



Office for  
Nuclear Regulation

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# Office for Nuclear Regulation

## Transport Class 7 materials

**11 March 2020**

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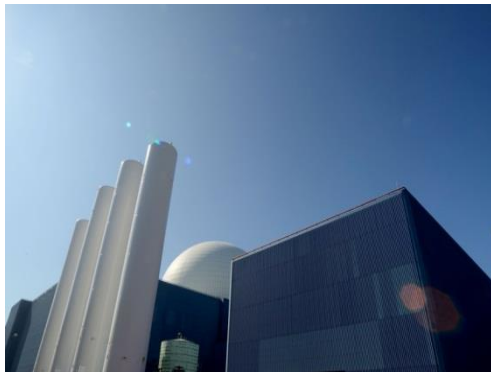
Superintending Inspector

Head of Transport Competent Authority &

Professional Lead Mechanical Engineering

# Office For Nuclear Regulation

- Sector-specific independent regulator – nuclear safety, security, transport and conventional H&S on licensed sites
- Reports to Ministers in respect of its regulatory functions
- Became Statutory Corporation in April 2014 on the commencement of the Energy Act 2013
- Regulates UK civil nuclear industry and *aspects* of nuclear defence activity across the UK

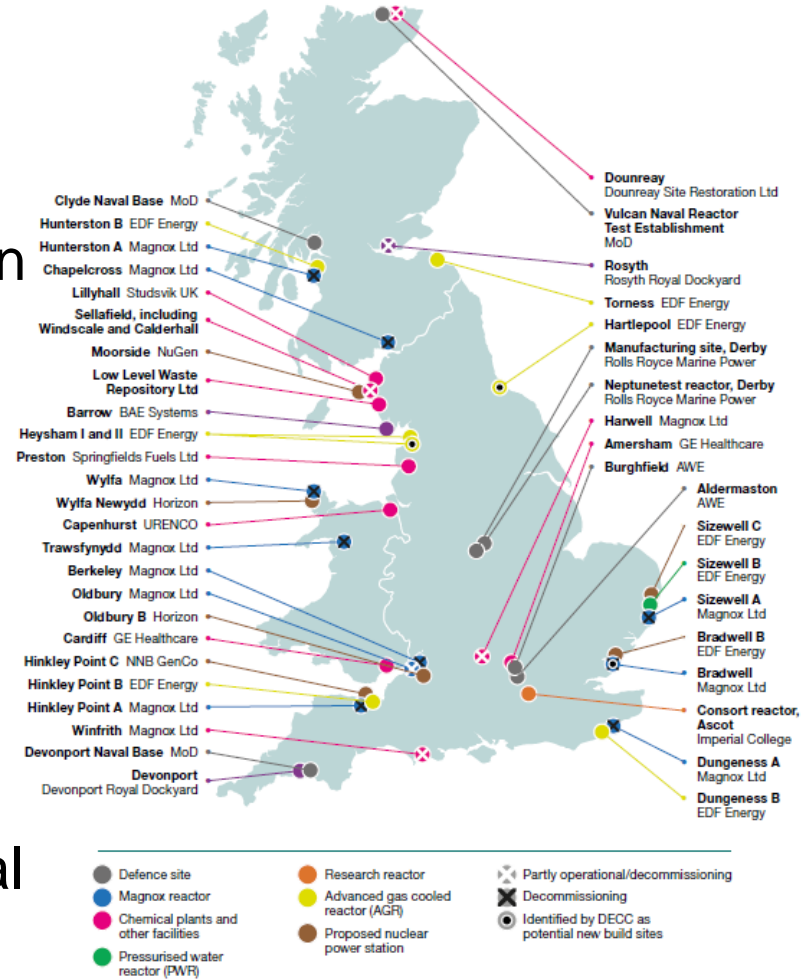


# ONR Overview

ONR regulates a wide range of facilities both in terms of location and activity.

- New Build (+ GDA & GDF)
- Operating Power Stations
- Decommissioning
- Reprocessing
- Defence (part)
- Medical
- Research

Site and project inspectors are supported by specialist technical inspectors



# Draft ONR strategy to 2025 – Stakeholder briefing



# Role of the Transport Competent Authority

- Enforcing authority for the civil transport of radioactive material by road, rail and inland waterway in Great Britain
- Regulation of the non-nuclear sector, transport package design assessment approvals and oversight of all civil nuclear sector transport regulation across ONR
- Also acts on behalf of the other Competent Authorities with respect to the issuing of transport approvals
- Inspection and Assessment by ONR Inspectors

# UK regulators

Within the UK there are a number of regulators covering different modes of transport



