

ONR Guidance for the Assessment of Accountancy and Control Plans (ACP)

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Version Control

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Development of DRAFT 4.6 ONR Guidance for the Assessment of Accountancy and Control Plans (ACP) was completed in January 2019, the final version will be a product of extensive stakeholder engagement.

Changes may need to be made to this document in response to stakeholder engagement.

For this reason the website version is the only authorised version.

Where amendments are made to the document, these will be published on the ONR website with an audit trail and, where possible, stakeholders will be alerted to the changes.

Revision History

No	Date	Change Summary
Draft 4.6	January 2019	

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FOREWORD

ONR State System of Accounting for, and Control of Nuclear Material (SSAC) Vision:

The ONR UK SSAC vision is to regulate safeguards and enable the UK to meet its international obligations.

What is the purpose of the ACP Guidance?

The Office for Nuclear Regulation (ONR) is the independent regulator of nuclear safety, civil nuclear security and nuclear safeguards across the United Kingdom. ONR will use this guidance and the assessment expectations encompassed within it, together with supporting Technical Assessment Guides (TAGs), to guide regulatory judgements and recommendations when undertaking assessments of operator Nuclear Material Accountancy and Control Plans (ACP) submissions. Underpinning the requirement for these submissions, and ONR's role in their approval, are the legal duties placed on organisations subject to the Nuclear Safeguards (EU Exit) Regulations 2018 [1].

The Nuclear Safeguards (EU Exit) Regulations 2018 ('The Regulations') require operators to produce an accountancy and control plan (ACP) for a qualifying nuclear facility.¹ The ACP must describe in writing² the arrangements and procedures adopted or to be adopted by an operator to establish and maintain a system of "nuclear material accountancy, control and safeguards", or NMAC&S) as required by regulation 6.³ The NMAC&S is also required by the duty on operators under The Regulations to provide for international safeguards inspection.

The purpose of this document is to set down guidance for nuclear safeguards inspectors on good practice ACPs to assist them;

- assess submitted ACPs
- form regulatory judgements
- inform safeguards related inspections
- to provide advice to Operators and the public

Outcome focussed NMAC&S regulation supports clarity that responsibility for delivery and ownership of ACPs rests with operators. ONR will hold them to account for that delivery. Outcome focussed regulation allows greater flexibility in approach and encourages innovation in ACP solutions maximising opportunities for adding value. The ACP guidance supports this flexibility enabling alternative approaches to those presented when justified.

This is the first draft of the ACP guidance and it is expected to take time to embed and reach full maturity. Particularly recognising the requirement for an ACP does not come into effect for a year after the regulations come into force. ONR recognises that learning from the new approach, may require the ACP guidance to be refined during initial implementation and intends to review this guidance after 12 months.

¹ Qualifying nuclear facility is defined in Section 76A of The Energy Act (2013) as "a facility (including associated buildings) in which qualifying nuclear material is produced, processed, used, handled, stored or disposed of".

² Writing is considered to include electronic media

³ The components of an accountancy and control system are set out in Schedule 2 of The Nuclear Safeguards (EU Exit) Regulations 2018.

Further development of this first draft of ACP guidance will be informed by extensive stakeholder engagement including a diverse range of industry operators, the Nuclear Decommissioning Authority and the Department for Business, Energy and Industrial Strategy. Comments and views submitted to us during engagement may, in some cases lead us to modify the text. However, decisions on the final text and responsibility for the ACP guidance content are the ONR's alone.

