



Adoption of SAPs for Regulation of the Defence Nuclear Propulsion Programmes

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Where are we now?



- ◆ DNSR's requirements for the regulation of the propulsion programme are laid down in JSP 518
 - ◆ Authorisation Conditions (ACs)
 - ◆ Safety Principles (SPs)
 - ◆ Safety Criteria (SCs)
- ◆ SPSC philosophy
 - ◆ Broadly similar to SAPs and based on IAEA guidance, but...
 - ◆ structure, positioning and level of detail very different to SAPs
 - ◆ Nuclear Weapon SPSCs issued in 2002
- ◆ SAPs – NII internal **guidance for NII Inspectors**
- ◆ SPSCs – **DNSR regulatory requirements**, duty holders must address
- ◆ Joint regulation – different approach to principles is not ideal when sharing assessment and inspection tasks
- ◆ Perception of different standards with duty holders

DNSR NWP Regulatory Requirements



- 1958 Ordnance Board independent assessment of nuclear weapon system safety
- OB Proceedings N392 1984 used for Trident entry into service Approval
- OB Proceedings N446 1995 introduced ALARP concept, -Trident assessed against 446 together with an ALARP case
- 1997 NWSA agreed with President OB replace N446 with document taking account NII SAP's, HSE TOR and ESTC Presc No2
- New document Safety Principles and Safety Criteria (SPSC's) for Nuclear Weapon Systems endorsed DNSB November 2002

Alignment with NII SAPs 1



◆ Objective

- ◆ To advise the NII's revision of their SAPs to improve the relevance to nuclear installations in the defence nuclear propulsion programme.
- ◆ To achieve greater clarity in the coherence between SAPs and MoD's Nuclear Propulsion and Nuclear Weapon Safety Principles and Safety Criteria (SPSCs)

◆ DNSR Process

- ◆ Reviewed and commented on iterations of revised SAPs – formal process.
- ◆ Attended stakeholder workshops, Nuclear Topic Groups and NII Editorial Boards.
- ◆ Commented on public consultation draft
- ◆ Attended Nuclear Topic Groups and NII Editorial Boards to formally address stakeholder comments.

Alignment with NII SAPs 2



- ◆ **Current intent NNPP**– DNSR view is that most principles are fit for use by DNSR for assessment of the NNPP. So subject to consultation;
 - ◆ DNSR plan to adopt the NII SAPs, with a “Preface” providing context for assessment of the NNPP.
 - ◆ Focus DNSR resources into joint working with NII to produce updated Technical Assessment Guides (where the detail is really important).
- ◆ DNSR policy for adoption of NII SAPs in the assessment of the NWP under review.

Benefits



- ◆ Duty holders have one set of regulatory expectations expressed in one common document.
- ◆ Improved consistency of regulatory assessment.
- ◆ Improved clarity and understanding of the application of the principles for activities in the defence environment.
- ◆ Develop further the joined-up processes between NII and DNSR

What Next?



- ◆ Production of a regulatory impact assessment on the adoption of SAPs for the NNPP
- ◆ Draft DNSR “Preface” context for assessment of NNPP
- ◆ Issue Preface, RIA and transitional arrangements for consultation
- ◆ DNSR Preface to NII SAPs published (coordinated with reissue of JSP 518)
- ◆ DNSR and NII to agree joint working arrangements for TAG review project (2 -3 yrs)
- ◆ NWR policy for adoption to follow

Defence Nuclear Safety Regulator



Defence Nuclear Safety Regulator



VISION

Demonstrably safe defence nuclear programmes, providing effective, available, capability.

MISSION

To regulate the nuclear and radiological safety of the defence nuclear programmes so that they are managed with due regard for the protection of the workforce, the public and the environment.

Joint Regulation



- ◆ DNSR is recognised by NII as a **competent authority**, which provides assurance and information to NII relating to the Naval Reactor Plant and Nuclear Weapons. Letter of understanding builds on formal MoD/HSE agreements.
- ◆ Therefore NII and DNSR operate a system of **joint regulation** which ensures complete and seamless oversight over all relevant activities, agreeing:
 - ◆ to share information provided by operators
 - ◆ to share assessment plans
 - ◆ to jointly determine and agree any action to be taken.

Defence Characteristics



- ◆ Mobility of plant
- ◆ Constraints on space and weight
- ◆ Challenging environment
- ◆ Need for integrity
- ◆ Juxtaposition of explosives and radioactive materials

