



Part I: Company information and financial requirements

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1 PURPOSE

Title 10 to the *Code of Federal Regulations* (10 CFR) Section 50.77, “Contents of applications; general information,” requires that 10 CFR 50.33, “Contents of applications; general information,” be met.

The purpose of this part is to include relevant information, required by 10 CFR 50.33, as shown in Table 1-1.

Table 1-1: Distribution of requirements from 10 CFR 50.33

Part I chapter	Title	Requirements addressed
I.02	General applicant information	10 CFR 50.33(a) 10 CFR 50.33(b) 10 CFR 50.33(c) 10 CFR 50.33(d)
I.03	Class of license	10 CFR 50.33(e)
I.04	Financial qualification	10 CFR 50.33(f)
I.05	Radiological emergency response plans	10 CFR 50.33(g)
I.06	Decommissioning	10 CFR 50.33(k)

The requirements contained in 10 CFR 50.33(h), which relate to construction and alteration, 10 CFR 50.33(i), which relate to generation and distribution of electric energy, and 10 CFR 50.33(j), which relate to restricted data or other defense information, are not included because they do not apply. See Part V, “Non-applicabilities and requested exemptions,” for further information regarding non-applicability.

2 GENERAL APPLICANT INFORMATION

2.0 Purpose

This chapter satisfies 10 CFR 50.33(a), 10 CFR 50.33(b), 10 CFR 50.33(c), and 10 CFR 50.33(d) requirements, which are replicated below:

- (a) Name of applicant;
- (b) Address of applicant;
- (c) Description of business or occupation of applicant;
- (d)(1) If applicant is an individual, state citizenship.
 - (2) If applicant is a partnership, state name, citizenship and address of each partner and the principal location where the partnership does business.
 - (3) If applicant is a corporation or an unincorporated association, state:
 - (i) The state where it is incorporated or organized and the principal location where it does business;
 - (ii) The names, addresses and citizenship of its directors and of its principal officers;
 - (iii) Whether it is owned, controlled, or dominated by an alien, a foreign corporation, or foreign government, and if so, give details.
 - (4) If the applicant is acting as agent or representative of another person in filing the application, identify the principal and furnish information required under this paragraph with respect to such principal.

2.1 Name and address of applicant

The applicant is Oklo Power LLC (Oklo Power), a wholly owned subsidiary of Oklo Inc. (Oklo). Oklo Power is located at 230 E. Caribbean Dr., Sunnyvale, CA 94089.

2.2 Description of business of applicant

Oklo Power's parent company, Oklo, is a privately funded, U.S.-based company focused on commercializing advanced fission power. The first product from Oklo is the Aurora powerhouse, an advanced fission clean energy plant. Oklo was incorporated in 2013, and has received multiple rounds of private funding. Oklo is headquartered in California.

2.3 Applicant information for corporations

Oklo Power is incorporated in the state of Delaware with headquarters in Sunnyvale, CA, which is the principal location where Oklo Power does business. Oklo is incorporated in the state of Delaware, and is headquartered in Sunnyvale, CA as well. The principal officers of Oklo and their names, addresses, and citizenships are listed in Table 2-1.

Table 2-1: Oklo principal officers

Jacob DeWitte	Caroline Cochran
CEO	COO
230 E. Caribbean Dr.	230 E. Caribbean Dr.
Sunnyvale, CA	Sunnyvale, CA
U.S. Citizen	U.S. Citizen

Oklo is a U.S.-based company, and is majority-owned by U.S. investors.

3 CLASS OF LICENSE

3.0 Purpose

This chapter satisfies 10 CFR 50.33(e) requirements, which are replicated below:

(e) The class of license applied for, the use to which the facility will be put, the period of time for which the license is sought, and a list of other licenses, except operator's licenses, issued or applied for in connection with the proposed facility.

3.1 Description of class of license application

Oklo Power is applying for one Class 103 combined license under 10 CFR Part 52, Subpart C, “Combined licenses,” to construct and operate one nuclear power plant. This application does not reference a standard design. The nuclear power plant will be used to produce electricity for sale. The license shall expire 20 years from the date upon which the U.S. Nuclear Regulatory Commission (NRC) makes a finding under 10 CFR 52.103(g) that the acceptance criteria are met or allowing operation during an interim period under 10 CFR 52.103(c).