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1. Introduction and Scope

1. The Nuclear Safeguards (EU Exit) Regulations 2018 ('The Regulations') require operators to produce an accountancy and control plan (ACP) for a qualifying nuclear facility.⁴ The ACP must describe in writing⁵ the arrangements and procedures adopted or to be adopted by an operator to establish and maintain a system of "nuclear material accountancy, control and safeguards", or NMAC&S) as required by regulation 6.⁶ The NMAC&S is also required by the duty on operators under The Regulations to provide for international safeguards inspection.
2. The purpose of this document is to set down guidance for nuclear safeguards inspectors on good practice ACPs to assist them;
 - assess submitted ACPs
 - form regulatory judgements
 - inform safeguards related inspections
 - to provide advice to Operators and the public
3. The assessment of an ACP should take into account all relevant NMAC&S information submitted by operators to the Office for Nuclear Regulation (ONR), inspections carried out by ONR, relevant good practice, and the expectations set down here.
4. This guidance should be used to judge whether a submitted ACP meets the requirements of The Regulations in terms of quality, completeness, and, in conjunction with proportionate and appropriate inspection, implementation.
5. This assessment may inform ONR's inspection priorities and any decision to approve an ACP as provided for in The Regulations should ONR judge that approval is a suitable and necessary regulatory outcome⁷.
6. An ACP may be a single document or a collation of a series of documents that signposts, underpins, explains, and justifies arrangements and procedures for NMAC&S that are proportionate to and appropriate for the qualifying nuclear facility.
7. The ACP may refer to and use parts of the operator's formal management system that covers wider aspects than those covered by The Regulations.
8. The safeguards regulatory system prior to the introduction of The Regulations involved prescriptive arrangements set down by Euratom. The UK's goal setting regime expects the operator to meet goals set down in regulations. In demonstrating how it meets the

⁴ Qualifying nuclear facility is defined in Section 76A of The Energy Act (2013) as "a facility (including associated buildings) in which qualifying nuclear material is produced, processed, used, handled, stored or disposed of".

⁵ Writing is considered to include electronic media

⁶ The components of an accountancy and control system are set out in Schedule 2 of The Nuclear Safeguards (EU Exit) Regulations 2018.

⁷ It is anticipated that approval would only be in rare circumstances. Where this is the case the operator must be notified in writing. Once approved any modifications to the ACP must also be approved by ONR.

goals, the operator should provide the reasoning for how its systems, arrangements and procedures achieve them.

9. The contents of the ACP and the scope of the systems, arrangements and procedures should be in line with the expectations set down in Schedule 2 of The Regulations and the ONR Guidance for Nuclear Material Accountancy, Control and Safeguards [ONMACS].
10. An ACP should identify how the operator will present claims regarding the components of an NMAC&S system. It should also identify where, and how, the operator has provided:
 - reasoning for these claims,
 - information or evidence to support these claims

2. Expectations

11. There are eight interrelated expectations that should underpin a 'good practice' ACP. An ACP that reflects these expectations and the components of an NMAC&S (as described in ONMACS and Schedule 2 of The Regulations) will support, explain, and justify NMAC&S arrangements and procedures to external stakeholders, including ONR and (where relevant) the International Atomic Energy Agency (IAEA).
12. An operator should use these expectations in a manner that is commensurate with the basic technical characteristics (BTC) of the qualifying nuclear facility, and proportionate to the category, quantity, and use of the qualifying nuclear material in that facility.
13. These expectations are:⁸
 - RAACP 1 – Clear and Effective Ownership
 - RAACP 2 – Proportionate Production Process
 - RAACP 3 - Recognition of Facility Life-cycle Stages
 - RAACP 4 – Active Maintenance
 - RAACP 5 – Proportionate and Appropriate Content
 - RAACP 6 – Functionality
 - RAACP 7 – Clear Purpose and Appropriate Scope
 - RAACP 8 – Uncertainty and Limitations

Sampling

14. ONR uses a sampling approach in deploying its resources. As such, it may not be necessary to assess every aspect of an ACP in full. The breadth and depth of the assessment shall be established by the inspector at the start of his assessment, taking into account:
 - the level of confidence ONR has in the operator's NMAC&S ;

⁸ These expectations have been drawn from and are similar to those found within other regulatory regimes within ONR

- the quality and completeness of the operators understanding of its NMAC&S derived from methods including assessment outcomes of previous ACPs;
 - the level of confidence ONR has in the operator’s approach to leadership and management for NMAC&S;
 - the type of qualifying nuclear facility and its operational status;
 - the category, quantity, and use of qualifying nuclear material covered by the ACP
 - the degree of change since the previous assessment ;
- and
- recent events, incidents or operating experience at the qualifying nuclear facility, or similar facilities.

