*, of movements between the authorised persons described in paragraph 4.3 of the Control section of this *Compliance Code*;
 - c.3.3. *inventory changes* or corrections recorded within a business day since the change or correction occurs or is calculated at the operational level;
 - c.3.4. the location of each *batch* or item recorded to sufficient detail so that it can be located within two hours;
 - c.3.5. *inventory* listings generated by location as required (e.g. for *inspections* and *physical inventory takings*);
 - c.3.6. record whether each *batch* or item of *nuclear material* or *associated material* is subject to the full safeguards procedures under the *Agency Agreement*; and
 - c.3.7. record any *bilateral obligations* attached to *batches* of *nuclear material* or *associated material*.



- c.4. Report all *inventory* and *inventory changes* in accordance with the following:
 - c.4.1. the quantity of *inventory* by *batch* for each material category;
 - c.4.2. *inventory changes,* corrections and concise notes reported in accordance with the specifications in Code 10 of the *Subsidiary Arrangement* and Code 6 of each *Facility Attachment;*
 - c.4.3. where required, report whether each *batch* is subject to the full safeguards procedures under the *Agency Agreement* or has any *bilateral obligations*; and
 - c.4.4. report *inventory change* reports, *physical inventory* listings, and *material balance reports*, in accordance with the forms and time frames specified in Part C below.
- c.5. Reporting and recording of *inventory* and *inventory changes* for *associated material* shall be done in the same way as *source material* is treated under this Permit.

Objective D: Physical Inventory Takings and Other Preparations for Agency Inspections

- d.1. Conduct a *physical inventory taking* of all *nuclear material* and *associated material* each year in accordance with the following time frames:
 - d.1.1. for *nuclear material* in *material balance areas* selected by the *Agency* for a *physical inventory verification*, not more than 30 calendar days prior to the *physical inventory verification*;
 - d.1.2. for *nuclear material* in *material balance areas* not selected by the *Agency* for a *physical inventory verification*, not later than 30 June of that year;
 - d.1.3. for associated material, not later than 30 June of that year; or
 - d.1.4. any other time as requested by the *Director General*.
- d.2. Review of the design information against the *design information questionnaire* for each *material balance area* not more than 90 days prior to the respective *design information verification* conducted by *Agency inspectors* for that *material balance area*.
- d.3. Inform *ASNO* in advance of the Permit Holder's plans for a *physical inventory taking* or for a review of design information, to afford *ASNO inspectors* the option of participating.
- d.4. The carrying out *physical inventory takings* shall include:
 - d.4.1. measurement of quantities of *nuclear material* present at *the key measurement points* identified in Objective a.1. at the time of *physical inventory takings* and recording the results of those measurements and their accuracy;
 - d.4.2. hardware (e.g. measurement and analysis equipment, labels and other forms of identification); and
 - d.4.3. procedures, including measurement and analysis techniques and methodology for ensuring all items on the Permit Holder's *inventory* are located and accurately recorded.
- d.5. Other preparations for *Agency inspections* shall include preparation of up-to-date detailed designs and/or floor plans (including layout of material stores, design of storage



containers and design of equipment containing *nuclear material* or for handling *nuclear material*) of locations holding *nuclear material*.

7. Design Information

- 7.1. The Permit Holder shall ensure that the relevant design features of facilities, details of operations and procedures and any changes in the foregoing:
 - 7.1.1. remain consistent with the relevant descriptions contained in the current form of the *design information questionnaire* for each *material balance area*; and
 - 7.1.2. do not invoke Code 2.2 of the relevant *Facility Attachments* without submitting an advance notice seeking approval by the *Director General*.
- 7.2. To ensure compliance with paragraph 7.1, reviews of the *design information questionnaire* for each *material balance area* shall be completed annually in accordance with the following:
 - 7.2.1. for *material balance areas* selected by the *Agency* for *design information verification inspection*, the review shall be scheduled in accordance with Objective d.2;
 - 7.2.2. for all other *material balance areas* the review shall be scheduled annually in conjunction with performance reporting; or
 - 7.2.3. any other time at the request of the *Director General*.

8. Additional Protocol

- 8.1. The Permit Holder shall:
 - 8.1.1. for the purposes of *Additional Protocol* article 2.a.(iii), keep records of the relevant activities carried out in each building, and maintain an up-to-date site map and a complete and current set of basic floor plans for buildings and huts, where available;
 - 8.1.2. notify the *Director General* in advance of any activities listed in Annex I of the *Additional Protocol*; and
 - 8.1.3. notify the *Director General* in advance of any installation, construction or acquisition of *hot cells*.
- 8.2. The Permit Holder shall report to the *Director General* on information required under the *Additional Protocol* in accordance with the following schedule:
 - 8.2.1. for Additional Protocol articles 2.a.(i), 2.a.(iii), 2.a.(iv), 2.a.(vi)-(viii), and 2.a.(x) report by 31 March each year (or at other times as specified by the Director General);
 - 8.2.2. for Additional Protocol article 2.a.(ii), report the [Facility] operating schedules once a year covering a full year's operations, or as otherwise requested by the Director General;



- 8.2.3. for *Additional Protocol* article 2.a.(ii) also report any other information requested by the *Agency* on a schedule agreed with the *Director General*; and
- 8.2.4. for *Additional Protocol* article 2.c, provide amplifications and clarifications of information as requested by the *Agency* in a timely manner.