STATUTORY INSTRUMENTS

2009 No. 1348

HEALTH AND SAFETY

The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009

Made - - - - 27th May 2009  
Laid before Parliament - - - - 3rd June 2009  
Coming into force - - - - 1st July 2009

CONTENTS

PART 1  
INTRODUCTORY PROVISIONS

1. Citation and commencement
2. Interpretation - General
3. Interpretation of ADR, RID and ADN for the purposes of these Regulations
4. Application

PART 2  
PROHIBITIONS AND REQUIREMENTS

5. Carriage to be in accordance with ADR or RID
6. Alternative placarding requirements to apply to certain national carriage
7. Additional security requirements for carriage by road
8. Additional security requirements relating to access
9. Application of ADR to carriage by private individuals
10. Application of ADR to carriage by certain enterprises

PART 3  
EXEMPTIONS

*Draft Legislation: This is a draft item of legislation. This draft has since been made as a UK Statutory Instrument: The Carriage of Dangerous Goods (Amendment) Regulations 2019 No. 598*

*Draft Regulations laid before Parliament under section 113(2)(a) of the Energy Act 2013, for approval by resolution of each House of Parliament.*

DRAFT STATUTORY INSTRUMENTS

2019 No.

RADIOACTIVE SUBSTANCES

The Carriage of Dangerous Goods (Amendment) Regulations 2019

Made - - - -  
Coming into force in accordance with regulation 1

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Secretary of State makes the following Regulations in exercise of the powers conferred by section 2(2) of, and paragraph 1A of Schedule 2 to, the European Communities Act 1972(1) ("the 1972 Act"), sections 15(1), (1B), (2) and (4) of, and paragraphs 1(1), (2) and (4), 3, 9, 13 and 14 of the Health and Safety at Work etc. Act 1974(2) ("the 1974 Act") and sections 74, 75 and 76 of, and paragraphs 1, 6 and 16 of Schedule 6 to the Energy Act 2013 ("the 2013 Act")(3). The Secretary of State is a Minister designated(4) for the purposes of section 2(2) of the 1972 Act in relation to the environment.

A provision for a purpose mentioned in section 2(2) of the 1972 Act and it is expedient for references to Council Directive 2013/59/EU on basic safety standards for protection against the dangers arising from exposure to ionising radiation, and to amend Directives 89/618/Euratom, 90/641/Euratom, 96/29/Euratom, 2003/122/Euratom and 2006/61/Euratom to be construed as references to that Directive as amended.

Section 74(7)(a) and (c) of the 2013 Act, has consulted the persons as the Secretary of State considers appropriate in relation to these Regulations. The Secretary of State has consulted the Secretary of State independently of any proposals made by the Health and Safety Commission under section 50(1)(b) of the 1974 Act, having consulted, in accordance



# Regulation of Class 7 dangerous goods

- The UK regulates the movement of all dangerous goods via the application of international requirements:
  - ADR
  - RID
  - ADN (part of)
  - ICAO TI
  - IMDG



# Package approvals

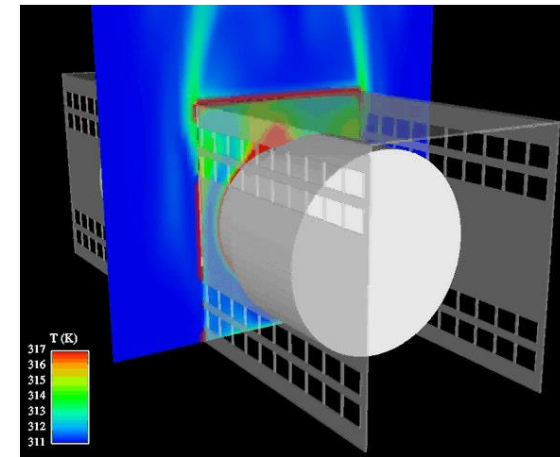
- Certain packages require competent authority approval and certification prior to use.
- ONR looks at 4 technical areas:
  - Criticality
  - Shielding
  - Thermal
  - Containment/Structural
- There is also a significant focus on the management arrangements.
  - Design/Manufacture
  - Use
  - Maintenance/Inspection
  - Loading/Unloading



# Thermal



- Effects of internally generated heat as well as natural and accident condition heat loads.
- Computer modelling/physical testing
- Considerations include:
  - Aging and strength of materials
  - Internal pressure
  - Sealing for containment



# Drop test

## Containment/Structural



- Drops from various heights and orientations, including drops onto posts
- Can be complex to justify the worst case drop orientations and that the drops are representative

# Radiation Emergencies

- Emergency plans – duty holder responsibility to assess risk
- Emergency plans – actions to be taken to protect general public
  - Arrangements for providing assistance to Local Authorities with mitigatory action
- ONR website – Information to the public on radiation emergencies during transport

Any Questions