



Office for
Nuclear Regulation

License Compliance/Site Related Activities

Licence Compliance

- The **Nuclear Installation Act** is the basis for much of our regulation of the civil nuclear industry
 - It requires civil nuclear sites to have a nuclear site licence
 - It allows ONR to impose legally-binding **Licence Conditions (LC)**
 - The LC are a key means by which apply regulatory oversight and control
 - There are 36 generic licence conditions assigned to each site licence which cover a wide range of requirements
 - ONR's expectation is that NNB proportionally develops and implements its licence compliance arrangements commensurate to the current state of the project
 - Licensee is always retains responsibility for safety

Licence Compliance

- Although some LCs are prescriptive the majority are goal setting and do not detail how the licensee should achieve their requirements
- ONR adopts an evidence-based sampling approach, informed by intelligence, judgment and previous experience
- During each LC inspection we collect the evidence to support our judgments, making a decision based on what was found during the inspection against our inspection guidance
- Compliance against the LC under inspection is rated using a **RED** (demand improvement), **AMBER** (seek improvement), **GREEN** (no formal action) scale which is publically available and gives example inspection findings which would warrant the associated rating



Licence Compliance

1	Interpretation
2	Marking of the site boundary
3	Control of property transactions
4	Restrictions on nuclear matter on the site
5	Consignment of nuclear matter
6	Documents, records, authorities and certificates
7	Incidents on the site
8	Warning notices
9	Instructions to persons on the site
10	Training
11	Emergency arrangements
12	Duly authorised and other suitably qualified and experienced persons
13	Nuclear safety committee
14	Safety documentation
15	Periodic review
16	Site plans, designs and specifications



Licence Compliance

17	Management systems
18	Radiological protection
19	Construction or installation of new plant
20	Modification to design of plant under construction
21	Commissioning
22	Modification or experiment on existing plant
23	Operating rules
24	Operating instructions
25	Operational records
26	Control and supervision of operations
27	Safety mechanisms, devices and circuits
28	Examination, inspection, maintenance and testing
29	Duty to carry out tests, inspections and examinations
30	Periodic shutdown
31	Shutdown of specified operations
32	Accumulation of radioactive waste
33	Disposal of radioactive waste
34	Leakage and escape of radioactive material and radioactive waste
35	Decommissioning
36	Organisational capability

License Compliance/Site Related Activities - HPC

- Site facing regulation has a number of aims which are achieved by the implementation of the project wide intervention strategy and detailed intervention plan to ensure that:-
 - NNB is implementing its justified design to the required quality requirements – Construction Assurance
 - NNB adequately manages design changes and deviations from design in an appropriate manner – Control of Modifications
 - There is appropriate preservation and maintenance of installed assets during the construction phase prior to handover for commissioning

Licence Compliance/Site Related Activities – cont... (indicative there is more...)

- NNB is sufficiently resourced and capable of discharging its responsibilities including oversight of its contractors
- NNB is ensuring the health and safety of all persons on the licensed site and wider construction area
- NNB is complying with all applicable licence conditions including non-construction specific LCs
- NNB is ensuring compliance with other applicable legislation such as IRR17 – Radiography – largest project of its type in Europe to date....
- Adequate emergency arrangements to deal with any incident on the site (LC 11)

Important Licence Conditions During Construction

LC19 Construction or installation of new plant - requires that NNB make and implement adequate arrangements to control construction

- In addition it requires NNB to divide the construction into stages and requires that NNB does not proceed from one stage to the next without ONR's permission where ONR has so specified – this also gives ONR its permissioning powers during construction
- Hence NNB is required to define and manage its own hold points and ONR may specify that its permission is required to proceed where it judges appropriate
- Adequate arrangements include requirement to control construction in terms of quality and implementation of approved design.

Intended ONR Permissioning Points

Next permissioning hold points:

- Bulk mechanical and electrical installation (yet to be defined) - 2020
- NSSS delivery - 2021
- Inactive commissioning – 2021/2022 (pre Aux transformer energisation)
- Active commissioning – 2022 (post Aux transformer energisation)
- Commercial Operation Date – 2025
- First criticality is likely to additionally specified by ONR
- Plus unit 2 permissioning points!