PART B – NUCLEAR SECURITY OBJECTIVES AND REQUIREMENTS

For the purpose of this *Compliance Code, nuclear security* will be taken to apply to *nuclear material, associated items, and associated facilities* but not to other radioactive materials.

As the Permit Holder must also comply with security requirements imposed by the CEO of *ARPANSA* for radiologically hazardous materials and facilities, *ASNO* will cooperate with *ARPANSA* on the appropriate nuclear security measures that the Permit Holder needs to apply in order to harmonise regulatory requirements.

9. Nuclear Security Objectives

The Permit Holder shall implement an integrated set of *nuclear security* and other associated measures (*nuclear security system*) to:

- 9.1. protect against unauthorised removal (theft) of *nuclear material* and *associated items*;
- 9.2. locate and recover missing *nuclear material* and *associated items*;
- 9.3. protect nuclear material and associated facilities against sabotage; and
- 9.4. mitigate or minimize the radiological consequence of sabotage.

10. Threat Assessment and Design Basis Threat (DBT)

- 10.1. The Permit Holder shall conduct or commission a threat assessment specific to the nuclear activities conducted by the Permit Holder and the local environment. The threat assessment shall be updated at [timeframe], or as required to reflect a significant change in the Australian threat environment. The threat assessment shall include consideration of the threat from insiders.
- 10.2. ASNO will coordinate with the relevant Australian competent authorities in order to facilitate the development and issue of a design basis threat and related guidance material, relevant to the Permit Holder and update it as necessary to incorporate changes to current threats. The Permit Holder shall use this design basis threat as a basis for the performance of the *nuclear security system*.

11. Targets and Consequence Assessment

- 11.1. Taking the threat assessment and design basis threat (where applicable) into account, the Permit Holder shall:
 - 11.1.1. identify the potential target points for the unauthorised removal of, or access to, *nuclear material* and *associated items* (theft targets);



- 11.1.2. determine the categorisation (including uncategorised) of *nuclear material* for each location (building) in nuclear facilities in accordance with Table 1 of *NSS-13*;
- 11.1.3. identify equipment, systems or devices, or *nuclear material*, the sabotage of which could directly or indirectly result in *unacceptable radiological consequences* (sabotage targets); and
- 11.1.4. assess the physical damage and radiological consequences that could result from the successful sabotage of each potential sabotage target. The Permit Holder's assessment shall be provided to a relevant radiation safety authority for review and endorsement.

12. Vulnerability and Risk Assessments

With respect to the installed or proposed *nuclear security system*, the current threat assessment and the design basis threat (where applicable), the Permit Holder shall conduct and document:

- 12.1. evaluations of adversary sequence diagrams and tactics (including for insiders), cyberattacks and an assessment of any weakness (vulnerabilities) in the system; and
- 12.2. a risk assessment of unauthorised removal of, or access to, *nuclear material* and *associated items*, and of sabotage, informed by the current threat assessment, the design basis threat, vulnerability assessments and consequence assessments, for each theft and sabotage target identified in paragraph 11.

13. The Nuclear Security System

- 13.1. The Permit Holder shall maintain a *nuclear security system* to address:
 - 13.1.1. Nuclear Security Objectives specified in paragraph 9;
 - 13.1.2. the threat and design basis threat, as relevant; and
 - 13.1.3. the provisions of *NSS-13* relevant for operators.
- 13.2. The *nuclear security system* should provide for detection and assessment of malicious acts and delay for an appropriate and effective response. Individual *nuclear security* measures shall include a mixture of the following incorporating 'defence-in-depth' and the *graded approach*:
 - 13.2.1. hardware (security devices, physical barriers, access control/monitoring, communication systems, cameras, intrusion detection sensors, etc.);
 - 13.2.2. policies and procedures; and
 - 13.2.3. design (incorporating, where appropriate, safety features and building layout).
- 13.3. The *nuclear security system* shall provide for pre-planned enhancements to nuclear security measures and procedures that may be put in place in the event of any increase in the level of threat relevant to the Permit Holder including procedures for their rapid escalation and de-escalation.



13.4. The *nuclear security system* shall be sustainable for the lifetime of the projects and activities conducted by the Permit Holder.

14. Guards, Response Forces, Contingency Plans & Security Exercises

- 14.1. The *nuclear security system* shall include the use of on-site guards and external response forces. On-site guards should:
 - 14.1.1. respond to *nuclear security events* in a timely manner;
 - 14.1.2. have sufficient numbers of guards [and other arrangements];
 - 14.1.3. have knowledge of the targets and threats for the facilities being protected; and
 - 14.1.4. be sufficiently trained for the conduct of their specific duties, including in the use of [scalable force] where relevant.
- 14.2. The Permit Holder shall maintain *contingency plans* that take into account the threat assessment or design basis threat as relevant.
- 14.3. There shall be in place arrangements with off-site response forces to provide for the protection *nuclear material, associated items* and associated facilities, including the joint development of arrangements for the *contingency plan* to facilitate the collective response making an effective intervention where required.

