Part V: Non-applicabilities and requested exemptions

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1 INTRODUCTION

Section 50.1, "General provisions," to Title 10 of the *Code of Federal Regulations* (10 CFR), states, in part, "The regulations in this part are promulgated by the Nuclear Regulatory Commission pursuant to the Atomic Energy Act of 1954, as amended (68 Stat. 919), and Title II of the Energy Reorganization Act of 1974 (88 Stat. 1242), to provide for the licensing of production and utilization facilities." Further, the U.S. Nuclear Regulatory Commission (NRC) mission states the following:

> The NRC licenses and regulates the Nation's civilian use of radioactive materials to provide reasonable assurance of adequate protection of public health and safety and to promote the common defense and security and to protect the environment.

The NRC generally implements the relevant portions of the Atomic Energy Act (AEA) through regulations, although the NRC retains the authority to establish the level of protection that it considers adequate and reasonable.

Regulations from the CFR for nuclear power plants generally have two characteristics: (1) they contain assumptions about the facility, and (2) they evoke that adequate protection is assured, in part, through compliance.

The delineation between regulations that apply and those that do not is nested in the former – the assumptions in each regulation. Many regulations in 10 CFR Part 50 and 10 CFR Part 52 were written under the pretense of large light water reactors (LWRs) and make assumptions about the technology in the language of each requirement. Many of the assumptions that these regulations make can be applied to other reactor technologies, besides large LWRs. However, some regulations make assumptions that are specific to either large reactors or reactors that are water-cooled. These regulations largely do not apply to reactors that are not large LWRs.

For the regulations that do apply, the premise is that if compliance is demonstrated, the intent of the regulation is met, and adequate protection is assured. However, because some regulations are overly prescriptive or are technology-specific, this logic does not hold for all regulations for all reactors.

The purpose of this part is to describe which portions of the regulations do not apply to the Aurora and which regulations apply but require exemptions. The portions of the regulations that do not apply to the Aurora are discussed in Section 2 and do not have compliance information outlined in this combined license application. For the regulations that apply to the Aurora but have associated requested exemptions, information is provided in Section 3 regarding the scope and summary of the request, and the technical and regulatory justification.

2 REGULATIONS THAT ARE NOT APPLICABLE

The regulations discussed in this chapter do not apply to the Aurora, because they make assumptions about components or design features that are not present in the Aurora design. These regulations are not discussed as part of the Aurora combined license application. Information required to be submitted as part of a combined license application is located in 10 CFR 52.77, "Contents of applications; general information," 10 CFR 52.79, "Contents of applications; technical information in the final safety analysis report," and 10 CFR 52.80, "Contents of applications; additional technical information."

The purpose of this chapter is to describe which regulations from 10 CFR 52.77, 10 CFR 52.79, and 10 CFR 52.80 do not apply to the Aurora. These regulations might reference other portions of the CFR, and when other portions are referenced, they are also discussed. This chapter is broken up into three sections, to parallel 10 CFR 52.77, 10 CFR 52.79, and 10 CFR 52.80. Each section includes a table that summarizes the non-applicabilities and includes information on the specific regulation discussed, any other regulations in the CFR that might be referenced, a short description of the requirement, and a brief summary of the reasons the regulation does not apply to the Aurora.

2.1 10 CFR 52.77: Contents of applications; general information

Applicants for a combined license are required by 10 CFR 52.77 to submit information as per the requirements of 10 CFR 50.33, "Contents of applications; general information." Most of these requirements apply to the Aurora design, and compliance with them is discussed in Part I, "Company information and financial requirements." Several requirements from 10 CFR 50.33 do not apply to the Aurora design or to the nature of the application submitted, as shown in Table 2-1.

Table 2-1: Regulations from 10 CFR 50.33 that do not apply

52.33 requirement	Regulation that is N/A	Short description	Summary
50.33(h)	None	Construction or alteration	Do not apply to a combined license applicant.
50.33(i)	None	Generation and distribution of electric energy	The Aurora will not produce electricity for local or regional commercial grids, nor will it hold commercial value for any organizations outside of the Idaho National Lab.
50.33(j)	None	Restricted Data or defense information	This combined license application does not contain any Restricted Data or other defense information.

2.2 10 CFR 52.79: Contents of applications; technical information in final safety analysis report

Applicants for a combined license are required by 10 CFR 52.79 to submit a final safety analysis report (FSAR). Section 52.79 to 10 CFR contains 47 specific requirements for information that must be submitted. Most of these requirements apply to the Aurora design, and compliance with them is discussed in Part II, "Final safety analysis report." The regulations that do not apply to the Aurora design are summarized in Table 2-2. These regulations make assumptions about the components of the Aurora or the design features that are not present. Each regulation that does not apply is also discussed in terms of its intent and how that intent is met.

Table 2-2: Regulations from 10 CFR 52.79 that do not apply, part 1 of 4

52.79 requirement	Regulation that is N/A	Short description	Summary
52.79(a)(4)	Appendix A to Part 50	GDC[1]	The Aurora is not a water-cooled reactor, and the GDC are minimum requirements specific to the principal design criteria of water-cooled reactors. The intent of this regulation is met by proposing principal design criteria for the Aurora in the FSAR.
52.79(a)(5)	50.46	ECCS[2]	The Aurora does not have a reactor coolant system nor an ECCS, and a loss of coolant accident is not possible. The intent of this regulation is met by the safety analysis[3] in the FSAR, which analyzes reactor heat removal degradation.
	50.46a	Reactor coolant system vents	Non-condensable gasses do not negatively impact systems related to cooling of the Aurora reactor. The intent of this regulation is met by the performance of relevant safety analyses in the FSAR.
52.79(a)(6)	Appendix A to Part 50	GDC	The Aurora is not a water-cooled reactor, and the GDC are minimum requirements specific to the principal design criteria of water-cooled reactors. The intent of this regulation is met by proposing principal design criteria for fire protection for the Aurora in the FSAR.
52.79(a)(7)	50.60; 50.61	Pressurized thermal shock	There is no reactor coolant present in the Aurora design, and the Aurora operates as near-atmospheric pressures. The intent of this regulation is met by the performance of relevant safety analyses in the FSAR.
52.79(a)(8)	50.44	Combustible gas control	Accidents including combustible gases are not technically relevant since the Aurora is a nonlight water reactor. Since there is no water coolant accidents associated with hydrogen production due to the zirconium-water interaction are not possible. The intent of this regulation is met by the performance of relevant safety analyses in the FSAR.

1 - General design criteria
2 - Emergency core cooling system
3 - The safety analysis for the Aurora is located in Chapter 5, "Transient analysis," of Part II.

Table 2-3: Regulations from 10 CFR 52.79 that do not apply, part 2 of 4

52.79 requirement	Regulation that is N/A	Short description	Summary
52.79(a)(9)	50.63	Station blackout	This regulation is specific to pressurized and boiling water reactors. The Aurora does not rely on AC offsite power, and emergency onsite power is not required to shut down the reactor nor achieve a safe state. The intent of this regulation is met by the design of electrically-independent systems and not requiring electricity to assure the safety of the plant.
52.79(a)(10)	50.49	Environmental qualification of electric equipment	The change in environmental conditions between normal operation and transients do not require additional qualification programs to assure that the needed equipment will function as expected. The Aurora reactor operates at near atmospheric pressure and does not use any water such that changes in environmental conditions caused by chemical effects, humidity, pressure, and submergence are not applicable. Additionally, commercially-available electrical components can meet the resulting changes in temperature and radiation and do not challenge the operational limits of the electrical components specified for each location. The intent of this regulation is met by the presence of only a mild environment and through adequate procurement of relevant parts through the Oklo Quality Assurance Program.
52.79(a)(11)	50.55a	Codes and standards	The requirement to meet ASME codes applies only to LWRs and is therefore not applicable to the Aurora. The requirement to meet IEEE codes is applicable to all power reactors, but the IEEE codes only apply to safety systems that are required to protect the public health and safety, and the Aurora has no such systems because of its small size and passively safe design features. The intent of this regulation is met by analysis of components with approved codes and through assurance made by design commitments coupled with programmatic controls including QA in order to assure appropriate analysis and ensure safety in the as-built and operated plant.
52.79(a)(12)	Appendix J to Part 50	Primary containment leakage rate testing program	The Aurora is not a water-cooled reactor and does not implement a primary reactor containment. The intent of this regulation is met by the design and operation of all primary components at near-atmospheric pressures.
52.79(a)(13)	Appendix H to Part 50	Reactor vessel material surveillance program	The Aurora does not have a primary reactor coolant. The Aurora also does not use safety-related reactor pressure vessels but utilizes reactor enclosures that are constructed from materials, which are proven to be more corrosion and irradiation resistant that ferritic steels and operate at near-atmospheric pressures. The intent of this regulation is met by not utilizing a reactor coolant and through assurance made by design commitments coupled with programmatic controls including QA in order to assure appropriate analysis and ensure safety in the as-built and operated plant.

52.79(a)(15)	50.65	Maintenance rule	Maintenance requirements are based on identified concerns of LWRs, especially for aging plants. The intent of this regulation is met by maintaining active components through existing operational programs like the Technical Specifications or through operational plans like the Emergency Plan.