Important Licence Conditions During Construction

- LC20 Modification to design of plant under construction – requires NNB to ensure that no modifications are made to a plant under construction except in accordance with adequate arrangements made and implemented by the licensee for that purpose
- Again this gives ONR the option of requiring that a licensee shall not commence any modification or thereafter proceed from one stage to the next without the permission of ONR
- In addition it requires modifications to be classified based on their safety significance and hence ONR would generally only seek to permission the most safety significant modifications



Commissioning

LC21 Commissioning - requires that NNB make and implement adequate arrangements to commissioning

- Similarly to LC19 it requires NNB to divide commissioning into stages and requires that NNB does not proceed from one stage to the next without ONR's permission where ONR has so specified – this also gives ONR its permissioning powers during construction
- Hence again NNB is required to define and manage its own hold points and ONR may specify that its permission is required to proceed where it judges appropriate

Licence Conditions – Important LCs to other cornerstones

Org Capability

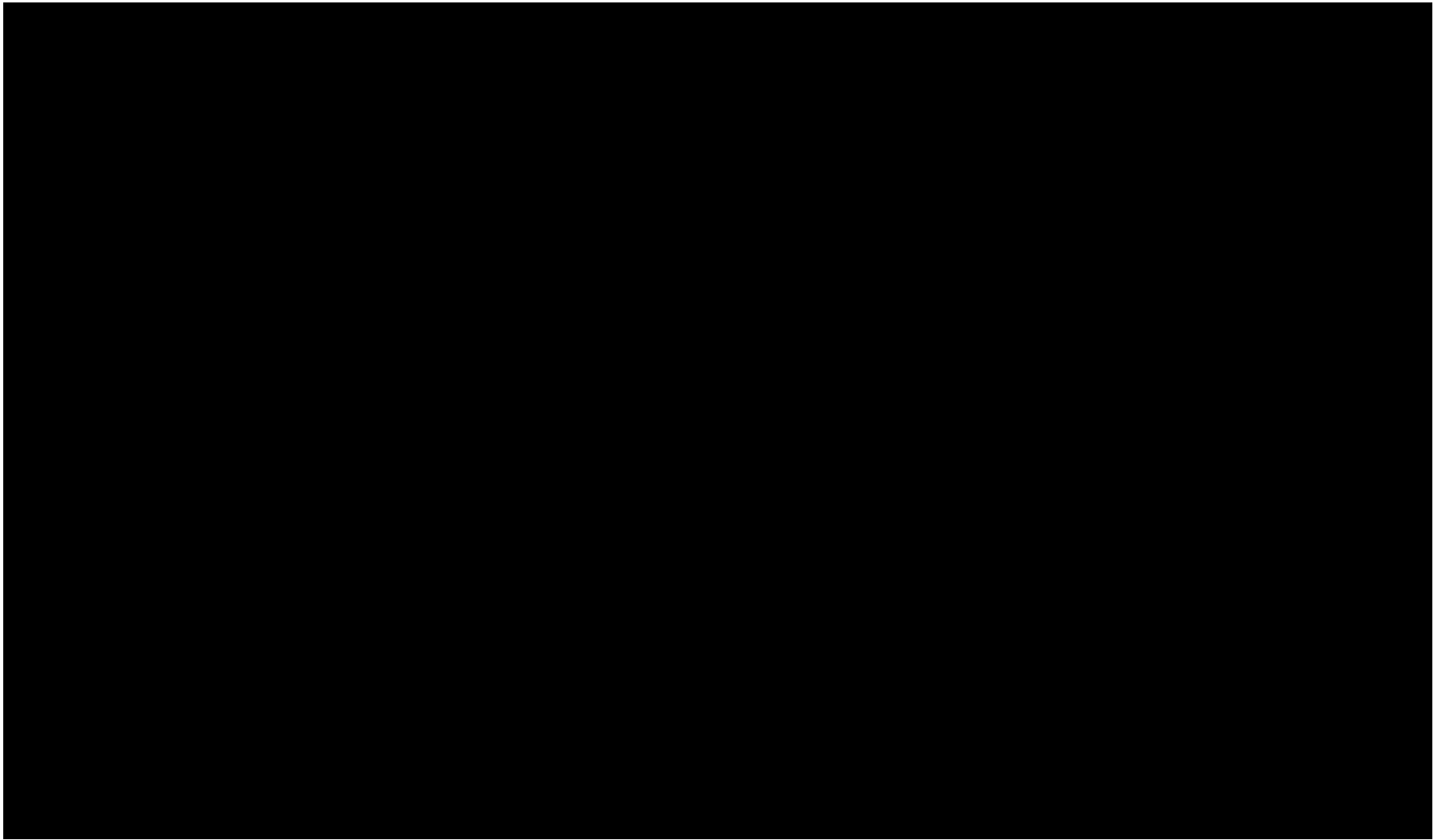
- LC17 – Management systems requires the licensee to establish and implement management systems which give due priority to safety; and within these arrangements make and implement adequate quality management arrangementsfor all matters which may affect safety
- LC36 – Organisational capability - the licensee shall provide and maintain adequate human and financial resources to ensure the safe operation of the site; and make and implement adequate arrangements for the control of any change to its organisational structures or resources which may affect safety

Design and Safety Case

- LC14 – Safety documentation – requires adequate arrangements for the production and assessment of safety cases consisting of safety documentation to justify the design, construction, manufacture, commissioning, operation and decommissioning phases of the installation.