RAACP 1 – Clear and Effective Ownership

The Regulatory Assessment of Accountancy and Control Plans	Clear and Effective Ownership	RAACP 1
<p>Ownership of the Accountancy and Control Plan should reside within the operator’s organisation with those who have direct responsibility for accounting for and controlling qualifying nuclear material.</p>		

15. An ACP should be understandable, useable and clearly owned by both those who are accountable for compliance with The Regulations and those who rely on the ACP for accurate and objective information on accountancy and control measures to make informed decisions. In certain instances these may be the same person / persons within an organisation.

16. Ownership and responsibility require that:

- At the board level, the company representative should be aware of the requirements of The Regulations and how the responsibilities are being discharged through the management structure to the management of qualifying nuclear material;
- throughout the organisation there is an appropriate level of understanding of the ACP, any standards applied in it⁹, its assumptions and the limits and conditions derived from it;
- at the operational level, the ability to use the ACP to manage and ensure that NMAC&S arrangements and procedures are proportionate to, and appropriate for, the qualifying nuclear facility;
- the organisation and people within it recognise the need for NMAC&S;

⁹ Including any formal national or international standards

- processes are in place to ensure that the initial ACP and subsequent amendments are produced in accordance with The Regulations which include submission to the regulator;
- the ACP is fully implemented at the facility and there is assurance and oversight to confirm its effectiveness in achieving the desired outcomes;
- any amendment to the ownership of the ACP is recognised within the operator’s organisation and its processes.

RAACP 2 – Proportionate Production Process

The Regulatory Assessment of Accountancy and Control Plans	Proportionate Production Process	RAACP 2
<p>The process for producing Accountancy and Control Plans should be designed and operated in a way that is proportionate to the category, quantity, and use of qualifying nuclear material in question.</p>		

17. The process of producing an ACP should involve those responsible for and those with experience of delivering an NMAC&S system. Including:
- subject matter experts
 - those who have an extensive knowledge of the qualifying nuclear facility, and the use of qualifying nuclear material in that facility whether new or existing
 - those who have knowledge of the management and systems in place in the organisation that is responsible for the facility

Such input will ensure the ACP

- underpins, explains, and justifies arrangements and procedures for NMAC&S
- enables the identification of operational weaknesses in NMAC&S and possible solutions that might increase its robustness and effectiveness

18. Knowledge utilised should also include:

- recognition of possible changes to facilities in the reasonably foreseeable future
- experience of challenges to NMAC&S;
- Impacts of any reasonably foreseeable deviations from normal operations ;
- Any possible challenges to meeting expected reporting standards both for accuracy and completeness
- an understanding of the interactions between people, processes, and technical systems to deliver and effective NMAC&S

19. Application of this expectation should result in an ACP production process that:

- Is proportionate to and appropriate for the qualifying nuclear facility, the quantity, form, and use of qualifying nuclear material in question;
- Is commensurate with claims being made regarding the effectiveness and robustness of NMAC&S arrangements and procedures;

- utilises lessons learned and relevant good practice from across the international nuclear industry;
- presents a clear understanding of the purpose, standards and expectations of the ACP production process;
- highlights the feedback, review, and quality control mechanisms that ensure the production process and the resulting ACP is fit-for-purpose ; and
- Is clearly based on the skills, knowledge, and expertise of suitably qualified and experienced personnel (SQEP).

RAACP 3 – Recognition of facility life-cycle stages

The Regulatory Assessment of Accountancy and Control Plans	Recognition of facility life-cycle stages	RAACP 3
<p>For each lifecycle stage, the maintenance of a system of accountancy and control should be demonstrated by a valid Accountancy and Control Plan that takes into account relevant experience from previous stages, and takes into account future stages.</p>		