Table 2-4: Regulations from 10 CFR 52.79 that do not apply, part 3 of 4

52.79 requirement	Regulation that is N/A	Short description	Summary
52.79(a)(16)	Appendix I to Part 50	Effluent monitoring and sampling	The Aurora does not release effluents during normal operations because gaseous and liquid materials are expected to reside inside the reactor module. Inventories of gaseous and liquid forms that are radioactive are well below the design objectives set using concentration limits in 10 CFR Part 20. The intent of this regulation is met through the small design of the Aurora and by the tracking of all radioactive material through the Radiation Protection Program[4].
52.79(a)(17)	50.34(f)	Three Mile Island requirements	These requirements are specific to LWR designs. The intent of the regulation is met by various aspects of the Aurora design and programmatic controls.
52.79(a)(18)	50.69	Risk-informed treatment of SSCs	This application does not use the risk-informed requirements of 10 CFR 50.69.
52.79(a)(21)	50.47(b)(5) Appendix E, Section IV.D.1, to Part 50	Early notification of the public	Procedures will be established for notification to the relevant response organizations. However, since there is no offsite radiological release for the Aurora, there are no scenarios that require early notification to the public. Additionally, there is no populace residing in the Aurora emergency planning zone (EPZ). This intent of this regulation is met by all emergency planning activities being implemented onsite.
	50.47(b)(10) Appendix E, Section IV.3-5, to Part 50	Evacuation of the public	A range of protective actions has been developed for the onsite Aurora personnel and is part of the Emergency Plan. No protective actions, including no evacuation time estimates, are developed for the public since there is no offsite radiological release. This intent of this regulation is met by the small design of the Aurora that does not have an associated offsite release.
	Appendix E, Section IV.7, to Part 50	Changes in population in the EPZ	No review of changes in population in the EPZ will be performed since no one resides in the Aurora EPZ. The intent of this regulation is met by the EPZ being set at the Aurora powerhouse.
	Appendix E, Section IV.F.1, to Part 50	Onsite emergency response teams	The Emergency Plan[5] provides for 10 CFR Part 50, Appendix E, Section IV(F)(1)(a)-(b) with the exception of the requirements of 10 CFR Part 50, Appendix E, Section IV(F)(1)(b)(iii)-(vii) and 10 CFR Part 50, Appendix E, Section IV(F)(1)(b)(ix) because the described groups are not onsite Aurora personnel. The intent of this regulation is met by contracting with the appropriate outside resources.

52.79(a)(23)	None	Reserved	There is no requirement in this section because it is reserved.
52.79(a)(31)	None	Multi-unit sites	The Aurora is a single unit site.

4 - The Radiation Protection Program for the Aurora is described in Chapter 20, "Radiation Protection Program description," of Part II.
5 - The Emergency Plan for the Aurora is described in Chapter 9, "Emergency planning," of Part II.

Table 2-5: Regulations from 10 CFR 52.79 that do not apply, part 4 of 4

52.79 requirement	Regulation that is N/A	Short description	Summary
52.79(a)(35) 52.79(a)(36)	73.55(i)(2); 73.55(i)(4); 73.55(j)(4)	Secondary alarm station	The Aurora powerhouse houses only one alarm station since including a second alarm station would not provide the redundancy intended by the regulation because of the small footprint of the site. The intent of this regulation is met by the redundancy assured by continuous offsite communication with the relevant contracted authorities.
	73.55(e)(8)(i)(B); 73.55(g)(2)(ii); 73.55(g)(2)(iv); 73.55(g)(3); 73.55(g)(8)(iii); 73.55(h)(2)(ii)-(v); 73.55(g)(3); 73.55(j)(3)	Vehicles in security areas	Vehicles cannot enter security areas at the Aurora since these are inside the Aurora powerhouse. The intent of this regulation is met by the security areas being contained or comprising the Aurora powerhouse.
	73.55(e)(5); 73.55(e)(9); 73.55(g)(4)	Vital equipment	There is no vital equipment and therefore no vital areas. The intent of this regulation is met by the security-by-design principles of the Aurora.
	73.55(b)(1), (6); 73.55(c)(1)(i), (4); 73.55(d); 73.55(i)(5)(iv)-(v); 73.55(k); Appendix B to Part 73	Armed guards	No specific security organization or armed personnel are employed onsite as the intent of having armed response is met through contracted organizations.
52.79(a)(38)	None	Severe accidents	The severe accidents (e.g., challenges to containment integrity caused by core-concrete interaction, steam explosion, high-pressure core melt ejection, hydrogen combustion, and containment bypass) do not have an equivalent in the Aurora design. The intent of this regulation is met by the performance of relevant safety analyses in the FSAR.
52.79(a)(41)	None	Standard Review Plan evaluation	The Aurora is not an LWR, which have identified anticipated transients without scram concerns. The intent of this regulation is met through the safety analyses included in the FSAR.
52.79(a)(42)	50.62	Anticipated transients without scram	The Aurora is a low value target and is not hittable by a large commercial airplane. The intent of this regulation is inherently met by the small radionuclide inventory of the Aurora and most components being located below grade.

52.79(a)(47)	50.150	Aircraft impact assessment	The Aurora is a low value target and is not hittable by a large commercial airplane. The intent of this regulation is inherently met by the small radionuclide inventory of the Aurora and most components being located below grade.

2.3 10 CFR 52.80: Contents of applications; additional technical information

Applicants for a combined license are required to submit additional technical information by 10 CFR 52.80. Section 52.80(a) of 10 CFR applies and is discussed in Part VI, "Proposed license conditions." Section 52.80(b) of 10 CFR applies and is discussed in Part III, "Environmental report." Two requirements of 10 CFR 52.80 do not apply and are shown in Table 2-6.

Table 2-6: Regulations from 10 CFR 52.80 that do not apply

52.80 requirement	Regulation that is N/A	Short description	Summary
52.80(c)	None	Limited work authorization	No request is filed for a limited work authorization.
52.80(d)	50.155(b)-(c)	Mitigation of beyond design basis events	The Aurora is inherently safe and has a small radionuclide inventory. The Aurora has no reliance on a secondary system, electricity, or human action in order to maintain a safe state. Additionally, there are no active systems for core cooling, no reliance on AC power, no spent fuel pool, personnel do not need to remain onsite during an emergency, and there are no human actions required to maintain a reactor safe state. The intent of this regulation is inherently met by the small radionuclide inventory of the Aurora, most components being located below grade, and the administrative controls required by the Emergency Plan.

3 REQUESTED EXEMPTIONS

The regulations discussed in this chapter apply to the Aurora but have associated requested exemptions. The requested exemptions are associated with regulations, whose intent might not accurately depict the assurance of safety. In other words, meeting the intent of the rule is often not necessary to assure the safety of the public and the environment. These regulations are not discussed as part of the Aurora combined license application.

The purpose of this chapter is to describe which regulations from 10 CFR 52.77, 10 CFR 52,79, and 10 CFR 52.80 apply to the Aurora but have associated requested exemptions. These regulations might reference other portions of the CFR, and when other portions are referenced, they are also discussed.

This chapter organizes the requested exemptions by a topic area and provides the appropriate regulatory and technical justifications. Each requested exemption follows the same format and outlines the specific regulations, relevant technical information of the Aurora design, and the technical and regulatory basis for the exemption request.

3.1 Cyber security

The use of digital computers and communications and networks is required to be protected from cyber attacks, as described by the design basis threat. Specifically, these requirements apply to digital components that relate to the safety of the plant, security functions, emergency preparedness functions, or any support systems which, if compromised, could adversely affect the safety of the facility. The intent of the regulations related to cyber security are to assure the safety of the public and the environment by the protection of certain digital systems.

The following regulations are applicable to the Aurora and relate to cyber security:

- 10 CFR 73.54, "Protection of digital computer and communication systems and networks"
- 10 CFR 73.77, "Cyber security event notifications"
- 10 CFR 52.79(a)(36)(iii), in part
- 10 CFR 73.55, "Requirements for physical protection of licensed activities in nuclear power reactors against radiological sabotage," paragraph (b)(8)
- 10 CFR 73.55(c)(1)(i), in part
- 10 CFR 73.55(c)(6)
- 10 CFR 73.55(m)(2), in part

The Aurora is a compact, low-tech facility with a small inventory of radioactive fission products and poses minimal risk to the health and safety of the public. The requirements listed above are disproportionate to the risk presented by the Aurora.

Because there is a lack of safety or security importance of digital computer and communication systems and networks in the Aurora design, Oklo Power, LLC (Oklo Power) seeks exemptions in accordance with 10 CFR 52.7, "Specific exemptions," and 10 CFR 73.5, "Specific exemptions," from the following requirements:

- 10 CFR 73.54
- 10 CFR 73.77
- 10 CFR 52.79(a)(36)(iii), in part
- 10 CFR 73.55(b)(8)
- 10 CFR 73.55(c)(1)(i), in part
- 10 CFR 73.55(c)(6)
- 10 CFR 73.55(m)(2), in part

3.1.1 Technical basis for requested exemptions

Section 73.54 to 10 CFR requires the protection against cyber attacks for digital computer and communication systems and networks that are associated with the following:

- Safety-related and important-to-safety functions
- Security functions
- Emergency preparedness functions, including offsite communications
- Support systems and equipment which, if compromised, would adversely impact safety, security, or emergency preparedness functions

The thermal power of the Aurora reactor is three orders of magnitude less than current LWRs and the accumulated inventory of radioactive fission products in the fuel is proportionally less than current LWRs. In bounding accidents, the Aurora design cannot cause an offsite radiation dose to the public.

In addition, the low-tech design of the Aurora prevents cyber threats from directly challenging the safety goals of the reactor. The Aurora does not have safety-related nor important-to-safety functions that have associated digital computer and communication systems and networks. The Aurora instrumentation and control system includes an automatic reactor trip system to enforce limits important to the safety goals of the reactor. The automatic reactor trip system does not use "digital computer and communication systems and networks," as defined in 10 CFR 73.54(a). The automatic reactor trip system does not use any digital computers, does not use a communication system, and is not connected to a network. The reactor trip system limits can only be changed by physically accessing the trip system hardware which is located in an access controlled area of the Aurora facility.