Oklo Power is also using this application for the licenses under 10 CFR Part 30, 10 CFR Part 40, and 10 CFR Part 70 in conjunction, which are necessary to receive, possess, and use byproduct, source, and special nuclear material. It is anticipated that for the first of the kind plant, supported by Oklo’s Memorandum of Understanding with the Department of Energy, as well as various follow-on agreements, that the Oklo Power plant may utilize DOE-owned and handled fuel, which would therefore not require Oklo Power to receive, possess or handle byproduct, source, and special nuclear material.

Special nuclear material shall be in the form of reactor fuel and spent fuel, in accordance with limitations for storage and amounts required for reactor operation, as described in this application. Byproduct, source, and special nuclear material shall be in the form of sealed neutron sources for reactor startup and sealed sources for reactor instrumentation, radiation monitoring equipment, calibration, and fission detectors in amounts as required. Following the 10 CFR 52.103(g) finding, byproduct, source, and special nuclear material in amounts as required, without restriction to chemical or physical form, will be used for sample analysis, instrument and equipment calibration, or associated with radioactive apparatus or components.

4 FINANCIAL QUALIFICATION

4.0 Purpose

This chapter is required by 10 CFR 50.33(f). Specifically 10 CFR 50.33(f)(1), 10 CFR 50.33(f)(2), and 10 CFR 50.33(f)(3) apply to Oklo Power and are replicated below:

(f) Except for an electric utility applicant for a license to operate a utilization facility of the type described in § 50.21(b) or § 50.22, information sufficient to demonstrate to the Commission the financial qualification of the applicant to carry out, in accordance with regulations in this chapter, the activities for which the permit or license is sought. As applicable, the following should be provided:

(1) If the application is for a construction permit, the applicant shall submit information that demonstrates that the applicant possesses or has reasonable assurance of obtaining the funds necessary to cover estimated construction costs and related fuel cycle costs. The applicant shall submit estimates of the total construction costs of the facility and related fuel cycle costs, and shall indicate the source(s) of funds to cover these costs.

(2) If the application is for an operating license, the applicant shall submit information that demonstrates the applicant possesses or has reasonable assurance of obtaining the funds necessary to cover estimated operation costs for the period of the license. The applicant shall submit estimates for total annual operating costs for each of the first five years of operation of the facility. The applicant shall also indicate the source(s) of funds to cover these costs. An applicant seeking to renew or extend the term of an operating license for a power reactor need not submit the financial information that is required in an application for an initial license. Applicants to renew or extend the term of an operating license for a nonpower reactor shall include the financial information that is required in an application for an initial license.

(3) If the application is for a combined license under subpart C of part 52 of this chapter, the applicant shall submit the information described in paragraphs (f)(1) and (f)(2) of this section.

Additionally, although Oklo Inc. is an entity formed approximately 7 years ago, Oklo Power LLC is a newly formed entity for the purposes of owning and operating the Aurora plant being applied for in this application. As such, (f)(4) applies, which states the following:

(4) Each application for a construction permit, operating license, or combined license submitted by a newly-formed entity organized for the primary purpose of constructing and/or operating a facility must also include information showing:

(i) The legal and financial relationships it has or proposes to have with its stockholders or owners;

- (ii) The stockholders’ or owners’ financial ability to meet any contractual obligation to the entity which they have incurred or proposed to incur; and
- (iii) Any other information considered necessary by the Commission to enable it to determine the applicant’s financial qualification.

4.1 Overview of financial qualification

Since Oklo Power is a wholly owned subsidiary of Oklo, the qualification of Oklo is discussed. Oklo has raised multiple financing rounds from investors who are committed to Oklo’s mission of bringing advanced fission technology to the commercial market. Oklo is able to fund its design, manufacturing, and construction efforts with private investment due in part to the small size and simplicity of the Aurora.