15. Personnel Security

- 15.1. The Permit Holder shall conduct periodic trustworthiness, checking by appropriate processes (e.g.: police check, security vetting, etc.), for all persons involved with the operation of the *nuclear security system* or who have access to classified *security sensitive information*.
- 15.2. The Permit Holder shall identify and protect against the risks associated with all foreign nationals and organisations involved in the design, construction or operation of associated facilities including staff, contractors and users.

16. Keys and Access Codes

- 16.1. For keys and access codes (including combinations, passwords and personal identification numbers) providing access to *nuclear material*, *associated items* and associated facilities, the Permit Holder shall:
 - 16.1.1. maintain a register of individuals with access to keys and access codes;
 - 16.1.2. limit access to keys and access codes to the minimum number required for operational reasons and only while such access is required; and
 - 16.1.3. ensure keys and access codes are held in secure storage when not in use commensurate with the level of access the key provides.



17. Nuclear Security Culture

- 17.1. The Permit Holder shall run programs to measure and improve *nuclear security culture* at all levels throughout the organisation.
- 17.2. The development of *nuclear security culture* shall include due attention to the security of information and communications technology.

18. Interfaces with Nuclear Safety and Accountancy and Control

18.1. The Permit Holder shall manage the *nuclear security* interface with nuclear safety and *nuclear material* accountancy and control arrangements in a manner to ensure that they do not adversely affect each other and to the degree possible, they are mutually supportive.

19. Security of Information and Communications Technology (ICT) Systems

The Permit Holder shall:

- 19.1. effectively classify and protect *security sensitive information* in accordance with relevant *Australian government standards* for protective security and security of government ICT systems as well as any *classification guide* issued by the *Director General*;
- 19.2. identify all information and communications technology systems, networks and components that if compromised could directly or indirectly impact *nuclear security* or MC&A objectives, taking into account the threat assessment or design basis threat as relevant;
- 19.3. protect those systems and networks on a risk informed, *graded approach* employing defence in depth from compromise initiated externally or internally, including through the introduction of malicious code or data; and
- 19.4. conduct regular evaluations of those systems and networks including vulnerability assessments, performance tests and penetration tests for critical systems and apply corrective measures as required.

20. **Performance Testing and Maintenance**

- 20.1. The Permit Holder shall ensure that performance of individual *nuclear security* measures and the system as a whole, is routinely inspected, tested and evaluated against their design specifications and corrective measures applied as required.
- 20.2. A maintenance program shall provide for:
 - 20.2.1. corrective maintenance to respond to unanticipated failures and to include other maintenance related works;
 - 20.2.2. planned preventative maintenance; and
 - 20.2.3. effective continuity of the *nuclear security system* during modification and maintenance of *nuclear security* measures.



- 20.3. *Contingency plans* should be regularly reviewed and tested and be complementary to state and Commonwealth contingency plans and the Permit Holders' emergency plans.
- 20.4. The Permit Holder shall conduct security exercise(s) to test the performance of the *contingency plan* and of the *nuclear security system*, including against the design basis threat.
- 20.5. The Permit Holder shall notify the *Director General* in writing of its intention to conduct comprehensive security exercises at least 60 days before the exercise date.
- 20.6. The Permit Holder shall conduct regular security drills at the facility to test the operation of one or more of its *nuclear security* measures and the readiness of its security personnel and guards.

21. **Compensatory Measures**

- 21.1. Whenever the *nuclear security system* is determined to be incapable of providing the required level of protection, the Permit Holder shall promptly implement compensatory measures to provide adequate protection.
- 21.2. For significant security events, the Permit Holder shall inform *ASNO* of the implementation and removal of compensatory measures.

22. Specific Requirements for Nuclear Material

22.1. Against Unauthorised Removal (Theft)

- 22.1.1. for *nuclear material* categorised as category I, II and III in accordance with paragraph 11.1.2, apply the provisions of paragraphs 4.13-49 of *NSS-13*¹ as relevant;
- 22.1.2. recover missing or stolen *nuclear material* in accordance with the provisions of paragraphs 4.57 to 4.63 of *NSS-13*, where this is within the Permit Holder's jurisdiction to conduct the recovery and otherwise assist law enforcement organisations where practicable; and
- 22.1.3. for *nuclear material* categorised below category III (i.e. uncategorised) in accordance with paragraph 11.1.2 protect against unauthorised removal and unauthorised access at levels commensurate with the quantities and concentrations of *nuclear material* involved and the overall risk of unauthorised removal and sabotage.

¹ Read together with Amplifications and Variations set out in Paragraph 22.4.



22.2. Against Sabotage

The Permit Holder shall:

- 22.2.1. apply the provisions of paragraphs 5.9-5.17 of *NSS-13* for sabotage targets identified in paragraph 11.1.3 for which *unacceptable radiological consequences* apply;
- 22.2.2. apply the provisions of paragraphs 5.20-5.42 of *NSS-13* where *high radiological consequences* apply;
- 22.2.3. for sabotage targets between *unacceptable radiological consequences* and *high radiological consequences* apply the provisions of paragraphs 5.20-5.42 of *NSS-13* on a *graded approach*, depending on the degree of radiological consequences relevant for a particular facility; and
- 22.2.4. apply the measures/processes specified in paragraphs 5.54-5.57 of *NSS-13* for mitigating the consequences of sabotage.