The Aurora security functions uses digital computers and networks for the intrusion detection system as per the Physical Security Plan. The intrusion detection system will be implemented and operated according to Oklo Inc. Corporate Cyber Security Policy, which is not submitted as part of this combined license application. The Aurora intrusion detection system relies on a few digital computers, a small internal network, and data diodes and a virtual private network to allow secure one-way data transmission to computers external to the Aurora facility. The Physical Security Plan requires that continuous communication is maintained between the Aurora site and Oklo Power Headquarters as well as the supporting contracted security organization to ensure there are redundant protective features in place. The Physical Security Plan is described in Chapter 18, "Security plans," of Part II.

The Emergency Plan emergency preparedness functions rely on two redundant radiation monitors, fixed and portable, and on two redundant, diverse-technology communication systems (e.g., phone and radio) to communicate with external emergency response organizations. The radiation monitoring function and communication systems will be implemented and operated according to the Oklo Inc. Corporate Cyber Security Policies. The Emergency Plan relies on two redundant, diverse-technology communication systems (e.g., phone and radio) to prevent disruption of communication with external emergency response organizations. The Emergency Plan is described in Chapter 9, "Emergency planning," of Part II.

The only two systems that include components under the scope of 10 CFR 73.54(a)(1) are the intrusion detection system and the communication systems for emergency response. Both of these systems will be implemented and operated according to the Oklo Inc. Corporate Cyber Security Policy. For the reasons described, the Aurora does not need a cyber security plan as described in 10 CFR 73.54 and consequently, does not need to provide cyber security event notifications as described in 10 CFR 73.77.

3.1.2 Regulatory basis for requested exemptions

3.1.2.1 10 CFR 52.7

As stated in 10 CFR 52.7, the NRC "may, upon application by any interested person or upon its own initiative, grant exemptions from the requirements of the regulations of this part" and defers governance to 10 CFR 50.12, "Specific exemptions." The following subsection describes the regulatory basis pursuant to 10 CFR 50.12.

3.1.2.2 10 CFR 50.12

As stated in 10 CFR 50.12(a):

> The Commission may, upon application by any interested person or upon its own initiative, grant exemptions from the requirements of the regulations of this part, which are--
>
> (1) Authorized by law, will not present an undue risk to the public health and safety, and are consistent with the common defense and security.
>
> (2) The Commission will not consider granting an exemption unless special circumstances are present. Special circumstances are present whenever--
>
> > (i) Application of the regulation in the particular circumstances conflicts with other rules or requirements of the Commission; or
> >
> > (ii) Application of the regulation in the particular circumstances would not serve the underlying purpose of the rule or is not necessary to achieve the underlying purpose of the rule; or
> >
> > (iii) Compliance would result in undue hardship or other costs that are significantly in excess of those contemplated when the regulation was adopted, or that are significantly in excess of those incurred by others similarly situated; or
> >
> > (iv) The exemption would result in benefit to the public health and safety that compensates for any decrease in safety that may result from the grant of the exemption; or
> >
> > (v) The exemption would provide only temporary relief from the applicable regulation and the licensee or applicant has made good faith efforts to comply with the regulation; or
> >
> > (vi) There is present any other material circumstance not considered when the regulation was adopted for which it would be in the public interest to grant an exemption. If such condition is relied on exclusively for satisfying paragraph

> (a)(2) of this section, the exemption may not be granted until the Executive Director for Operations has consulted with the Commission.

The following discussion pertains to the requirements of 10 CFR 50.12.

Pursuant to 10 CFR 50.12(a)(1), the exemptions requested will not present an undue risk to the public health and safety and are consistent with the common defense and security.

Section CFR 50.12(a)(2) to 10 CFR requires a special circumstance exist for an exemption to be granted. Specifically for this exemption request, application of the regulations is not necessary to achieve the underlying purpose of the rule. The Aurora has a small radionuclide inventory, passive safety features, and no need for electricity or personnel actions to ensure the safe state of the facility is maintained. As there is no credible radiological release associated with the Aurora, regulations pertaining to cyber security do not serve the underlying purpose of assuring the safety of the public and the environment. The requested exemptions meet the special circumstances described in 10 CFR 50.12(a)(2)(ii).

3.1.2.3 10 CFR 73.5

As stated in 10 CFR 73.5:

> The Commission may, upon application of any interested person or upon its own initiative, grant such exemptions from the requirements of the regulations in this part as it determines are authorized by law and will not endanger life or property or the common defense and security, and are otherwise in the public interest.

Pursuant to 10 CFR 73.5, the exemptions requested will not endanger life or property or the common defense and security and are otherwise in the public interest.

3.1.3 Conclusion

Due to the technical and regulatory information discussed, Oklo Power requests that the NRC Commission grants an exemption for the Aurora combined license application from the following requirements:

- 10 CFR 73.54
- 10 CFR 73.77
- 10 CFR 52.79(a)(36)(iii), in part
- 10 CFR 73.55(b)(8)
- 10 CFR 73.55(c)(1)(i), in part
- 10 CFR 73.55(c)(6)
- 10 CFR 73.55(m)(2), in part

The regulations that have partial requested exemptions are shown in Table 3-1 for clarity.

Table 3-1: Requested partial exemptions for cyber security

Regulation	Language
52.79(a)(36)	(i) A safeguards contingency plan in accordance with the criteria set forth in appendix C to 10 CFR part 73. The safeguards contingency plan shall include plans for dealing with threats, thefts, and radiological sabotage, as defined in part 73 of this chapter, relating to the special nuclear material and nuclear facilities licensed under this chapter and in the applicant's possession and control. Each application for this type of license shall include the information contained in the applicant's safeguards contingency plan.8 (Implementing procedures required for this plan need not be submitted for approval.) (ii) A training and qualification plan in accordance with the criteria set forth in appendix B to 10 CFR part 73. (iii) A cyber security plan in accordance with the criteria set forth in § 73.54 of this chapter; (iv) A description of the implementation of the safeguards contingency plan, training and qualification plan, and cyber security plan; and (v) Each applicant who prepares a physical security plan, a safeguards contingency plan, a training and qualification plan, or a cyber security plan, shall protect the plans and other related Safeguards Information against unauthorized disclosure in accordance with the requirements of § 73.21 of this chapter.
73.55(c)(1)(i)	How the licensee will implement requirements of this section through the establishment and maintenance of a security organization, the use of security equipment and technology, the training and qualification of security personnel, the implementation of predetermined response plans and strategies, and the protection of digital computer and communication systems and networks.
73.55(m)(2)	Reviews of the security program must include, but not limited to, an audit of the effectiveness of the physical security program, security plans, implementing procedures, cyber security programs, safety/security interface activities, the testing, maintenance, and calibration program, and response commitments by local, State, and Federal law enforcement authorities.

3.2 Fitness-for-duty

A fitness-for-duty (FFD) program is intended to ensure individuals are trustworthy, reliable, and not under the influence of any substance, legal or illegal, or mentally or physically impaired from any cause, in a way that adversely affects their ability to safety and competently perform their duties. The intent of FFD programs is to require additional controls on onsite individuals to reduce the risk of human error that can cause damage to the reactor.

The following regulations are applicable to the Aurora and relate to FFD:

- 10 CFR Part 26, "Fitness for duty programs"
- 10 CFR 52.79(a)(44), in part
- 10 CFR 73.55(g)(7)(ii), in part

Oklo Power intends to implement the FFD Program at the Aurora to ensure individuals are not under the influence of any substance, or mentally or physically impaired, in a way that adversely affects their ability to safety and competently perform their duties. Personnel who perform duties that impact the safety or security of the facility are subject to the FFD Program. The FFD Program includes drug and alcohol testing, including pre-access, for-cause, post-event, and random testing, as well as behavioral observation. The FFD Program is described in Chapter 23, "Fitness-for-Duty Program description," of Part II.

Oklo Power seeks exemptions in accordance with 10 CFR 26.9, "Specific exemptions," 10 CFR 52.7, and 10 CFR 73.5 from the requirements in 10 CFR Part 26, 10 CFR 52.79(a)(44), in part, and 10 CFR 73.55(g)(7)(ii), in part, due to the implementation of the FFD Program at the Aurora instead of the requirements given in the relevant regulations.

3.2.1 Technical basis for requested exemptions

In comparison to large LWRs, personnel requirements and responsibilities for the Aurora are significantly reduced. During normal operation, two Onsite Monitors are responsible for monitoring operation of the reactor. Reactor controls are automatic, and Onsite Monitors do not perform any credited operator actions.

All personnel who impact the safety or security of the facility are subject to the FFD Program. The FFD Program includes drug and alcohol testing, including pre-access, for-cause, post-event, and random testing. Testing includes marijuana metabolite, cocaine metabolite, opiates (codeine, morphine, 6-acetylmorphine), amphetamines (amphetamine, methamphetamine), phencyclidine, adulterants, and alcohol. Testing cutoff levels are consistent with 10 CFR Part 26. Testing procedures, including testing personnel and laboratories, are consistent with Oklo Power quality assurance standards. Through the implementation of the FFD Program at the Aurora, the intent of the regulation is met.

3.2.2 Regulatory basis for requested exemptions

3.2.2.1 10 CFR 26.9

As stated in 10 CFR 26.9:

> Upon application of any interested person or on its own initiative, the Commission may grant such exemptions from the requirements of the regulations in this part as it determines are authorized by law and will not endanger life or property or the common defense and security, and are otherwise in the public interest.

Pursuant to 10 CFR 26.9, the exemptions requested will not endanger life or property or the common defense and security and are otherwise in the public interest.

