

OKLO INC

Non-Applicabilities & Requested Exemptions for the Aurora-INL

About us

Raised the first-ever, modern, venture-led, series A for a fission company

Granted an INL site use permit from Department of Energy

Selected to demonstrate recycle of spent fuel at Idaho National Laboratory

Became the first advanced fission company in the country to have a license application accepted by the U.S. Nuclear Regulatory Commission



Oklo develops clean energy generation sources with advanced fission to mitigate the social and environmental impacts of pollution as well as energy poverty.

Aurora Powerhouse



The Aurora

1-2 MWe output depending on use case

20 years between refueling

Advanced fission battery with solar

Can utilize used material ("waste")







	Current large light water reactors
Power output (MWth)	1600-4400
Refueling cycle (years)	1.5-2
Radionuclide inventory (metric tons)	100-150
System pressure (atm)	150
Hydrogen explosion risk	Yes
Cooling	Loop with low thermal inertia
Electric power dependence	Relies on offsite power or emerge diesel generation
Negative reactivity coefficient	Yes

Aurora < 5 None < 5 Near atmospheric No Passive heat pipes No safety-related electric ency power dependence



Methodology

Background

Atomic Energy Act \rightarrow NRC regulations

Regulations generally have two characteristics:

- 1. They contain assumptions about the facility
- 2. They evoke that adequate protection is assured, in part, through compliance

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Background Non-Applicability Atomic Energy Act \rightarrow NRC regulations

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Background Exemption

Atomic Energy Act \rightarrow NRC regulations

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1. They contain assumptions about the facility

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Process



Regulations

Design assumption

Regulations

Do not apply

Design assumption

Regulations

Do not apply

Non-applicability



Documentation method

Compliance not needed — Exemption





Regulations

of Documentation method eded — COLA





Examples





Examples: generic to non-LWRs

GDC ECCS & RCS vents PTS **SBO** Codes & standards Primary containment leakage rate testing

surveillance ATWS

- **Reactor vessel material**
- Effluent monitoring
- TMI requirements
- Severe accidents
- **SRP** evaluation

Examples: generic to microreactors

Maintenance Rule Emergency preparedness **Physical security** Aircraft impact Loss of large area

Examples: specific to Aurora

Combustible gas control Environmental qualification 10 CFR 50.69 Multi-unit considerations



Thank you



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