22.3. Transport of Nuclear Material

- 22.3.1. implement the provisions of Section 6 of *NSS-13* for measures to prevent the unauthorised removal and sabotage of *nuclear material* during transport;
- 22.3.2. protect on-site movements of *nuclear material* between *protected areas* consistent with the provisions of Section 6 of *NSS-13*;
- 22.3.3. in the case of transporting spent fuel, conduct or commission an updated threat assessment for each transport;
- 22.3.4. implement measures to address the design basis threat, where relevant;
- 22.3.5. in the case of transporting *nuclear material* categorised as category I or II in accordance with Table 1 of *NSS-13*, spent fuel, and other *nuclear material* for which *unacceptable radiological consequences* may result from sabotage:
 - i. obtain approval in writing from the *Director General* of a transport security plan prior to the commencement of transportation; and
 - ii. transport *nuclear material* only along approved routes, in approved vehicles and to approved destinations;
- 22.3.6. maintain adequate *nuclear security* in the event of an accident or vehicle breakdown during transport; and
- 22.3.7. put in place timely and effective response arrangements to address theft, loss, unauthorised handling, accidents or loss of communications during transportation.



22.4. NSS-13 Variations and Amplifications

22.4.1. With respect to references to *NSS-13* in paragraphs 22.1 to 22.3 of the *Compliance Code* above, the following amplifications apply:

NSS-13 Paragraph	Amplification
4.8	The Permit Holder shall consult with <i>ASNO</i> on the application of nuclear material aggregation.
4.25 & 5.23	The frequency and stringency of searching shall be based on a risk assessment, but must contain a random element and be able to be escalated to searching all persons entering or leaving a <i>protected area</i> at elevated levels of threat. All persons who enter a <i>protected area</i> shall be informed that entry may be subject to search.
4.35	Performance testing of at least one design basis threat scenario shall be done at least once during the term of the permit. (cf. paragraph 20.4).
4.42, 4.48 & 5.31	<i>Vital areas</i> and <i>inner areas</i> shall be accessed only by at least two authorised persons, or an equivalent arrangement such as constant observation to ensure timely detection and prevention of unauthorised actions.
4.30 & 5.36	Sufficient numbers of trained staff shall be available at all times to operate the central alarm station (CAS).

22.4.2. Any variation to the implementation of the requirements specified in *NSS-13* requires approval from the *Director General* and must provide equivalent protection.

23. Specific Requirements of Security of Associated Material, Equipment and Technology

23.1. Associated Material

23.1.1. Associated material shall be secured against unauthorised removal and unauthorised access at levels commensurate with quantities of associated material involved and the overall risk.

23.2. Associated Equipment

This section applies to associated equipment that is not also classified associated technology.

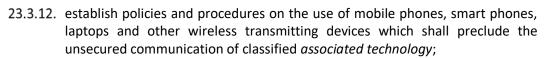
- 23.2.1. maintain a register of *associated equipment* and their location;
- 23.2.2. conduct a *physical inventory taking* of *associated equipment* not more than thirty (30) calendar days prior to 30 June each year;
- 23.2.3. provide an updated register of *associated equipment* to *ASNO* by 31 July each year;



- 23.2.4. transport *associated equipment* only under a documented transport security plan;
- 23.2.5. seek approval from the *Director General* prior to:
 - i. acquiring additional associated equipment;
 - i. disposing of associated equipment; or
 - ii. exporting *associated equipment* subject to a *prescribed international agreement*; and
- 23.2.6. maintain measures to prevent, detect and respond to unauthorised access or copying of *associated equipment* commensurate with the risk.

23.3. Associated Technology (AT)

- 23.3.1. allocate each item (or group of items) of *associated technology* an item name to refer to the item in records, applications, notifications and reports;
- 23.3.2. classify *associated technology* in accordance with any *Classification Guide* or guidance provided by the *Director General*;
- 23.3.3. mark classified items with its item name and its classification followed by the letters "AT", e.g. CONFIDENTIAL AT (items which are not conducive to markings (e.g., equipment) may be exempt from this requirement subject to the approval from the *Director General* on a case-by-case or programmatic basis);
- 23.3.4. record each instance of access to *associated technology*, including the date, time, persons involved and item name;
- 23.3.5. not copy associated technology without the approval from the Director General;
- 23.3.6. ensure that any destruction of *associated technology* is done in accordance with relevant *Australian government standards* for protective security and security of government ICT systems or by methods approved by the *Director General*;
- 23.3.7. record the location of any item of *associated technology* to sufficient detail such that it can be located within two hours;
- 23.3.8. conduct a *physical inventory taking* of *associated technology* not more than thirty (30) days prior to 30 June each year;
- 23.3.9. provide an updated register of *associated technology* to *ASNO* by 31 July each year;
- 23.3.10. provide all cleared employees with security briefings (initial and annual refresher) commensurate with their involvement with classified *associated technology*;
- 23.3.11. provide debriefings to all individuals no longer requiring access to *associated technology* or whose access authorisation has been revoked;