3.2.2.2 10 CFR 52.7

As stated in 10 CFR 52.7, the NRC "may, upon application by any interested person or upon its own initiative, grant exemptions from the requirements of the regulations of this part" and defers governance to 10 CFR 50.12. The following subsection describes the regulatory basis pursuant to 10 CFR 50.12.

3.2.2.3 10 CFR 50.12

As stated in 10 CFR 50.12(a):

> The Commission may, upon application by any interested person or upon its own initiative, grant exemptions from the requirements of the regulations of this part, which are--
>
> (1) Authorized by law, will not present an undue risk to the public health and safety, and are consistent with the common defense and security.
>
> (2) The Commission will not consider granting an exemption unless special circumstances are present. Special circumstances are present whenever--
>
> > (i) Application of the regulation in the particular circumstances conflicts with other rules or requirements of the Commission; or
> >
> > (ii) Application of the regulation in the particular circumstances would not serve the underlying purpose of the rule or is not necessary to achieve the underlying purpose of the rule; or
> >
> > (iii) Compliance would result in undue hardship or other costs that are significantly in excess of those contemplated when the regulation was adopted, or that are significantly in excess of those incurred by others similarly situated; or
> >
> > (iv) The exemption would result in benefit to the public health and safety that compensates for any decrease in safety that may result from the grant of the exemption; or
> >
> > (v) The exemption would provide only temporary relief from the applicable regulation and the licensee or applicant has made good faith efforts to comply with the regulation; or
> >
> > (vi) There is present any other material circumstance not considered when the regulation was adopted for which it would be in the public interest to grant an exemption. If such condition is relied on exclusively for satisfying paragraph (a)(2) of this section, the exemption may not be granted until the Executive Director for Operations has consulted with the Commission.

The following discussion pertains to the requirements of 10 CFR 50.12.

Pursuant to 10 CFR 50.12(a)(1), the requested exemptions will not present an undue risk to the public health and safety and are consistent with the common defense and security.

Section 50.12(a)(2) to 10 CFR requires a special circumstance exist for an exemption to be granted. The FFD Program is commensurate with the size of the Aurora and is sufficient to ensure that personnel are trustworthy, reliable, and not under the influence of any substance, legal or illegal, or mentally or physically impaired from any cause, in a way that adversely affects their ability to safety and competently perform their duties. Therefore, application of the regulation is not necessary to achieve the underlying purpose of the rule and special circumstances exist under 10 CFR 50.12(a)(2)(ii).

3.2.2.4 10 CFR 73.5

As stated in 10 CFR 73.5:

> The Commission may, upon application of any interested person or upon its own initiative, grant such exemptions from the requirements of the regulations in this part as it determines are authorized by law and will not endanger life or property or the common defense and security, and are otherwise in the public interest.

Pursuant to 10 CFR 73.5, the exemptions requested will not endanger life or property or the common defense and security and are otherwise in the public interest.

3.2.3 Conclusion

Due to the technical and regulatory information discussed, Oklo Power requests that the NRC Commission grants an exemption for the Aurora combined license application from the requirements of 10 CFR Part 26, 10 CFR 52.79(a)(44), in part, and 10 CFR 73.55(g)(7)(ii), in part. The regulation that has a partial requested exemption is shown in Table 3-2 for clarity.

Table 3-2: Requested partial exemptions for fitness-for-duty

Regulation	Language
52.79(a)(44)	A description of the fitness-for-duty program required by 10 CFR part 26 and its implementation.
73.55(g)(7)(ii)	Individuals not employed by the licensee but who require frequent or extended unescorted access to the protected area and/or vital areas to perform duties and responsibilities required by the licensee at irregular or intermittent intervals, shall satisfy the access authorization requirements of § 73.56 and part 26 of this chapter, and shall be issued a non-employee photo identification badge that is easily distinguished from other identification badges before being allowed unescorted access to the protected and vital areas. Non-employee photo identification badges must visually reflect that the individual is a non-employee and that no escort is required.

3.3 Fuel cycle environmental considerations

The fuel cycle environmental regulations evaluate the negative effects of the nuclear fuel cycle on the environment. The intent of the regulations is to ensure that the environment is protected.

The following regulations are applicable to the Aurora and relate to the environmental impacts of the nuclear fuel cycle:

- 10 CFR 51.50, "Environmental report—construction permit, early site permit, or combined license stage," paragraph (c), in part
- 10 CFR 51.52, "Environmental effects of transportation of fuel and waste—Table S–4," paragraph (b)

The U.S. currently does not produce the high assay low enriched uranium (HALEU) needed for the Aurora design at a commercial scale. The fuel manufacturing and fabrication process will differ for early implementations of the Aurora from the long-term fuel manufacturing and fabrication process.

Oklo Power seeks exemptions in accordance with 10 CFR 51.6, "Specific exemptions," from the requirements in 10 CFR 51.50(c), in part, and 10 CFR 51.52(b) because of the minimal amount of fuel required for the Aurora design and this being a first-of-a-kind reactor.

3.3.1 Technical basis for requested exemption

The first-of-a-kind Aurora reactor uses approximately 5 metric tons of HALEU over its 20 year operating lifetime. For comparison, a Westinghouse pressurized water reactor uses approximately 110 metric tons of low enriched fuel about every 3 years. Due to the minimal amount of fuel required for the Aurora, it is not necessary to provide the basis for evaluating the environmental effects of the fuel cycle for the first core fuel load. Through the process of manufacturing and fabricating the first fuel load, there will be significant insights gained to more appropriately analyze the realistic fuel cycle impacts.

The most recent environmental analysis that provides some insight into the environmental impacts of manufacturing small amounts of HALEU is the January 2019 "Environmental Assessment for Use of DOE-Owned High-Assay Low-Enriched Uranium Stored at Idaho National Laboratory" [1]. The Department of Energy is proposing to make 10 metric tons of HALEU from feedstock materials currently at Idaho National Laboratory. The environmental analysis performed conclude that the environmental and human environment impacts are negligible, and thus made a finding of no significant impact (FONSI). The analysis provides context on the minimal likely impact of such a small volume of fuel. Due to the small overall amount of fuel, the environmental impacts of manufacturing and fabrication of the first core will not be large.

3.3.2 Regulatory basis for requested exemption

3.3.2.1 10 CFR 51.6

As stated in 10 CFR 51.6:

> The Commission may, upon application of any interested person or upon its own initiative, grant such exemptions from the requirements of the regulations in this part as it determines are authorized by law and are otherwise in the public interest.

Pursuant to 10 CFR 51.6, the exemptions requested do not violate any laws, neither the National Environmental Policy Act or the AEA, and are in the public interest.

3.3.3 Conclusion

Due to the technical and regulatory information discussed, Oklo Power requests that the NRC Commission grants a partial exemption for the Aurora combined license application from the requirements of 10 CFR 51.50(c), in part, and to 10 CFR 51.52(b). The regulation that has partial requested exemptions is shown in Table 3-3 for clarity.

Table 3-3: Requested partial exemption for fuel cycle environmental considerations

Regulation	Language
51.50(c)	Combined license stage. Each applicant for a combined license shall submit with its application a separate document, entitled "Applicant's Environmental Report—Combined License Stage." Each environmental report shall contain the information specified in §§ 51.45, 51.51, and 51.52, as modified in this paragraph. For other than light-water-cooled nuclear power reactors, the environmental report shall contain the basis for evaluating the contribution of the environmental effects of fuel cycle activities for the nuclear power reactor. Each environmental report shall identify procedures for reporting and keeping records of environmental data, and any conditions and monitoring requirements for protecting the non-aquatic environment, proposed for possible inclusion in the license as environmental conditions in accordance with § 50.36b of this chapter. The combined license environmental report may reference information contained in a final environmental document previously prepared by the NRC staff. As stated in § 51.23, no discussion of the environmental impacts of the continued storage of spent fuel is required in this report.

3.4 Land vehicle bomb assault

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3.5 Licensed operators

Reactor operators (ROs) and senior reactor operators (SROs) are required to be licensed through 10 CFR Part 55, "Operators' licenses," and reactor controls may only be manipulated by licensed ROs and SROs. As the manipulation of controls directly affects the reactivity or power level of the reactor, the intent of the regulations is to ensure the safety of the reactor by requiring that manipulation of reactor controls is done only by qualified, trained, and licensed personnel.

The following regulations are applicable to the Aurora and relate to licensed operators:

- 10 CFR 52.79(a)(14)
- 10 CFR 52.79(a)(34)
- 10 CFR 50.54, "Conditions of licenses," paragraph (i)
- 10 CFR 50.54(i-1)
- 10 CFR 50.54(j)
- 10 CFR 50.54(k)
- 10 CFR 50.54(l)
- 10 CFR 50.54(m)
- 10 CFR Part 55

Contrary to large LWRs, the Aurora is designed with few active systems, allowing extremely simple and highly automated reactor controls. The reactor trip system, which ensures that the reactor is shut down when trip setpoints are exceeded, is fully automatic. Because of this fully automatic reactor trip system, the personnel onsite do not have any credited safety actions. The safety of the Aurora is ensured without any 10 CFR Part 55 licensed operators.