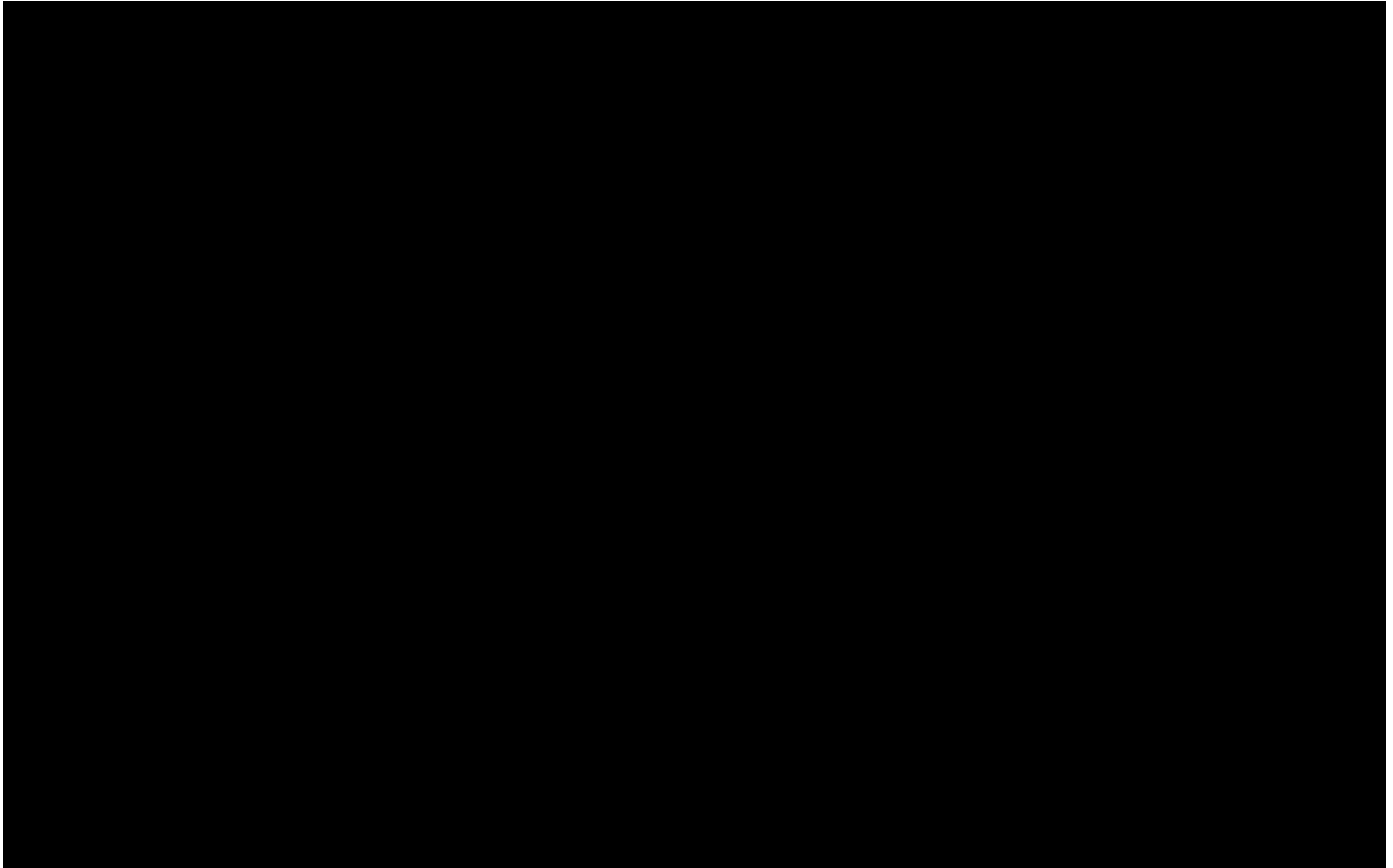


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HPC Nuclear and Conventional Island



HPC Pumping Station and Conventional Island



Learning for SZC

- Significant effort is required to ensure site contractors understand and can implement “nuclear” quality requirements – benefit in using experienced contractors where possible
 - This point extends to wider supply chain – evidence that NNB has had to provide enhanced oversight/engagement to a number of suppliers to ensure they meets its quality requirements
 - Design stability and replication – benefit in ensuring stability of the design – although schedule/cost is not ONR’s concern stable design leads to better control of construction which supports high quality safe construction
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Thank you

- All intervention records and project assessment reports are publically available on the ONR website

<http://www.onr.org.uk/reports.htm>