- 23.3.13. for *associated technology* stored as documents and electronic media, implement relevant *Australian government standards* for protective security and security of government ICT systems;
- 23.3.14. for *associated technology* that is also *associated equipment*, store and protect *associated technology* in accordance with the relevant *Australian government standards* for protective security:
 - i. in a protected area as specified in Section 4 of NSS-13; or
 - ii. in accordance with the relevant *Australian government standards* for protective security;
- 23.3.15. transfer classified *associated technology* between facilities within Australia under an approved transport plan in accordance with relevant *Australian government standards* for protective security and security of government ICT systems; and
- 23.3.16. apply managed access procedures during inspections by Agency inspectors.

PART C – RECORDS AND REPORTS

24. Record Keeping for MC&A and Nuclear Security

- 24.1. Records are to be kept in such a way that they are readily retrievable as documentary evidence of compliance to the requirements of the *Compliance Code*.
- 24.2. Access control logs are to held for a minimum of 7 years.
- 24.3. CCTV records are to be held for a minimum of 30 days.

25. **Reportable Events**

- 25.1. The following is a list of events reportable to the *Director General* under Form ASO201:
 - 25.1.1. an actual, attempted or suspected:
 - i. theft or loss of nuclear material or associated items, security sensitive information;
 - ii. act of sabotage;
 - iii. compromise of system of control and accountancy of *nuclear material* and *associated material*; or
 - iv. compromise of the operation of containment and surveillance and other *Agency* instruments and devices, including the alteration, defacement or breakage of *Agency* safeguards seals.



- 25.1.2. any significant security incident in the form of:
 - i. a misuse of security-related equipment that may result in a security and/or safety vulnerability;
 - ii. the discharge of firearms or the application of use of force options;
 - iii. a credible security threat made against the Permit Holder;
 - iv. adverse conduct with respect to the operation of the *nuclear security* system;
 - v. adverse failure of the *nuclear security system*;
 - vi. unauthorised entry to the *protected area*, *vital area* or *inner area*;
 - vii. any confirmed cyber-attack that threatens *nuclear security* objectives; and
 - viii. an unauthorised release of *security sensitive information* or *associated technology*.
- 25.2. The Permit Holder shall conduct investigations into reportable events and provide a report to the *Director General*, within 30 business days of the notification (unless otherwise directed by the *Director General*) of the incident, detailing the actions undertaken in the investigation, findings of the investigation, actions to correct any compromise and actions taken to prevent recurrence of such incidents.

26. Reports, Notifications and Requests for Approvals

- 26.1. The Permit Holder or *designated individual* shall report to, notify or apply to the *Director General* as appropriate for each activity or item listed in paragraph 27 below.
- 26.2. Each such report, notification or application shall be made by completing the specified forms listed in paragraph 27 or using other formats as approved by *ASNO*.
- 26.3. The reports, notifications or applications shall be delivered to the *Director General* in accordance with the reporting requirements specified on the respective form.
- 26.4. The Permit Holder shall:
 - 26.4.1. provide the *Director General* the following annual reports of the Permit Holder's *inventory* and *inventory changes*:
 - i. all *nuclear material* as at 30 June and all *inventory changes* from 1 July to 30 June, to be submitted by 15 July; and
 - ii. all *nuclear material* and all *inventory changes* with *bilateral obligations* as at 31 December, to be submitted by 15 January; and
 - 26.4.2. obtain approval from the *Director General* for all international or domestic transfers and receipts of *nuclear material* under this Permit, in accordance with the reporting timeframes and forms.



27. ASNO Forms

Forms are reviewed or amended from time to time. Current forms can be downloaded from the *ASNO* website at: www.dfat.gov.au/asno or by contacting the *Director General*.

27.1. Approval Forms

APPLICATION FORMS TO CONDUCT CERTAIN ACTIONS: ¹	TIMEFRAME LIMITS FOR APPLICATIONS, NOTICE OR REPORTING: ²	FORM TO USE:
Application to Transfer Material (Import, Export or Domestic Transfer)	7 day notice	ASO106
Application to Consume, Dilute or Dispose of Nuclear Material or Associated Item ³	7 day notice	ASO108
Application to Create a New Approved Location	7 day notice for nuclear material 20 day notice for associated material	ASO112
A New (or Variation) to a Current Transport Plan		ASO113
Application for Authorisation to Access Associated Items	-	ASO122
Application to Exempt a Classified Item from Marking Requirements	-	ASO124
A New Project Involving Specific Activities	20 day notice before using new route	ASO126
Application to Vary Disposition of Material Such That it will Become Unavailable for Verification	14 day notice	ASO128
A new project producing 20% - or higher - Enriched Uranium by Blending	-	ASO129
Change to the Accountancy or Security Plan	-	ASO134

¹ Each report, notification or application should be made by the *Permit Holder's representative* or by a *designated individual* as notified under ASO214, responsible for compliance with that application requirement. ² Refer to related form for detailed timeframe requirements. <u>All days</u> refer to consecutive business days.