Because Oklo Power does not have credited operator actions necessary for the safety of the reactor, Oklo Power seeks exemptions in accordance with 10 CFR 52.7, 10 CFR 50.12, and 10 CFR 55.11, "Specific exemptions," from the following requirements:

- 10 CFR 52.79(a)(14)
- 10 CFR 52.79(a)(34)
- 10 CFR 50.54(i)
- 10 CFR 50.54(i-1)
- 10 CFR 50.54(j)
- 10 CFR 50.54(k)
- 10 CFR 50.54(l)

- 10 CFR 50.54(m)
- 10 CFR Part 55

3.5.1 Technical basis for requested exemptions

3.5.1.1 Aurora reactor controls

The simple design of the Aurora, along with the few active systems, enables extremely simple and highly automated reactor controls. The Aurora is controlled in a vastly different way than a large LWR. Contrary to large LWRs, there are no control rods in the core during normal operation; instead, three control drums are rotated to control reactivity letdown with depletion. The rotation of the control drums is managed by the reactivity management system and is entirely automatic. The failure of this automatic system places the reactor in a less reactive state since the purpose of the control drums are to maintain reactivity with fuel depletion over core life.

Three shutdown rods are positioned above the core and are inserted based on signals from the reactor trip system. The reactor trip system is fully automatic. When trip setpoints are exceeded, a trip signal is sent, and all three shutdown rods are inserted into the core. Only one shutdown rod is needed to achieve a sub-critical state.

During normal operation, two Onsite Monitors are responsible for monitoring operation of the reactor and ensuring proper operation of plant equipment. The role of the Onsite Monitors is mostly for investment protection and troubleshooting of the secondary system, neither of which has an effect on the safety of the plant. The Onsite Monitors have other duties, as dictated by the operational programs, which include actions that are largely for their own protection. Onsite Monitors are trained according to the Training Program prior to onsite duty. Because of the simplified and highly automatic controls of the Aurora, Onsite Monitors do not have the typical responsibilities of a large LWR RO or SRO. The only reactor control that is available to Onsite Monitors is the ability to initiate a reactor trip. While initiating a reactor trip does directly affect the reactivity and power level of the reactor, this action can only put the reactor into a shutdown state. The Training Program is described in Chapter 17, "Training Program description," of Part II.

3.5.1.2 Credited operator actions

Onsite Monitors do not perform any credited operator actions to ensure the reactor maintains a safe state. As shown in Chapter 5, "Transient analysis," of Part II, the maximum credible accident (MCA) assumes a complete loss of heat sink in conjunction with a failure to insert one of three shutdown rods. When trip setpoints are exceeded, two of three shutdown rods are assumed to be inserted, and the reactor is shut down. Following shutdown, decay heat is transferred away from the fuel by entirely passive and inherent means, primarily through conduction to nearby structures. Decay heat is ultimately removed by natural convection to the air in the reactor cavity. Safety and operational goals are met throughout the event, no material limits are exceeded, and no release of radioactive material occurs. It is important to note that Onsite Monitors do not have any credited actions during the entire event.

3.5.1.3 Startup Operators

During startup, including the initial criticality and ascent to power, the reactor is controlled by Startup Operators. Startup Operators are trained according to the Training Program prior to

duty. It is not expected that Startup Operators will be present at the facility during normal operation.

Startup Operators have the ability to control the rotation of control drums, as well as the insertion and removal of shutdown rods. The rates of rotation, for control drums, and withdrawal, for shutdown rods, are limited mechanically by the relevant motors. While all three shutdown rods can be inserted simultaneously, only one shutdown rod can only be withdrawn at a time. Details of startup are included in Chapter 14, "Preoperational testing and initial operations," of Part II.

The reactor trip system is active during startup and ensures that the reactor is shut down if trip setpoints are exceeded. As described in Chapter 5 of Part II, the most challenging events, namely the loss of heat sink, which is the MCA, and transient overpower, occur at full power. Because the safety limits of interest are related to material temperature limits, events that occur during startup (typically lower temperature and power) are bounded by events at full power and high temperature. Therefore, while Startup Operators are able to control the reactivity by manipulation of control drums and shutdown rods, startup accidents are not challenging, and adequate operational protections are in place.

3.5.2 Regulatory basis for requested exemptions

3.5.2.1 10 CFR 52.7

As stated in 10 CFR 52.7, the NRC Commission "may, upon application by any interested person or upon its own initiative, grant exemptions from the requirements of the regulations of this part" and defers governance to 10 CFR 50.12. The following subsection describes the regulatory basis pursuant to 10 CFR 50.12.

3.5.2.2 10 CFR 50.12

As stated in 10 CFR 50.12(a):

> The Commission may, upon application by any interested person or upon its own initiative, grant exemptions from the requirements of the regulations of this part, which are--
>
> (1) Authorized by law, will not present an undue risk to the public health and safety, and are consistent with the common defense and security.
>
> (2) The Commission will not consider granting an exemption unless special circumstances are present. Special circumstances are present whenever--
>
> > (i) Application of the regulation in the particular circumstances conflicts with other rules or requirements of the Commission; or
> >
> > (ii) Application of the regulation in the particular circumstances would not serve the underlying purpose of the rule or is not necessary to achieve the underlying purpose of the rule; or
> >
> > (iii) Compliance would result in undue hardship or other costs that are significantly in excess of those contemplated when the regulation was adopted, or that are significantly in excess of those incurred by others similarly situated; or

> (iv) The exemption would result in benefit to the public health and safety that compensates for any decrease in safety that may result from the grant of the exemption; or
>
> (v) The exemption would provide only temporary relief from the applicable regulation and the licensee or applicant has made good faith efforts to comply with the regulation; or
>
> (vi) There is present any other material circumstance not considered when the regulation was adopted for which it would be in the public interest to grant an exemption. If such condition is relied on exclusively for satisfying paragraph (a)(2) of this section, the exemption may not be granted until the Executive Director for Operations has consulted with the Commission.

The following discussion pertains to the requirements of 10 CFR 50.12.

Pursuant to 10 CFR 50.12(a)(1), the exemptions requested will not present an undue risk to the public health and safety and are consistent with the common defense and security.

Section 50.12(a)(2) to 10 CFR requires a special circumstance exist for an exemption to be granted. As described in Section 3.5.1, application of the regulations is not necessary to achieve the underlying purpose of the rule. The Aurora is designed with sufficient protections to ensure that the safety goals of the Aurora are achieved without any credited operator actions. Further, onsite personnel who have the ability to directly affect the reactivity or power level of the Aurora are qualified and trained to do so according to the Training Program. Therefore, 10 CFR Part 55 licensed operators are not required to ensure the safety of the Aurora.

3.5.2.3 10 CFR 55.11

As stated in 10 CFR 55.11:

> The Commission may, upon application by an interested person, or upon its own initiative, grant such exemptions from the requirements of the regulations in this part as it determines are authorized by law and will not endanger life or property and are otherwise in the public interest.

Pursuant to 10 CFR 55.11, the exemptions requested will not endanger life or property or the common defense and security and are otherwise in the public interest.

3.5.3 Conclusion

Due to the technical and regulatory information discussed, Oklo Power requests that the NRC Commission grant exemptions for the Aurora combined license application from the requirements of the following:

- 10 CFR 52.79(a)(14)
- 10 CFR 52.79(a)(34)
- 10 CFR 50.54(i)
- 10 CFR 50.54(i-1)

- 10 CFR 50.54(j)
- 10 CFR 50.54(k)
- 10 CFR 50.54(l)
- 10 CFR 50.54(m)
- 10 CFR Part 55

3.6 Offsite emergency planning

Offsite emergency planning is an important consideration for nuclear power plants with complex systems and large radionuclide inventories. The intent of the regulation is to provide adequate response to the public to minimize the risk of radiation exposure to individuals.

The current set of regulations surrounding offsite monitoring and planning for the emergency planning zone (EPZ) in 10 CFR 50.47, "Emergency plans," and 10 CFR Part 50, Appendix E, "Emergency planning and preparedness for production and utilization facilities," do not take into consideration small plants with inherent safety characteristics.

The following regulations are applicable to the Aurora and relate to offsite planning:

- 10 CFR 50.47(b), in part
- 10 CFR 50.47(b)(4), in part
- 10 CFR 50.47(b)(6), in part
- 10 CFR 50.47(b)(7)
- 10 CFR 50.47(b)(9)
- 10 CFR Part 50, Appendix E, Section IV.E.8.b
- 10 CFR Part 50, Appendix E, Section IV.F.1, in part
- 10 CFR Part 50, Appendix E, Section VI.1, in part
- 10 CFR Part 50, Appendix E, Section VI.2.a, in part
- 10 CFR Part 50, Appendix E, Section VI.3.d, in part

Due to the Aurora design having no credible radiological release,[4] the Aurora EPZ is limited to the Aurora powerhouse. Since the Aurora powerhouse contains the EPZ, the parts of 10 CFR 50.47 and 10 CFR Part 50, Appendix E related to offsite emergency monitoring and response no longer serve the underlying the intent of the regulation to ensure rapid response to protect the public in the case of an offsite radiological event.

Oklo Power seeks exemptions in accordance with 10 CFR 50.12 from the requirements in the following:

- 10 CFR 50.47(b), in part
- 10 CFR 50.47(b)(4), in part

[4] As shown in Chapter 5 of Part II, there are no credible accidents that result in the release of radioactive material; the MCA, which assumes a complete loss of the secondary system in conjunction with a failure to insert one of the shutdown rods, does not result in a radioactive release.

- 10 CFR 50.47(b)(6), in part
- 10 CFR 50.47(b)(7)
- 10 CFR 50.47(b)(9)
- 10 CFR Part 50, Appendix E, Section IV.E.8.b
- 10 CFR Part 50, Appendix E, Section IV.F.1, in part
- 10 CFR Part 50, Appendix E, Section VI.1, in part
- 10 CFR Part 50, Appendix E, Section VI.2.a, in part
- 10 CFR Part 50, Appendix E, Section VI.3.d, in part

3.6.1 Technical basis for requested exemptions

Postulated radioactive releases from credible accidents provide the basis for determining the size of the EPZ. NUREG-0654, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants", Revision 2, December 2019, defines an EPZ as "the areas for which planning is needed to assure that prompt and effective actions can be taken to protect the public in the event of an accident." NUREG-0654, authored by a task force comprised of representatives from the Federal Emergency Management Agency and the NRC, includes the following language:

> The primary objective of radiological emergency planning is to provide dose savings for a spectrum of radiological incidents that have the potential to produce offsite doses in excess of the current Federal protective action guides (PAGs).

