

Regulator Assessment: Qualifying Regulatory Provisions

Title of proposal	New Transport Technical Assessment Guides for Applications for UK Competent Authority Approval (Shielding, Criticality and Engineering)
Lead Regulator	Office for Nuclear Regulation
Contact for enquiries	Andy Smith, ONR Inspector, Felicity Robinson, ONR Policy
Date of assessment	11th February 2017
Commencement date	April 2017
Origin	Domestic
Does this include implementation of a Cutting Red Tape review?	No
Which areas of the UK will be affected?	GB
ONR internal reference	2017/91181
RPC BIT Ref	RPC 3701 DECC-ONR

Summary of costs and benefits

Price base year	Implementation date	Duration of policy (years)	Net Present Value	Business Net Present Value	Net cost to business (EANDCB)	BIT score
2017	2017	10	0	0	0	0

Brief outline of proposed new, withdrawn, or amended regulatory activity

1. ONR regulates all movements of civil radioactive material in GB and approves the designs of packages used to carry high-hazard radioactive materials associated with the civil nuclear industry and also non-nuclear sectors such as hospitals and Industrial Radiographers. As a Competent Authority, ONR assesses package and other design approvals for Road and Rail modes in its own right but also for Sea and Air modes on behalf of Civil Aviation Authority and Maritime Coastguard Agency to ensure they are built to robust quality Management Systems, and that these packages are correctly used and maintained.
2. These new technical assessment guides follow on from ONR's revised guidance for applications for UK competent authority approval (submitted to the RPC on 03 March) 2017.
3. Three new guidance documents have been produced that are specifically aimed at assisting ONR inspectors to inform regulatory judgements with respect to the shielding, engineering and criticality assessments that support duty-holder applications for transport package and other design approvals..

4. A secondary function of the documents is to provide transparency with respect to ONR's expectations (with respect to the shielding, engineering and criticality aspects of package design applications) on duty-holders, as the documents will be published on the ONR website.
5. The guidance follows the International Atomic Energy Agency (IAEA) Regulations for the Safe Transport of Radioactive Material and associated guidance material. The IAEA transport standards are implemented in GB law via the 'Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009' through European agreements known as 'ADR' and 'RID'.
6. The documents bring ONR procedures / industry activities into line with international requirements as well as reflecting specific policy changes that align more with the wider ONR approach.
7. There was no gold plating by ONR on top of the legal requirements, and no addition to the guidance beyond explanation of the international requirements and how compliance may be achieved.
8. The expected cost to industry should be the cost of reading the guidance, and should place no additional burden on industry, as these guides do not introduce any further requirements other than those already required by GB law. The process of assessing safety cases and making regulatory decisions remain unchanged.
9. The guidance should serve to save industry money, as the transparent approach should assist duty-holders in delivering a 'right first time' safety case, requiring less interaction with ONR.
10. Under ONR's openness and transparency policy the guide will be published and is available for duty-holders to read on the ONR website.

Which type of business/industry will be affected? How many are estimated to be affected?

11. The shielding, criticality and engineering guidance will affect organisations who apply to ONR for the approval of their radioactive material transport designs and to organisations that undertake technical engineering, criticality and shielding assessment work in support of the designs. There are about 20 organisations in the UK from the combined nuclear and non-nuclear sectors. This estimate is based on applications from recent years (taken from the Transport Permissioning Programme that records all submissions).
12. Within those organisations the impact is on the 'Design Authority' function i.e. the group who put together Package Design Safety Reports (PDSRs), which is on average about 5 people per organisation, as well as any external specialist engineering, shielding and criticality assessors who undertake the mechanical, thermal, shielding and criticality components of PDSRs (as an estimate, there may be approximately 20 shielding and criticality assessors who regularly undertake the relevant assessment work that would read the shielding and criticality documents, based on ONR knowledge of the industry fora for criticality and shielding). However, fewer people in the design authority would have an interest in the shielding and criticality technical assessments guides. Therefore,

it can still be approximated that on average 5 people per organisation will read each of the 3 guides.

13. It is not expected that duty-holders will have to amend their PDSRs as a result of this guidance. Applications are generally steady over time and ONR actively seeks to smooth the process if peaks and troughs are anticipated.

Please set out the impact to business/industry clearly with a breakdown of costs and benefits

14. The guidance documents are new and will aid consistency in design practice and improve visibility of ONR's expectations; thereby promoting compliance amongst organisations affected. There are no additional requirements introduced through this guidance, only clarification and codification of current policy and practices.

15. Based on a 200 words/minute reading speed then all 3 documents (totalling 24,000 words) would take 2 hours to read¹. Assuming an average of 2 reads are necessary for comprehension (as the overall design authority may be expected to spend less time than the technical specialists) then **the initial familiarisation cost in year one** will be:

4hrs x 20 organisations x 5 people x £47.86 = **£19,144** (assuming cost on average £47.86/h²).

16. In future years, assuming duty-holders will apply for 40 Competent Authority (ONR) approvals each year from ONR as the Competent Authority, (based on information from the Transport Permissioning Programme) and that on average 3 people from the dutyholder organisation will read this guidance just once (as they are more familiar with the documents and fewer people are expected to read in future as the documents are aimed more towards technical specialists) then the annual cost to industry is (conservatively) 40 applications x 3 readers x £47.86 x 2hrs = **£11,486 annually**.

17. The benefits of this new guidance are that less interaction with ONR should be required as the applicants become more familiar with our expectations. However due to the relative infrequency of new safety cases, and their unique nature, it is not possible to quantify this more generally. The number of technical comments for applicants to address that are frequently raised by ONR in package design assessments is expected to reduce as they are clarified in these documents.

Please provide any additional information (if required) that may assist the RPC to validate the BIT Score

As the net impact to business is estimated at less than £50k per annum, the BIT score is rounded to zero, in accordance with the Better Regulation Framework manual.

¹ Based on RAS Group Guidance: valuation of guidance gives an estimate of around 200 words per minute (24000/200 = 120 minutes)

² Based on ASHE 2015 figures for 'professional occupation' of £716.70 per week which we have doubled to £1433.40, given the skilled nature of nuclear assessment work and the profit margins of an operating facility (diversion of labour), over a 36 hour week and uplifted by 20.2% to account for non-wage labour costs.