³ *Nuclear material* may only be disposed of in such a way that the *nuclear material* will become practicably irrecoverable.



27.2. Notification Forms

NOTIFICATION IS REQUIRED FOR: 1	TIMEFRAME LIMITS FOR APPLICATIONS, NOTICE OR REPORTING: ²	FORM TO USE:
Notification of an Incident	Report <i>incidents</i> by phone within 2 hrs. of detection. Submit form within 4 hrs.	ASO201
Notification of Designation of an Individual	-	ASO214
Design Information, New or Changes to Existing, to Reflect Permit Holder's Operations	-	ASO225
Situation Affecting Access to Nuclear Material or Ability to Carry out Safeguards Procedures	-	ASO226
Designation of (or Change to) an <i>Approved</i> <i>Project</i>	-	ASO227
Planned Removal of Seals	-	ASO229
Notification of Change to Permit Holder's Particulars	Within 10 days of effect of change	ASO231

27.3. Report Forms

REQUIRED REPORTS: ¹	TIMEFRAME LIMITS FOR APPLICATIONS, NOTICE OR REPORTING: ²	FORM TO USE:
Report on Incident Investigation	Within 30 days of initial report	ASO303
Ledger Page	Report monthly transactions or 5 days after the <i>Physical Inventory</i> <i>Taking</i> date set in Objective D	ASO311
Planned Reactor Operating Program		ASO314
Description of Each Building at an Approved Location	15 March	ASO316
Inventory Listing – Detail		ASO317
Bilateral Obligation Report		ASO318
Material Listing by Location for Inspections		ASO322

¹ Each report, notification or application should be made by the *Permit Holder's representative* or by a *designated individual* as notified under ASO214, responsible for compliance with that application requirement. ² Refer to related form for detailed timeframe requirements. <u>All days</u> refer to consecutive business days.



28. Annual Report

The Permit Holder shall provide to the *Director General*, by 15 August each year, or ad hoc reports at other times upon request of the *Director General*, an annual report summarising the previous financial year's:

- 28.1. significant events affecting the Permit Holder's MC&A and nuclear security systems;
- 28.2. its review of approved projects and activities;
- 28.3. the outcomes of security exercises and drills;
- 28.4. nuclear security culture program activities;
- 28.5. Agency inspections;
- 28.6. summary of changes to the MC&A Plan;
- 28.7. the outcome of reviews including performance reviews; and
- 28.8. outlining significant events and planned activities using *nuclear material* in the upcoming year.

PART D - INSPECTIONS

29. Inspections by ASNO Inspectors and Agency Inspectors

- 29.1. The Permit Holder shall:
 - 29.1.1. complete preparatory work prior to an *inspection* by *ASNO inspectors* or *Agency inspectors*, in accordance with the following:
 - i. preparation of preliminary documentation provided for in the Permit;
 - ii. preparations to avail access by *inspectors* to relevant locations and information; and
 - iii. confirm that any locations at which *managed access* procedures apply are prepared for the application of such procedures;
 - 29.1.2. ensure that all necessary records and reports relating to *nuclear material* which is to be the subject of *inspection* are readily available to *ASNO inspectors* and *Agency inspectors* prior to the commencement of the *inspection*. For *physical inventory verification inspections*, these shall be provided to the *Director General* at least three working days prior to the *inspection* upon request;
 - 29.1.3. within 2 hours of a request by an ASNO inspector or Agency inspector, provide a location-based listing of all nuclear material and associated material inventory;
 - 29.1.4. afford every assistance and comply with any reasonable request, including, but not limited to:
 - i. the application of containment and surveillance and the installation of *Agency* instruments and devices as specified in Code 3.2 of the *Facility Attachments*; and



- ii. the facilitation of activities and provision of services listed in Code 7.9 of the *Facility Attachments*;
- 29.1.5. ensure, at the time of each *inspection* by an *ASNO inspector* or *Agency inspector*, the presence of the *designated individual*(s) responsible for those areas being inspected, or an alternate with equivalent knowledge of and access to the material, and the necessary personnel responsible for handling the *nuclear material*;
- 29.1.6. advise the *Director General* of any changes to "regular working hours", as stipulated in Code 14.2 of the *Subsidiary Arrangement*, prior to any *inspection* by the *Agency; and*
- 29.1.7. promptly return to the *Agency* any equipment or samples in accordance with the request of *Agency inspectors*. The Permit Holder may seek reimbursement for such services as provided for in the *Agency Agreement*.