The Environmental Protection Agency (EPA) determines the PAGs, which are the basis for emergency response. The precedent, set by all currently licensed reactors, bases the plume exposure pathway EPZ size to the distance which a radioactive plume could result in possible dose to the public in excess of the PAGs. The PAGs dose level concerns for determining the EPZ has been the precedent for determining radiological harm to the public since 1979 when the NRC incorporated NUREG-0396, "Planning Basis for the Development of State and Local Government Radiological Emergency Response Plans In Support of Light Water Nuclear Power Plants," Revision 0, issued December 1978, guidance through a policy statement[5]. In NUREG-0396, the combined NRC EPA task force concluded that "the objective of emergency response plans should be to provide dose savings for a spectrum of accidents that could produce offsite doses in excess of the PAGs." The early phase limits for the public taking protective actions is 1-5 rem projected dose over 4 days as given in the PAG Manual, "Protective Action Guides and Planning Guidance for Radiological Incidents," published January 2017. As the basis in NRC emergency planning guidance is for the size of the EPZ to be based on the PAGs,

[5] The NRC's policy statement incorporating NUREG-0396 was released October 23, 1979 in 44 FR 61123.

an offsite emergency preparedness plan needs to exist if there is a possibility of an accident which would result in a 1 rem projected dose[6] to a member of the public.

For the Aurora, the plume exposure and ingestion exposure pathway comprise the same EPZ, which is limited to the exterior boundary of the Aurora powerhouse. As there is no radiological release associated with the MCA, the PAGs are met through an EPZ limited to the Aurora powerhouse. The MCA is discussed in Chapter 5 of Part II.

As there is no credible offsite radiological release for the Aurora, a notification of unusual event is the only applicable emergency action level for the Aurora, as described in the Emergency Plan, which is described in Chapter 9 of Part II.

. As stated in 10 CFR 50.72(a)(4):

> The licensee shall activate the Emergency Response Data System (ERDS) as soon as possible but not later than one hour after declaring an Emergency Class of alert, site area emergency, or general emergency. The ERDS may also be activated by the licensee during emergency drills or exercises if the licensee's computer system has the capability to transmit the exercise data.

Due to the Aurora having no events that result in an emergency class of alert or greater in consequence, there are no events that require the activation of an ERDS.

3.6.2 Regulatory basis for requested exemptions

3.6.2.1 10 CFR 50.12

As stated in 10 CFR 50.12(a):

> The Commission may, upon application by any interested person or upon its own initiative, grant exemptions from the requirements of the regulations of this part, which are--
>
> > (1) Authorized by law, will not present an undue risk to the public health and safety, and are consistent with the common defense and security.
> >
> > (2) The Commission will not consider granting an exemption unless special circumstances are present. Special circumstances are present whenever--
> >
> > > (i) Application of the regulation in the particular circumstances conflicts with other rules or requirements of the Commission; or
> > >
> > > (ii) Application of the regulation in the particular circumstances would not serve the underlying purpose of the rule or is not necessary to achieve the underlying purpose of the rule; or

[6] As stated in the PAG Manual "Projected dose is the sum of the effective does from external radiation exposure (e.g. groundshine and plume submersion) and the committed effective dose from inhaled radioactive material."

> (iii) Compliance would result in undue hardship or other costs that are significantly in excess of those contemplated when the regulation was adopted, or that are significantly in excess of those incurred by others similarly situated; or
>
> (iv) The exemption would result in benefit to the public health and safety that compensates for any decrease in safety that may result from the grant of the exemption; or
>
> (v) The exemption would provide only temporary relief from the applicable regulation and the licensee or applicant has made good faith efforts to comply with the regulation; or
>
> (vi) There is present any other material circumstance not considered when the regulation was adopted for which it would be in the public interest to grant an exemption. If such condition is relied on exclusively for satisfying paragraph (a)(2) of this section, the exemption may not be granted until the Executive Director for Operations has consulted with the Commission.

The following discussion pertains to the requirements of 10 CFR 50.12.

Pursuant to 10 CFR 50.12(a)(1), the exemptions requested will not present an undue risk to the public health and safety and are consistent with the common defense and security.

Special circumstances exist for the Aurora due to the small size of the facility. The Aurora has a small radionuclide inventory, passive safety features, and no need for electricity or personnel actions to ensure the safe state of the facility is maintained. As there is no credible radiological release associated with the Aurora, regulations pertaining to offsite emergency planning do not serve the underlying purpose of providing dose savings to the public in the case of an offsite radiological event. The requested exemptions meet the special circumstances described in 10 CFR 50.12(a)(2)(ii).

3.6.3 Conclusion

Due to the technical and regulatory information discussed, Oklo Power requests that the NRC Commission grant exemptions for the Aurora combined license application from the requirements of the following:

- 10 CFR 50.47(b), in part
- 10 CFR 50.47(b)(4), in part
- 10 CFR 50.47(b)(6), in part
- 10 CFR 50.47(b)(7)
- 10 CFR 50.47(b)(9)
- 10 CFR Part 50, Appendix E, Section IV.E.8.b

- 10 CFR Part 50, Appendix E, Section IV.F.1, in part
- 10 CFR Part 50, Appendix E, Section VI.1, in part
- 10 CFR Part 50, Appendix E, Section VI.2.a, in part
- 10 CFR Part 50, Appendix E, Section VI.3.d, in part

The regulations that have partial requested exemption is shown in Table 3-6 and Table 3-7 for clarity.

Table 3-6: Requested partial exemptions for offsite emergency planning, part 1 of 2

Regulation	Language
50.47(b)	The onsite *and, except as provided in paragraph (d) of this section, offsite* emergency response plans for nuclear power reactors must meet the following standards:
50.47(b)(4)	A standard emergency classification and action level scheme, the bases of which include facility system and effluent parameters, is in use by the nuclear facility licensee, and State and local response plans call for reliance on information provided by facility licensees for determinations of minimum initial offsite response measures.
50.47(b)(6)	Provisions exist for prompt communications among principal response organizations to emergency personnel and to the public.
Appendix E, Section IV.F.1, to Part 50	1. The program to provide for: (a) The training of employees and exercising, by periodic drills, of emergency plans to ensure that employees of the licensee are familiar with their specific emergency response duties, and (b) The participation in the training and drills by other persons whose assistance may be needed in the event of a radiological emergency shall be described. This shall include a description of specialized initial training and periodic retraining programs to be provided to each of the following categories of emergency personnel: i. Directors and/or coordinators of the plant emergency organization; ii. Personnel responsible for accident assessment, including control room shift personnel; iii Radiological monitoring teams; iv. Fire control teams (fire brigades); v. Repair and damage control teams; vi. First aid and rescue teams; vii. Medical support personnel; viii. Licensee's headquarters support personnel; ix. Security personnel. In addition, a radiological orientation training program shall be made available to local services personnel; e.g., local emergency services/Civil Defense, local law enforcement personnel, local news media persons.

Table 3-7: Requested partial exemptions for offsite emergency planning, part 2 of 2

Regulation	Language
Appendix E, Section VI.1, to Part 50	The Emergency Response Data System (ERDS) is a direct near real-time electronic data link between the licensee's onsite computer system and the NRC Operations Center that provides for the automated transmission of a limited data set of selected parameters. The ERDS supplements the existing voice transmission over the Emergency Notification System (ENS) by providing the NRC Operations Center with timely and accurate updates of a limited set of parameters from the licensee's installed onsite computer system in the event of an emergency. When selected plant data are not available on the licensee's onsite computer system, retrofitting of data points is not required. The licensee shall test the ERDS periodically to verify system availability and operability. The frequency of ERDS testing will be quarterly unless otherwise set by NRC based on demonstrated system performance
Appendix E, Section VI.2.a, to Part 50	Data points, if resident in the in-plant computer systems, must be transmitted for four selected types of plant conditions: Reactor core and coolant system conditions; reactor containment conditions; radioactivity release rates; and plant meteorological tower data. A separate data feed is required for each reactor unit. While it is recognized that ERDS is not a safety system, it is conceivable that a licensee's ERDS interface could communicate with a safety system. In this case, appropriate isolation devices would be required at these interfaces. The data points, identified in the following parameters will be transmitted
Appendix E, Section VI.3.d, to Part 50	Each licensee shall complete implementation of the ERDS by February 13, 1993, or before initial escalation to full power, whichever comes later. Licensees with currently operational ERDS interfaces approved under the voluntary ERDS implementation program will not be required to submit another implementation plan and will be considered to have met the requirements for ERDS under appendix E to part 50, section VI.1 and 2 of this part.

3.7 Postulated fission product release

As part of the FSAR, applicants are required to perform a safety assessment of the reactor in order to evaluate offsite radiological consequences. This assessment requires the assumption of a fission product release from the core to the containment based on a major accident. The intent of the regulation is to reduce offsite radiological consequences to specific limits at the boundary of the exclusion area and low population zone in order to ensure the health and safety of the public is maintained.