20. The Regulations require an operator to deliver an ACP just prior to the introduction of qualifying nuclear material into a facility.
21. However, the requirement to ‘produce’ an ACP for nuclear material (regulation 7.1) is not linked only to the presence of that material and it is considered good practice to consider NMAC&S from as early a stage as possible to deliver cost effective systems.
22. In addition, as a facility approaches shutdown and decommissioning it is good practice to consider, whilst the facility is operating and has suitable facilities and SQEP, how:
 - the operator may demonstrate that there is no further QNM within that facility
 - QNM could be prevented from being re-introduced following closure of the facility to reduce safeguarding activities
23. Proportionate and appropriate arrangements and procedures for NMAC&S should be in place before qualifying nuclear material is used. An operator must produce an ACP to describe these arrangements and procedures.
24. The ACP for any stage in a facility’s lifecycle stage should take account of future lifecycle stages, i.e. it should build on the ACP for previous stages and show how accountancy and control for subsequent stages will be achieved.
25. Any constraints that apply in all subsequent stages should be detailed in the ACP in which they are identified. The ACPs for post-operational clean out and decommissioning should have been considered in all previous lifecycle stages, taking into account relevant good practice.
26. The specific content and depth of information in an ACP will vary from stage to stage, and should be commensurate with the nature of the particular stage and inter-relationships with other stages. For example, in the early stages (e.g. pre-construction), the ACP will be more a statement of future intent, claims and expectations, whereas an ACP for an operational stage would be expected to contain far more detail, evidence and analysis.

RAACP 4 – Active Maintenance

The Regulatory Assessment of Accountancy and Control Plans	Active Maintenance	RAACP 4
The Accountancy and Control Plan should be actively maintained throughout each of the lifecycle phases, from pre-construction through to decommissioning, and reviewed regularly.		

27. An effective ACP is:

- recorded in a dynamic document or set of documents, easily accessible and understandable by those who need to use them;
- suitable for all users
- managed through auditable formal processes;
- reviewed periodically on a defined basis to maintain validity, quality and correctness;
- adaptable to accommodate changing NMAC&S reporting requirements, arrangements or procedures in each lifecycle phase;
- adaptable to accommodate evolving NMAC&S reporting requirements, arrangements or procedures in any 'in-phase' changes including those for the basic technical characteristics (BTC) of the facility;
- managed such that events or safeguards developments (e.g. technology improvements) impacting on NMAC&S can be incorporated in a timely manner

28. Factors that should inform the maintenance of an ACP include, for example:

- changes arising from modifications to or revised arrangements and procedures for nuclear material accountancy and control;
- changes to the Basic Technical Characteristics (BTC) of the qualifying nuclear facility;
- changes to the quantity, category, and use of qualifying nuclear material;
- changes arising from accountancy, control, safeguards, safety, or security events, operating experience, examination or testing results;
- changes to relevant good practice, relevant international standards,¹⁰ or other new information arising from external sources, particularly government sources;
- the outcome from periodic reviews to nuclear material accountancy and control systems; and
- changes due to plant or facility ageing.

29. Reviews of NMAC&S systems, operating experience and other sources of information should not be restricted to the facility in question. They should include facilities or nuclear

¹⁰ Including *International Target Values for Measurement Uncertainty in Safeguarding Nuclear Material*

material accountancy and control systems and also a wider range of nuclear and industrial experience, both nationally and internationally where available.

RAACP 5 – Proportionate and Appropriate Content

The Regulatory Assessment of Accountancy and Control Plans	Proportionate and Appropriate Content	RAACP 5
<p>The Accountancy and Control Plan should identify the relevant components of the accountancy and control system, and describe how these components will be implemented in a proportionate and appropriate manner.</p>		

30. The components of a system that are likely to be important for accounting for and controlling qualifying nuclear material are highlighted in ONMACS, and Schedule 2 of The Regulations. These are not exhaustive.
31. The relevant components should be implemented in a manner that is proportionate to and appropriate for the qualifying nuclear facility, as well as the quantity, category, and use of qualifying nuclear material within it.
32. The ACP should explain how the arrangements and procedures described within it are proportionate and appropriate, and how they will be implemented effectively. The explanation should be commensurate with the strength and complexity of the claims being made.
33. The means of implementation should consider:
 - any limits and conditions that aim to ensure the uninterrupted accountancy and control of qualifying nuclear material, including all reasonably foreseeable deviations from normal operations and any events relating to safety and security;
 - where relevant, the existence and potential use of any third-party processes, equipment or information (such as those required by the International Atomic Energy Agency) and how the operator manages the interface with the third party;
 - identification and allocation of the resources required to deliver the arrangements and procedures described in the ACP;
 - the arrangements and procedures that need to be followed;
 - the required examination, inspection, maintenance and testing regimes justified in or assumed by the ACP;
 - control, supervision, qualification and training and other competence management requirements; and
 - international good practice for NMAC&S