29.2. Health and Safety During Inspections

- 29.2.1. consistent with its obligations under applicable work health and safety legislation, take all reasonable steps to ensure the health and safety of ASNO inspectors and Agency inspectors while they are at the premises of the Permit Holder's business or undertaking;
- 29.2.2. provide to ASNO inspectors or Agency inspectors (and the Director General, on request) sufficient information, training, instruction or supervision in order to allow them to comply with any health and safety procedures applicable at the *approved locations* and carry out their duties at the approved locations without risk to their health or safety;
- 29.2.3. provide ASNO inspectors and Agency inspectors with all necessary personal protective equipment in order to ensure, so far as reasonably practicable, their health and safety while carrying out duties at the approved locations;
- 29.2.4. respond promptly to any request for information by an ASNO inspector, Agency inspector, or an officer of ASNO acting on behalf of such an ASNO inspector or Agency inspector, regarding the procedures or equipment referred to in paragraphs 29.2.2 and 29.2.3;
- 29.2.5. provide ASNO inspectors and Agency inspectors with necessary radiation measurement devices and radiation monitoring equipment and, where applicable, inform the Director General of the radiation dose received by each ASNO inspector and Agency inspector when these doses are determined. For the avoidance of doubt:
 - i. the words 'necessary' and 'where applicable' in this clause refer to circumstances where the requirements of the *Australian Radiation Protection and Nuclear Safety Act 1998* and its associated regulations and guidelines apply to the Permit Holder and/or *ASNO*; and



- ii. this condition does not limit the requirements in paragraphs 29.2.3 regarding provision of personal protective equipment; and
- 29.2.6. ensure that the "specific facility health and safety rules and regulations to be observed by the *Agency's Inspectors*" required under Code 7.10 of each *Facility Attachment* remain current in the relevant *design information questionnaires*.

PART E – NEW ASSOCIATED FACILITIES

This Part does not apply to the establishment of a new nuclear facility requiring a separate permit under s16A of the Act.

30. For the Siting and Construction of a New Associated Facility:

- 30.1. The Permit Holder shall provide information as required by the *Director General* in order to determine that:
 - 30.1.1. appropriate procedures could be applied for the implementation of material control and accounting of *nuclear material* to be stored or used at the *associated facility*; and
 - 30.1.2. whether adequate *nuclear security* could be applied to *nuclear material*, *associated equipment* and *associated technology* at the *associated facility*.
- 30.2. Construction of the *associated facility* shall take place:
 - 30.2.1. under a construction security plan that identifies how security will be implemented during all construction phases;
 - 30.2.2. such that construction activities do not compromise the security system of adjacent *associated facilities*;
 - 30.2.3. with quality assurance audits to:
 - i. ensure the installation of the security system meets design specifications; and
 - ii. detect any actions intended to facilitate future sabotage such as the deliberate introduction of defects or hidden devices;
 - 30.2.4. such that it provides for the provision of design information required by the *Agency* and access by *ASNO inspectors* and *Agency inspectors;* and
 - 30.2.5. in compliance with any construction hold points, the *Director General* may set in order to meet *Agency* safeguards requirements.



- 30.3. *Nuclear material, associated equipment* or *associated technology* shall not be introduced into the *associated facility* (unless otherwise agreed by the *Director General*) until:
 - 30.3.1. *Nuclear Security* Plan and the Material Control and Accountancy (MC&A) Plan have been approved by the *Director General*;
 - 30.3.2. security system has been installed and commissioned in accordance with the Security Plan;
 - 30.3.3. the MC&A procedures and arrangements are in place;
 - 30.3.4. the Permit Holder has provided a commissioning report to the *Director General* describing details and outcomes of the commissioning; and
 - 30.3.5. the *Director General* has endorsed the commissioning report.



APPENDIX A

31. Table: Documents Related to Managing Compliance with Conditions in this Permit.

Last updated: 24 March 2016

Document short name	Document full name or description	Date of entry into force or start of application
Subsidiary Arrangement	Subsidiary Arrangement to the Agreement and the Protocol Additional to the Agreement Between the Government of Australia and the International Atomic Energy Agency for the Application of Safeguards in Connection with the Treaty on the Non-Proliferation of Nuclear Weapons	22 February 1999
	List of Facility Attachments	
	[Other documents as required]	



APPENDIX B

32. **Definitions:**

"(the) Act "	Means the Nuclear Non-Proliferation (Safeguards) Act 1987.
"Additional Protocol"	Means the Protocol Additional to <i>the Agency Agreement</i> (INFCIRC/540), that entered into force on 12 December 1997.
"(the) Agency "	Means the International Atomic Energy Agency (IAEA).
"Agency inspector(s)"	Means a person declared to be an inspector of the International Atomic Energy Agency pursuant to section 57(2) of <i>the Act</i> .
"Agency Agreement"	Means the Agreement between Australia and the International Atomic Energy Agency for the Application of Safeguards in Connection with the Treaty on the Non-Proliferation of Nuclear Weapons (INFCIRC/217), being the Agreement that was signed on behalf of Australia on 10 July 1974, a copy of which is set out in Schedule 3 of <i>the Act</i> .
"ARPANSA"	Means the Australian Radiation Protection and Nuclear Safety Agency.
"ASNO inspector(s)"	Means a person appointed to be an inspector pursuant to section 57(1) of <i>the Act</i> .
"Associated facility"	Means any building or structure that holds nuclear material, associated equipment or associated technology.
"Associated item(s)"	Includes associated material, associated equipment or associated technology as individually defined in the Act.
"Australian government standards"	In the context of this <i>Compliance Code</i> means the Australian Government Protective Security Policy Framework or Order and the Information Security Manual, as applicable.
"Batch"	Means either one or several items with the same chemical and isotopic composition, physical form and <i>bilateral obligations</i> . All items in a batch must: have the same material description code as specified in Code 10 of the <i>Subsidiary Arrangement</i> to <i>the Agency Agreement</i> ; contain material of the same material category; and have the same enrichment within 0.5%.
"Bilateral obligations"	Means commitments by Australia under a prescribed international agreement to apply conditions in relation to certain nuclear material or associated items to which the prescribed international agreement applies.