Oklo’s board of directors set milestones, and oversees company progress. The chair of the Oklo board of directors is the CEO of OpenAI, and the former President of Y Combinator, which has a portfolio of companies worth well over \$100 billion dollars, and brings this experience and insight to Oklo’s management team. {

} A sizeable portion of

Oklo Inc. employees own shares and are part of the existing shareholders. To date, Oklo has excelled at meeting milestones under budget, which has been verified through investor due diligence, and continued investment by Oklo’s investors. {

}

4.1.1 Summary of awards

Oklo has won the following awards: the top MIT team at the MIT Clean Energy Prize (2013), the winner of the energy track at the MIT 100k (2013), finalist at MassChallenge (2013), winner of the MassChallenge Gold Award (2013), and investment by one of the most selective early stage investors and accelerators in the world, Y Combinator (2014). Oklo has been featured in numerous press articles and studies, and a documentary about advanced nuclear, The New Fire (2017). Oklo has also participated in three Gateway for Accelerated Innovation in Nuclear (GAIN) voucher awards for projects at national laboratories, totaling over \$1.6 million in value.

4.1.2 Summary of customers

Oklo Power is submitting this COLA for a site at the Idaho National Lab (INL). Oklo Power is committed to funding the construction of the plant, its operation, and decommissioning, though it should be noted that other agreements may be developed with INL and the Department of Energy (DOE). Sales of electricity produced by this small plant in this market will not be required to be relied upon in order to carry out construction, operation, or decommissioning. For more information on the relationship between Oklo, INL, and DOE, please see the Site Use Permit.

4.1.3 Legal and financial relationships of Oklo Power

Oklo Power is a wholly owned subsidiary of Oklo Inc. It is granted access to Oklo Inc intellectual property and supported by agreements Oklo Inc has made regarding partnerships, contractors, permits, and other awards, such as the award of fuel material by INL. While Oklo Power may receive additional funding separately to Oklo Inc., Oklo Inc. is financially committed as described above to commit necessary resources for Oklo Power to perform its function as the owner and operator of the Aurora plant.

4.2 Funds necessary for construction and fuel cycle costs

Oklo Power has budgeted for the construction and fuel cycle costs for this plant. Construction costs are estimated to be on the order of \$10 million for the structure and construction of the small building required, including the power conversion system. Because of the type of reactor and fuel cycle, only a single core load is required for the license lifetime of 20 years. Oklo has been awarded fuel material for use for this plant. Because the material is waste material which must otherwise be stored, there is not a price associated for use of the material. At the conclusion of the use of the fuel in the plant, it will be returned to DOE.

4.3 Funds necessary for operation costs

The Aurora allows for much smaller operational costs than a majority of existing nuclear plants. Its inherent abilities to maintain safety, in addition to its incredibly small size and output, means that far less staffing and maintenance is required. Additionally, the Aurora is a first-of-a-kind plant so certain unique staffing considerations associated with data collection may arise to advance Oklo's commercial interests. In light of that, Oklo anticipates annual operating and maintenance costs of less than \$3M/year.

5 RADIOLOGICAL EMERGENCY RESPONSE PLANS

5.0 Purpose

This chapter is required by 10 CFR 50.33(g), which are replicated below:

(g) If the application is for an operating license or combined license for a nuclear power reactor, or if the application is for an early site permit and contains plans for coping with emergencies under § 52.17(b)(2)(ii) of this chapter, the applicant shall submit radiological emergency response plans of State and local governmental entities in the United States that are wholly or partially within the plume exposure pathway emergency planning zone (EPZ)¹, as well as the plans of State governments wholly or partially within the ingestion pathway EPZ.² If the application is for an early site permit that, under 10 CFR 52.17(b)(2)(i), proposes major features of the emergency plans describing the EPZs, then the descriptions of the EPZs must meet the requirements of this paragraph. Generally, the plume exposure pathway EPZ for nuclear power reactors shall consist of an area about 10 miles (16 km) in radius and the ingestion pathway EPZ shall consist of an area about 50 miles (80 km) in radius. The exact size and configuration of the EPZs surrounding a particular nuclear power reactor shall be determined in relation to the local emergency response needs and capabilities as they are affected by such conditions as demography, topography, land characteristics, access routes, and jurisdictional boundaries. The size of the EPZs also may be determined on a case-by-case basis for gas-cooled reactors and for reactors with an authorized power level less than 250 MW thermal. The plans for the ingestion pathway shall focus on such actions as are appropriate to protect the food ingestion pathway.

The purpose of this chapter is to satisfy the requirements of 10 CFR 50.33(g) through definition of the emergency planning zones (EPZs) and submission of the relevant response plans.