The following regulation is applicable to the Aurora and relates to an assumed fission product release:

- 10 CFR 52.79(a)(1)(vi), in part

The assumed fission product release is based on a major accident, hypothesized for the purpose of site analysis or postulated from considerations of possible accident events, which has historically been assumed to result in substantial meltdown of the core and subsequent release of appreciable quantities of fission products into the containment. As shown in Chapter 5 of Part II, there are no credible accidents that result in the release of radioactive material. The MCA, which assumes a complete loss of the secondary system in conjunction with a failure to insert one of the shutdown rods, does not result in a radioactive release.

Oklo Power seeks an exemption in accordance with 10 CFR 52.7 from the requirements in 10 CFR 52.79(a)(1)(vi), in part, due to the lack of a credible accident that results in a release of fission products for the Aurora design.

3.7.1 Technical basis for requested exemption

3.7.1.1 Relevant design aspects of the Aurora

The Aurora is designed with several inherent advantages that relate to the release of radionuclides:

- Low power density results in small and easily manageable levels of decay heat
- Metal fuel that is operated at a low burnup retains the vast majority of radionuclides
- Arrangement of high-conductivity components ensures high thermal capacity
- Robust passive design ensures adequate heat removal during off-nominal events

During normal operation, fission products generated in the metal fuel are the only source of available radionuclides. Fission gases generated during irradiation form void pores in the fuel, which in turns causes metal fuel to swell. At a burnup of 2-3 atom per cent (at.%),[7] the fission gas voids interconnect and the fission gasses are released to the upper plenum. Since the peak burnup of the Aurora fuel never exceeds 1 at.%, the vast majority of fission gases are retained in

[7] Fuel burnup can be expressed as percent of heavy metal atoms that have fissioned (at.%) or in units of fission energy produced per unit mass of heavy metal (GWd/MTHM or MWd/kgHM). A burnup of 1 at.% of burnup corresponds to roughly 9.4 GWd/MTHM. The nuclear fleet of large LWRs in the U.S. operates at around 50 MWd/kgHM.

the fuel matrix, and substantive fission gas release to the plenum is not expected. Therefore, even a hypothesized breach of a reactor cell, it is unlikely that any fission gasses would be present in the gas plenum and further released. Nonetheless, the reactor cells are designed with enough internal free volume and structural integrity to accommodate fission gas pressurization. Additional detail on the containment of radionuclides is provided in Chapter 2, "Descriptions and analysis of structures, systems, and components," of Part II.

3.7.1.2 Maximum credible accident analysis

The safety analysis, presented in Chapter 5 of Part II, is bounded by two events: the loss of heat sink and the transient overpower, each occurring in conjunction with a failure to insert one of three shutdown rods. The loss of heat sink event is considered the more challenging event and is therefore designated as the MCA.

The MCA analysis shows that significant margin is maintained below material temperature limits, primarily the peak fuel temperature. Safety and operational goals are met throughout the event, and the reactor remains in a safe state without any release of radionuclides. The MCA can be described as a major accident, in that the entire secondary system is assumed to fail in conjunction with a failure to insert one shutdown rod. However, contrary to a major accident for a large LWR and due to the unique design aspects of the Aurora, this event does not result in a substantial meltdown of the core, nor a release of fission products from the core. Consequently, the assumption of a fission product release from the core is not consistent with a major accident postulated for the Aurora.

3.7.2 Regulatory basis for requested exemption

3.7.2.1 10 CFR 52.7

As stated in 10 CFR 52.7, the NRC Commission "may, upon application by any interested person or upon its own initiative, grant exemptions from the requirements of the regulations of this part" and defers governance to 10 CFR 50.12. The following subsection describes the regulatory basis pursuant to 10 CFR 50.12.

3.7.2.2 10 CFR 50.12

As stated in 10 CFR 50.12(a):

> The Commission may, upon application by any interested person or upon its own initiative, grant exemptions from the requirements of the regulations of this part, which are--
>
> (1) Authorized by law, will not present an undue risk to the public health and safety, and are consistent with the common defense and security.
>
> (2) The Commission will not consider granting an exemption unless special circumstances are present. Special circumstances are present whenever--
>
> > (i) Application of the regulation in the particular circumstances conflicts with other rules or requirements of the Commission; or
> >
> > (ii) Application of the regulation in the particular circumstances would not serve the underlying purpose of the rule or is not necessary to achieve the underlying purpose of the rule; or

> (iii) Compliance would result in undue hardship or other costs that are significantly in excess of those contemplated when the regulation was adopted, or that are significantly in excess of those incurred by others similarly situated; or
>
> (iv) The exemption would result in benefit to the public health and safety that compensates for any decrease in safety that may result from the grant of the exemption; or
>
> (v) The exemption would provide only temporary relief from the applicable regulation and the licensee or applicant has made good faith efforts to comply with the regulation; or
>
> (vi) There is present any other material circumstance not considered when the regulation was adopted for which it would be in the public interest to grant an exemption. If such condition is relied on exclusively for satisfying paragraph (a)(2) of this section, the exemption may not be granted until the Executive Director for Operations has consulted with the Commission.

The following discussion pertains to the requirements of 10 CFR 50.12.

Pursuant to 10 CFR 50.12(a)(1), the exemptions requested will not present an undue risk to the public health and safety and are consistent with the common defense and security.

Section 50.12(a)(2) to 10 CFR requires a special circumstance exist for an exemption to be granted. The MCA for the Aurora does not result in a substantial meltdown of the core or a release of fission products from the core. Therefore, the intent of the regulation, to ensure offsite radiological consequences of a major accident do not present a risk to the health and safety of the public, is met through the design of the Aurora and the requested exemption meets the special circumstances of 10 CFR 50.12(a)(2)(ii).

3.7.3 Conclusion

Due to the technical and regulatory information discussed, Oklo Power requests that the NRC Commission grants a partial exemption for the Aurora combined license application from the requirements of 10 CFR 52.79(a)(1)(vi), in part. The regulation that has a partial requested exemption is shown in Table 3-8 for clarity.

Table 3-8: Requested partial exemption for postulated fission product release

Regulation	Language
52.79(a)(1)(vi)	A description and safety assessment of the site on which the facility is to be located. The assessment must contain an analysis and evaluation of the major structures, systems, and components of the facility that bear significantly on the acceptability of the site under the radiological consequence evaluation factors identified in paragraphs (a)(1)(vi)(A) and (a)(1)(vi)(B) of this section. In performing this assessment, an applicant shall assume a fission product release from the core into the containment assuming that the facility is operated at the ultimate power level contemplated. The applicant shall perform an evaluation and analysis of the postulated fission product release, using the expected demonstrable containment leak rate and any fission product cleanup systems intended to mitigate the consequences of the accidents, together with applicable site characteristics, including site meteorology, to evaluate the offsite radiological consequences. Site characteristics must comply with part 100 of this chapter. The evaluation must determine that: (A) An individual located at any point on the boundary of the exclusion area for any 2-hour period following the onset of the postulated fission product release, would not receive a radiation dose in excess of 25 rem 6 total effective dose equivalent (TEDE). (B) An individual located at any point on the outer boundary of the low population zone, who is exposed to the radioactive cloud resulting from the postulated fission product release (during the entire period of its passage) would not receive a radiation dose in excess of 25 rem TEDE; and

3.8 Suspension of security measures during an emergency or during severe weather

Section 73.55 to 10 CFR provides requirements for the physical protection of nuclear power plants. Further, 10 CFR 73.55 allows for the temporary suspension of security measures during an emergency if needed to protect the public health and safety or during severe weather if needed to protect the personal health and safety of security force personnel. The suspension of security measures must be approved at a minimum by a licensed SRO and, for the case of severe weather, requires input from the security supervisor or manager. The intent of this regulation is to assure the regulations themselves do not pose a barrier to assuring the health and safety of the public or onsite personnel.

The following regulations are applicable to the Aurora and relate to the approval of suspension of security measures:

- 10 CFR 73.55(p)(1), in part
- 10 CFR 50.54(y)

Due to the small size and few active systems of the Aurora, the reactor controls are highly automated, and onsite personnel do not perform any credited operator actions. During normal operation, two Onsite Monitors are responsible for monitoring operation of the reactor, and the day-to-day operations of the plant are overseen by the Plant Manager. There are no 10 CFR Part 55 licensed ROs or SROs, nor is there an onsite security force. Instead, Oklo Power will establish agreements with local security services to provide emergency response when requested. As a result, for both emergency and severe weather events, the suspension of security measures must be approved by the Plant Manager.

Oklo Power seeks an exemption in accordance with 10 CFR 73.5 and 10 CFR 50.12 from the requirements in 10 CFR 73.55(p)(1), in part, and 10 CFR 50.54(y) due to the lack of 10 CFR Part 55 licensed SROs and onsite security force for the Aurora design.

3.8.1 Technical basis for requested exemption

The simple design of the Aurora, along with the few active systems, enables extremely simple and highly automated reactor controls. During normal operation, two Onsite Monitors are responsible for monitoring operation of the reactor and ensuring proper operation of plant equipment, including periodic rounds of the exterior of the Aurora powerhouse for security purposes. Because of the simplified and highly automatic controls of the Aurora, Onsite Monitors do not have the typical responsibilities of a 10 CFR Part 55 licensed RO or an SRO. The Plant Manager is responsible for the overall operations of the plant and reports to the Director of Reactor Operations.

Contrary to large LWRs, the Aurora does not have an onsite security force. Instead, agreements are made with Community Emergency Response Organizations (CEROs), including security, medical, ambulance, and fire services, as per the Emergency Plan; the Emergency Plan is described in Chapter 9 of Part II.

The security CERO may be summoned for security assistance, emergency radio communications, traffic control, and riot control. Relationships with contracted organizations,

such as the security CERO, are maintained through letters of agreement and have corresponding license conditions, as described in Part VI.