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"Classification Guide"	A guide for the appropriate security classification of information, including <i>security sensitive information</i> and <i>associated technology</i> and the level of protection required.
"Compliance Code"	Means the document called "Compliance Code for Class S1 permits".
"Designated individual(s)"	Means individual(s) to whom the <i>Permit Holder's representative</i> delegates some of the responsibility and authority with respect to compliance with this Permit.
"Design information questionnaire" ("DIQ")	Means the document by which Australia provides design information to the <i>Agency</i> under <i>the Agency Agreement</i> .
"Director General"	Means the Director General of the Australian Safeguards and Non-Proliferation Office.
"Facility Attachments"	Means the facility-specific attachments to the Subsidiary Arrangement.
"Graded approach"	Means the same as defined in NSS-13
"high radiological consequences"	A level of radiological consequences set by the <i>Director General</i> above which the requires comprehensive nuclear security measures to protect against sabotage.
"Hot cells"	Means the same as defined in sub-paragraph (xv) of Annex I of the <i>Additional Protocol</i> .
"Inner area(s)"	Means the same as defined in NSS-13
"Inspection(s)"	Means an activity by an <i>ASNO Inspector</i> to verify the Permit Holder's compliance with one or more conditions of the Permit, or by an <i>Agency Inspector</i> to verify Australia's compliance with respect to the <i>Agency Agreement</i> or the <i>Additional Protocol</i> .
"Inventory"	Means the entire physical stock of <i>nuclear material</i> , irrespective of its form or usefulness, held by the Permit Holder.
"Inventory change"	Means any change to the Permit Holder's inventory.
"Key measurement point(s)"	Means the same as defined in Article 99.K of the Agency Agreement and specified in each Facility Attachment.
"Loss of control" of nuclear material or associated items	Means the Permit Holder has lost the ability to apply the Permit conditions to that <i>nuclear material</i> or <i>associated items</i> .



"Managed access"	Means arrangements concluded between <i>ASNO</i> and the <i>Agency</i> in accordance with Article 7 of the <i>Additional Protocol</i> in order to prevent the dissemination of proliferation-sensitive information, to meet safety or <i>nuclear security</i> requirements, or to protect commercially sensitive information.
" Material balance area " ("MBA")	Has the same meaning as in <i>the Agency Agreement</i> . MBAs at an approved location shall be those, or parts of those, designated in the <i>Subsidiary Arrangement</i> .
"NSS-13"	Means the Nuclear Security Recommendations on Physical Protection of Nuclear Material and Nuclear Facilities (INFCIRC/225/Rev.5)
"Nuclear material"	Means source and special fissionable material the same as in <i>the Act</i> but for the purposes of this Permit excludes material that has been deemed by <i>ASNO</i> as practicably irrecoverable.
"Nuclear security" or "physical protection"	Means the prevention and detection of and response to, theft, sabotage, unauthorised access, illegal transfer or other malicious acts involving <i>nuclear material</i> , <i>associated items</i> or their <i>associated facilities</i> .
"Nuclear security event"	An event that has potential or actual implications for <i>nuclear security</i> that must be addressed.
"Permit Holder's representative"	Means the representative of the Permit Holder who will take responsibility and sign documents on behalf of the organisation. This person must be in a position with sufficient authority to ensure all Permit conditions are met.
"Physical inventory"	Means the sum of all the measured or derived estimates of <i>batch</i> quantities of <i>nuclear material</i> on hand at a given time within a <i>material balance area</i> , obtained in accordance with specified procedures.
"Physical inventory taking" ("PIT")	Means the actions taken by the operator to determine the <i>"physical inventory"</i> .
"Protected area(s)"	Means the same as defined in NSS-13
"Security sensitive information"	Means information that could prejudice the security of <i>nuclear material</i> or <i>associated items</i> , including a record of that information.
"Source material" and "Special fissionable material"	Means the same as in Schedule 1 of the Act.
"Subcontract"	Means an arrangement entered into by the Permit Holder with a person to provide goods or services in connection with this
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	Permit. A subcontractor or "agent" has a corresponding meaning.
"Subsidiary Arrangement"	Means the Subsidiary Arrangement to the Agreement and the Protocol Additional to the Agreement Between the Government of Australia and the International Atomic Energy Agency for the Application of Safeguards in Connection with the Treaty on the Non-Proliferation of Nuclear Weapons, that entered into force on 22 February 1999 (as amended from time to time), concluded pursuant to Article 40 of the Agency Agreement and Article 13 of the Additional Protocol.
"Unacceptable radiological consequences"	A level of radiological consequences above which the implementation of nuclear security measures is warranted. For this <i>Compliance Code</i> this level is set at 20 mSv.
" Vital area (s)"	Means the same as defined in NSS-13