5.1 Emergency planning zones

The Aurora has a power level far less than 250 MW thermal, at 4 MW thermal. Because of this, it is appropriate for the EPZ to be determined on a case-by-case basis. For the Aurora, the plume exposure and ingestion exposure pathway comprise the same EPZ, which is limited to the Aurora powerhouse. Both the plume exposure pathway and the ingestion EPZs associated with the Aurora end at the powerhouse, since there are no credible accidents that result in exposures

¹ Emergency planning zones (EPZs) are discussed in NUREG-0396, EPA 520/1-78-016, "Planning Basis for the Development of State and Local Government Radiological Emergency Response Plans in Support of Light-Water Nuclear Power Plants," December 1978.

² If the State and local emergency response plans have been previously provided to the NRC for inclusion in the facility docket, the applicant need only provide the appropriate reference to meet this requirement.

exceeding 1 rem whole body or 5 rem thyroid.³ For further information, Part II of the application, the FSAR, discusses the safety case and accident analyses. Additionally, Part II, Chapter 9 discusses emergency plans. Furthermore, due to the small size of the reactor, there is no significant effluent inventory to result in significant contamination of water and food in the region to result in significant internal doses. This is also discussed further in Part II of the application.

5.1.1 Field monitoring in the emergency planning zone

The field monitoring for an emergency is the same as the radiological monitoring procedures used during normal operation as the EPZ is limited to the reactor building.

5.1.2 Meteorological monitoring in the emergency planning zone

There is no meteorological monitoring for an emergency. If meteorological information is needed, the national weather service is the resource used.

5.1.3 Evacuation of the emergency planning zone

Since the EPZ stops at the edge of the Aurora powerhouse, there is no one living in the EPZ. There is no census taken as no one can live in the EPZ. There are no time estimates made for evacuation since Oklo employees are the only people typically in the EPZ.

5.2 Radiological emergency response plans

The Aurora EPZ is completely within the Idaho National Laboratory (INL), which is in the state of Idaho. The 2017 Idaho Emergency Operations Plan from the Idaho Office of Emergency Management Incident Annex #4 focuses on a Nuclear/Radiological Incidents. Annex #4 includes the following relevant policies:

C. The owner/operator of a Nuclear Regulatory Commission (NRC) licensed nuclear/radiological facility or the Maintenance and Operations contractor of a DOE facility such as the Idaho National Laboratory (INL), is primarily responsible for mitigating the consequences of an incident, providing notifications, and providing appropriate protective action recommendations to state and local government officials, and minimizing the radiological hazard to the public. The owner/operator has primary responsibility for actions within the facility boundary and may also have responsibilities for response and recovery activities outside the facility boundary under applicable legal obligations (e.g., contractual; licensee; Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA); Department of Transportation rules).

M. When a nuclear/radiological response is implemented, existing interagency plans that address nuclear/radiological incident management are incorporated as supporting plans and/or operational supplements (e.g., the Idaho Hazardous Materials/Weapons of Mass

³ As informed by the appropriate standard and as NUREG-0849 states, “As part of emergency planning, the reactor owner/operator of a facility that identifies radiological emergencies which result in offsite plume exposures exceeding 1 rem whole body or 5 rem thyroid should identify an emergency planning zone (EPZ).”

Destruction (WMD) Incident Command and Response Support Plan, the INL Fixed Nuclear Facility Emergency Plan, etc.).

Oklo has the primary responsibilities for actions within the Aurora site boundary, as discussed in policy C from the 2017 Idaho Emergency Operations Plan. The Oklo Emergency Plan for the Aurora is included in this license application.

There are no scenarios that result in an offsite release, so the language surrounding response and recovery responsibilities does not apply to the Aurora. Regardless, since the Aurora EPZ is completely within INL, the INL Fixed Nuclear Facility Emergency Plan governs any radiological response needed, as discussed in policy M from the 2017 Idaho Emergency Operations Plan. The Aurora is extremely small, in comparison to other facilities at INL, and does not necessitate an expansion of the current INL plans. The INL plans do not involve the state or local governments and are handled entirely by INL. Both the 2017 Idaho Emergency Operations Plan and the INL Fixed Nuclear Facility Emergency Plan are submitted as enclosures to this license application.