The Plant Manager is a key role in the Emergency Organization and is informed of the ongoing status of any emergency, including a security threat, as described in the Emergency Plan. During an emergency or severe weather, the suspension of security measures may be necessary to protect the personal health and safety of onsite personnel, primarily the suspension of any duties that are exterior of the Aurora powerhouse by Onsite Monitors. In these events, the suspension of security measures must be approved by the Plant Manager, who has sufficient knowledge of the status of the facility and any emergency event to make an informed decision.

3.8.2 Regulatory basis for requested exemption

3.8.2.1 10 CFR 73.5

As stated in 10 CFR 73.5:

> The Commission may, upon application of any interested person or upon its own initiative, grant such exemptions from the requirements of the regulations in this part as it determines are authorized by law and will not endanger life or property or the common defense and security, and are otherwise in the public interest.

Pursuant to 10 CFR 73.5, the exemptions requested will not endanger life or property or the common defense and security and are otherwise in the public interest.

3.8.2.2 10 CFR 50.12

As stated in 10 CFR 50.12(a):

> The Commission may, upon application by any interested person or upon its own initiative, grant exemptions from the requirements of the regulations of this part, which are--
>
> (1) Authorized by law, will not present an undue risk to the public health and safety, and are consistent with the common defense and security.
>
> (2) The Commission will not consider granting an exemption unless special circumstances are present. Special circumstances are present whenever--
>
> > (i) Application of the regulation in the particular circumstances conflicts with other rules or requirements of the Commission; or
> >
> > (ii) Application of the regulation in the particular circumstances would not serve the underlying purpose of the rule or is not necessary to achieve the underlying purpose of the rule; or
> >
> > (iii) Compliance would result in undue hardship or other costs that are significantly in excess of those contemplated when the regulation was adopted, or that are significantly in excess of those incurred by others similarly situated; or

(iv) The exemption would result in benefit to the public health and safety that compensates for any decrease in safety that may result from the grant of the exemption; or

(v) The exemption would provide only temporary relief from the applicable regulation and the licensee or applicant has made good faith efforts to comply with the regulation; or

(vi) There is present any other material circumstance not considered when the regulation was adopted for which it would be in the public interest to grant an exemption. If such condition is relied on exclusively for satisfying paragraph (a)(2) of this section, the exemption may not be granted until the Executive Director for Operations has consulted with the Commission.

The following discussion pertains to the requirements of 10 CFR 50.12.

Pursuant to 10 CFR 50.12(a)(1), the exemptions requested will not present an undue risk to the public health and safety and are consistent with the common defense and security.

Section 50.12(a)(2) to 10 CFR requires a special circumstance exist for an exemption to be granted. The suspension of measures may be necessary to protect the personal health and safety of onsite personnel, primarily the suspension of duties that are exterior of the Aurora powerhouse by Onsite Monitors. In these events, the suspension of security measures must be approved by the Plant Manager, who has sufficient knowledge of the status of the facility and any emergency event to make an informed decision. Since there are no 10 CFR Part 55 licensed operators, the Plant Manager approves this suspension. Because Oklo Power intends to reassign the responsibility of suspension of security measures to the appropriate personnel at the Aurora site, the exemption meets the special circumstances in 10 CFR 50.12(a)(2)(ii).

3.8.3 Conclusion

Due to the technical and regulatory information discussed, Oklo Power requests that the NRC Commission grants exemptions for the Aurora combined license application from the requirements of 10 CFR 73.55(p)(1), in part, and 10 CFR 50.54(y). The regulation that has a partial requested exemption is shown in Table 3-9 for clarity.

Table 3-9: Requested partial exemption for suspension of measures

Regulation	Language
73.55(p)	(1) The licensee may suspend implementation of affected requirements of this section under the following conditions: (i) In accordance with §§ 50.54(x) and 50.54(y) of this chapter, the licensee may suspend any security measures under this section in an emergency when this action is immediately needed to protect the public health and safety and no action consistent with license conditions and technical specifications that can provide adequate or equivalent protection is immediately apparent. This suspension of security measures must be approved as a minimum by a licensed senior operator before taking this action. (ii) During severe weather when the suspension of affected security measures is immediately needed to protect the personal health and safety of security force personnel and no other immediately apparent action consistent with the license conditions and technical specifications can provide adequate or equivalent protection. This suspension of security measures must be approved, as a minimum, by a licensed senior operator, with input from the security supervisor or manager, before taking this action.

3.9 Training program implementation schedule

The establishment, implementation, and maintenance of the training program for nuclear power plant personnel is required 18 months prior to fuel load. The training program is intended to ensure plant personnel are qualified and trained to operate and maintain the facility in a safe manner during all modes of operation. The intent of the regulation is to assure that onsite individuals are appropriately trained well ahead of special nuclear material entering the site.

The following regulations are applicable to the Aurora and relate to the implementation of the training program for plant personnel:

- 10 CFR 50.120, "Training and qualification of nuclear power plant personnel," paragraph (b)(1)(ii), in part

The Aurora is significantly smaller and less complex than a large reactor. During all modes of operation, the number of personnel required to operate and maintain the facility in a safe manner is significantly reduced in comparison to an LWR, and requirements for plant personnel are drastically reduced. Consequently, the training program for the Aurora is significantly less complex than for a large reactor and can be implemented in a substantially shorter time period. Oklo Power intends to establish, implement, and maintain its training program at least 3 months prior to the first test being conducted for the Initial Test Program, as described in Chapter 14 of Part II.

Oklo Power seeks an exemption in accordance with 10 CFR 50.12 from the requirements in 10 CFR 50.120(b)(1)(ii), in part, due to the simplified responsibilities for plant personnel for the Aurora.

3.9.1 Technical basis for requested exemption

Due to the size of the Aurora and the reduced number of active systems, the plant personnel required for operation and maintenance of the facility is significantly reduced in comparison to a large reactor. During normal operations, only two Onsite Monitors are present at the facility. Reactor controls are automatic, and Onsite Monitors do not perform any credited operator actions.

The small size and simplicity of the Aurora allows the site preparation and construction process to occur significantly faster than a large reactor; the entirety of site preparation and construction is expected to take substantially less than 18 months.

As a result, Oklo Power expects that its Training Program will be established and implemented in less than 3 months. Plant personnel will be qualified and trained to operate and maintain the facility in safe manner prior to the first test being conducted for the Initial Test Program. This regulatory commitment is made by Oklo Power through a license condition, as described in Part VI.

3.9.2 Regulatory basis for requested exemption

3.9.2.1 10 CFR 50.12

As stated in 10 CFR 50.12(a):

> The Commission may, upon application by any interested person or upon its own initiative, grant exemptions from the requirements of the regulations of this part, which are--
>
> (1) Authorized by law, will not present an undue risk to the public health and safety, and are consistent with the common defense and security.
>
> (2) The Commission will not consider granting an exemption unless special circumstances are present. Special circumstances are present whenever--
>
> > (i) Application of the regulation in the particular circumstances conflicts with other rules or requirements of the Commission; or
> >
> > (ii) Application of the regulation in the particular circumstances would not serve the underlying purpose of the rule or is not necessary to achieve the underlying purpose of the rule; or
> >
> > (iii) Compliance would result in undue hardship or other costs that are significantly in excess of those contemplated when the regulation was adopted, or that are significantly in excess of those incurred by others similarly situated; or
> >
> > (iv) The exemption would result in benefit to the public health and safety that compensates for any decrease in safety that may result from the grant of the exemption; or
> >
> > (v) The exemption would provide only temporary relief from the applicable regulation and the licensee or applicant has made good faith efforts to comply with the regulation; or

(vi) There is present any other material circumstance not considered when the regulation was adopted for which it would be in the public interest to grant an exemption. If such condition is relied on exclusively for satisfying paragraph (a)(2) of this section, the exemption may not be granted until the Executive Director for Operations has consulted with the Commission.

The following discussion pertains to the requirements of 10 CFR 50.12.

Pursuant to 10 CFR 50.12(a)(1), the exemption requested will not present an undue risk to the public health and safety and are consistent with the common defense and security. Because the Training Program will be established, implemented, and maintained at least 3 months prior to the first test being conducted for the Initial Test Program, plant personnel will be qualified and trained to operate and maintain the facility in a safe manner prior to duty, and the safety and security of the plant will not be impacted.

Section 50.12(a)(2) to 10 CFR requires a special circumstance exist for an exemption to be granted. Because Oklo Power intends to implement its Training Program with sufficient time to ensure plant personnel are trained prior to duty, the exemption meets the special circumstances in 10 CFR 50.12(a)(2)(ii).

3.9.3 Conclusion

Due to the technical and regulatory information discussed, Oklo Power requests that the NRC Commission grants an exemption for the Aurora combined license application from the requirements of 10 CFR 50.120(b)(1)(ii), in part. The regulation that has a partial requested exemption is shown in Table 3-10 for clarity.

Table 3-10: Requested partial exemption for training program

Regulation	Language
50.120(b)(1)(ii)	Each holder of a combined license shall establish, implement, and maintain the training program that meets the requirements of paragraphs (b)(2) and (b)(3) of this section, as described in the final safety analysis report no later than 18 months before the scheduled date for initial loading of fuel.

4 REFERENCES

[1] US Department of Energy, "Environmental Assessment Completed for Use of DOE-Owned High-Assay Low-Enriched Uranium Stored at Idaho National Laboratory," *Energy.gov*. [Online]. Available: https://www.energy.gov/ne/articles/environmental-assessment-completed-use-doe-owned-high-assay-low-enriched-uranium-stored. [Accessed: 08-Feb-2020].