RAACP 6 – Functionality

The Regulatory Assessment of Accountancy and Control Plans	Functionality	RAACP 6
<p>The Accountancy and Control Plan process should produce functional Accountancy and Control Plans that support the effective and robust accountancy and control of qualifying nuclear material in alignment with business processes.</p>		

34. The production of an ACP does not in itself ensure that qualifying nuclear material is accounted for and controlled.
35. Instead, the ACP should underpin, explain, and justify arrangements and procedures for NMAC&S in a manner that enables robust and effective accountancy and control in alignment with business processes.
36. An ACP should:
- take into account the needs of those who will use it to ensure qualifying nuclear material is accounted for and controlled;
 - be clear and logically structured so that the information is easily accessible to those who need to use it. This includes designers, nuclear material custodians, maintenance staff, technical personnel, managers, and all other staff who hold responsibilities for maintaining the system of accountancy and control; and
 - take into account how the different levels and types of documentation fit together to cover the full scope and content of the ACP.
37. The needs of users should be addressed by ensuring that:
- all descriptions and terms are easy to understand by the prime audience;
 - all arguments are cogent and coherently developed;
 - all references are easily accessible;
 - all conclusions are fully supported, and follow logically from the arguments; and
 - the trail from claims through argument to evidence is clear.

RAACP 7 – Clear Purpose and Appropriate Scope

The Regulatory Assessment of Accountancy and Control Plans	Clear Purpose and Appropriate Scope	RAACP 7
The Accountancy and Control Plan should be accurate, objective and demonstrably complete for its intended purpose.		

38. An ACP should:

- Demonstrate that the facility NMAC&S system is proportionate to and appropriate for the qualifying nuclear facility;
- set down clearly, accurately and realistically the scope that the plan covers and any exceptions or exclusions, including:
 - i. the facility,
 - ii. the type of qualifying material
 - iii. the use of qualifying nuclear material
 - iv. the quantity of QNM and any restrictions
 - v. international restrictions
 - vi. The lifecycle phases it covers
- set down the dates for which the ACP is valid and the date of its review
- link the information necessary to show that the arrangements and procedures of the NMAC&S system is proportionate and appropriate for the qualifying nuclear facility, and over the period for which the ACP is valid;¹¹
- identify any other requirements necessary to meet or maintain the ACP such as containment, measurement, maintenance and inspection
- identify where components of the NMAC&S have been defined by third parties and how they have been incorporated within the overall system

39. In the event of change to an NMAC&S system or the creation from new it is expected that the operator demonstrates that options have been considered to during the demonstration that the chosen system is proportionate to and appropriate for the qualifying nuclear facility. Relevant methods for this include:

- evidence of optioneering using a defined set of criteria ;
- presentation of an adopted option in terms of meeting relevant good practice and any other options considered

¹¹ This may include links or references to any other arrangements and procedures that are relevant to NMAC&S

RAACP 8 – Uncertainty and Limitations

The Regulatory Assessment of Accountancy and Control Plans	Uncertainty and Limitations	RAACP 8
<p>The Accountancy and Control Plan should recognise uncertainties and limitations in nuclear material accountancy and control systems, and incorporate appropriate caution in arrangements and procedures.</p>		

40. where there are uncertainties and limitations involved in to accounting for and controlling qualifying nuclear material the ACP should:

- provide a proportionate justification for arrangements and procedures to mitigate these challenges and the impact of their implementation on the accuracy and correctness of declared information
- clearly identify any caution in the measures that have been applied to mitigate uncertainties and limitations;
- identify areas where future activities, procedures or components might improve accuracy or correctness.

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