6 DECOMMISSIONING

6.0 Purpose

This chapter is required by 10 CFR 50.33(k) requirements, which states the following:

- (1) For an application for an operating license or combined license for a production or utilization facility, information in the form of a report, as described in § 50.75, indicating how reasonable assurance will be provided that funds will be available to decommission the facility.
- (2) On or before July 26, 1990, each holder of an operating license for a production or utilization facility in effect on July 27, 1990, shall submit information in the form of a report as described in § 50.75 of this part, indicating how reasonable assurance will be provided that funds will be available to decommission the facility.

Section 50.33(k) to 10 CFR further requires the submission of a decommissioning report in accordance with 10 CFR 50.75, “Reporting and recordkeeping for decommissioning planning.” The purpose of this chapter is to meet the requirements of 10 CFR 50.33(k).

6.1 Decommissioning information

6.1.1 Overview

Section 50.75 to 10 CFR contains the U.S. Nuclear Regulatory Commission (NRC) minimum funding requirement for decommissioning to provide assurance that adequate funding will be available to remove the facility safely from service and reduce residual reactivity to a level that permits release of the site property for unstructured use and termination of the license. Specifically, 10 CFR 50.75(c) provides guidance for minimum funding estimates necessary for decommissioning of light water reactors. The minimum funding estimates in 10 CFR 50.75(c) do not apply because the Aurora reactor operates at a thermal power rating that is significantly smaller than the minimum power level used to estimate these decommissioning costs, and the Aurora is not a light water reactor. The NRC staff have stated that it is appropriate to estimate decommissioning funds on a design-specific basis, as stated in the enclosure to SECY-10-0034, “Potential Policy, Licensing, and Key Technical Issues for Small Modular Nuclear Reactor Designs”:

The minimum amount of decommissioning funds required of boiling-water reactors and PWRs is regulated through the minimum decommissioning funds equation in 10 CFR 50.75(c). However, there are no formulas specifically for non-LWR designs. Because the regulations allow the use of a site-specific estimate instead of the amount calculated through the generic formula, the staff stated that it would accept a minimum decommissioning cost estimate specifically for the PBMR or for the GT-MHR if the applicant could technically justify the estimate... The NRC staff believes that it is appropriate to accept design-specific decommissioning cost estimates for the potential non-LWRs currently under consideration...

Therefore, Oklo will instead provide a decommissioning report indicating how reasonable assurance will be provided that funds will be available to decommission the facility along with annual adjustments and resubmissions. The simplicity, size, and other design attributes of the Oklo Aurora, including not having large amounts of circulating water, lead to reduced decommissioning burdens associated with the plant.

Information such as cost estimates for decommissioning the facility, a means of adjusting the cost estimate over the life of the facility, and a description of the method used to provide decommissioning funds are included. A copy of the financial instrument Oklo intends to use will also be provided no later than 30 days after the NRC publishes notice in the Federal Register under 10 CFR 52.103(a).

6.1.2 Cost estimate

The purpose of this estimate is to determine the minimum decommissioning funding requirement for the Aurora. This estimate is to provide reasonable assurance to the NRC that funding will be available to retire the Aurora and reduce residual radioactivity to a level that permits release of the site property for unrestricted use and termination of the license. This estimate does not include the cost of removal and disposal of spent fuel or nonradioactive structures and materials beyond that necessary to terminate the license.

The International Atomic Energy Agency, “Cost Estimation for Research Reactor Decommissioning,” IAEA Nucl. Energy Ser., vol. NW-T-2.4, 2013, provides a more accurate scaled cost estimation of the Aurora plant. {

}

6.1.3 Financial method

Financial assurance is to be provided as required by 10 CFR 50.75(e), {

} Payment amounts, payment schedule, and other details regarding logistics and ownership of the account are provided in the copy of the financial instrument, which will be submitted no later than 30 days after the NRC publishes notice in the Federal Register under 10 CFR 52.103(a).

6.1.4 Status reporting

Oklo will submit a report to the NRC two years before, and one year before, the scheduled date for initial loading of fuel for the Aurora that contains a certification updating the information described in this chapter and that includes a copy of the financial instrument, in accordance with 10 CFR 50.75(e)(3).

Oklo will also report on the status of the decommissioning fund for the proposed Aurora after the date that the NRC has made the finding under 10 CFR 52.103(g).

6.1.5 Recordkeeping

Oklo will retain records of information important to decommissioning until the termination of the license, in accordance with 10 CFR 50.75(g).