

**Department of Environmental Conservation
Division of Environmental Health**

**New Regulation Chapter: Nuclear Facility Siting
18 AAC 87**

**Public Noticed
March 9, 2023 – May 11, 2023**

**RESPONSIVENESS SUMMARY
July 25, 2023**

INTRODUCTION

Summary of Project

The Alaska Department of Environmental Conservation (DEC) seeks to adopt regulations to create a new chapter in Title 18 of the Alaska Administrative Code (18 AAC 87). This new chapter provides nuclear facility siting permit regulations authorized under Alaska Statute (AS) 18.45. The scope of these regulations includes a permit process for the siting of nuclear facilities and location requirements related to microreactors.

Opportunities for Public Participation

The 63 day public comment period for the proposed regulation changes began on March 9, 2023, when DEC published notice in the Anchorage Daily News. The public comment period ended on May 11, 2023. Publication included information about the proposed changes and the opportunity to submit comments. DEC also posted the public notice online at <https://dec.alaska.gov/commish/public-notices/> and <https://aws.state.ak.us/OnlinePublicNotices/>.

DEC also sent information by email on March 24, 2023, to the Alaska Chamber of Commerce and the Alaska Municipal League, which directed interested people to the DEC website to access the proposed regulation.

Decision Process and Purpose of Responsiveness Summary

DEC received 48 written comments on the draft regulations and reviewed each comment. The purpose of this document is to summarize and respond to comments received during the public comment period.

The following pages provide information about DEC's decision process, a summary of the comments that were submitted by one or more individuals during the public comment period, and DEC's response to those comments.

BACKGROUND INFORMATION

a. Alaska Statutory Background

Since 1959, AS 18.45.020 has required a federal permit before a nuclear facility can be built in Alaska. Since 1978, AS 18.45.025 has required any person constructing a nuclear facility in the State of Alaska to obtain a DEC permit. Under that statute, a DEC permit cannot be issued until the municipality with jurisdiction over the proposed facility site has approved the permit, on land designated by the legislature.

In 2022, the legislature passed a bill¹ amending several portions of AS 18.45 to streamline state permitting for microreactors. The bill updated AS 18.45.025 to allow a microreactor to be constructed on land that has not been legislatively designed for a nuclear facility. The 2022 legislative update left unchanged the requirement that a DEC siting permit be approved by the

¹ Senate Bill 177, SLA 22.

municipality with jurisdiction over the proposed facility site and clarified that this approval power reverts to the legislature in the unorganized borough (which was the case per Alaska Constitution Art. 10, § 6, but is now express).

The bill updated AS 18.45.900 to define microreactor as “a nuclear utilization facility that is (A) a nuclear fission reactor consistent with the definition of “advanced nuclear reactor” in 42 U.S.C. 16271; and (B) capable of generating not more than 50 megawatts of electric energy.”

Finally, the bill exempted microreactors from the ongoing study requirements in AS 18.45.030 but added a requirement for DEC to coordinate comments from state agencies on a proposed federal license for a microreactor in Alaska.

The 2022 legislative update to AS 18.45, plus several proposed microreactor projects in Alaska, prompted DEC to draft nuclear facility siting regulations with location requirements for microreactors.

b. Federal Preemption of State Nuclear Law

The federal Atomic Energy Act of 1954 (AEA), as amended, is the fundamental United States law on both civilian and military uses of nuclear materials. On the civilian side, it provides for the development and regulation of nuclear materials and facilities in the United States. The AEA requires that civilian uses of nuclear materials and facilities be federally licensed.

The AEA empowers the U.S. Nuclear Regulatory Commission (NRC) to establish and enforce standards governing nuclear material to promote the common defense and security, protect health, or minimize danger to life or property.²

States are preempted from regulating nuclear safety by the AEA. Preemption occurs under the U.S. Constitution, which provides that federal law is “the supreme Law of the Land.”³ Field preemption occurs where federal law occupies an entire field of regulation.

In a series of cases from 1983–1990, the U.S. Supreme Court determined that the NRC, by administering the AEA, occupies the entire field of radiological safety, which includes the safety of nuclear plant construction, operation, and decommissioning.⁴ To determine whether a state law is preempted, courts examine its purpose, as well as its effect on nuclear safety.⁵

The NRC licenses nuclear facility designs and sites, provides environmental review of those licenses under the National Environmental Policy Act, requires financial assurance and planning

² See 42 U.S.C. § 2201(b).

³ U.S. Const. art VI, cl. 2.

⁴ *Pac. Gas & Elec. Co. v. State Energy Res. Conservation & Dev. Comm’n*, 461 U.S. 190, 205 (1983); *Silkwood v. Kerr-McGee Corp.*, 464 U.S. 238, 256 (1984); *English v. Gen. Elec. Co.*, 496 U.S. 72, 85 (1990).

⁵ *English*, 496 U.S. at 84. The purpose of a state law is found on its face; not in its legislative history. *Virginia Uranium, Inc. v. Warren*, 139 S. Ct. 1894, 1905–1906 (U.S. 2019).

for addressing releases of radioactive materials, and generally regulates the safety of nuclear energy. Federal agencies like the Department of Transportation and the Department of Energy are also involved in the transportation and cleanup of nuclear waste.

States retain authority over non-safety-related concerns, including those related to traditional utilities regulation, land use, and environmental impacts unrelated to radiological safety.⁶ One state supreme court provided examples of environmental effects unrelated to nuclear safety: “the distance of the facility from residential areas, the flood zone, and tidal and inland wetlands; the impact of the facility on groundwater; the design of the facility; the impact on endangered, threatened or concerned species; and the impact on historic and archaeological resources.”⁷

c. DEC Location Requirement Considerations

DEC’s microreactor facility location requirements in 18 AAC 87.300 are intended to protect human health and the environment from risks unrelated to radiological safety, as well as to prevent nuisances. Nonradiological risks include those posed by non-reactor auxiliary equipment like vehicles, nonradiological fluids, maintenance equipment, and water or wastewater treatment.

A microreactor facility must be at least 50 feet from property boundaries and 100 feet from rights-of-way in consideration of the potential noise, dust, visual obstruction, or other potential nuisances associated with operating a utility for energy generation.

A microreactor facility must be at least 2700 feet from the nearest residence based on similar setback distances for power plants, wind turbines, and high voltage powerlines.

A microreactor facility must be at least 500 feet from coastal areas vulnerable to storm surge, floodplains, and erosion areas considering the potential impacts of erosion or storm surge on non-reactor auxiliary equipment such as vehicles, fluids, maintenance equipment, heating oil tanks, etc. These setbacks are designed to be preventative so that natural events do not lead to spills or releases of nonradiological hazardous substances to the environment. In addition, DEC is concerned about the impact of erosion, storm surge, or flooding on power generation for rural communities. In many cases, rural Alaska communities receive power from limited sources and disruption to energy sources would cause economic harm as well as potentially catastrophic impact to essential services.

DEC prohibits the installation of a microreactor facility in a drinking water protection area, to protect those areas from spills or releases of nonradiological hazardous substances associated with potential auxiliary equipment such as vehicles, maintenance, or fluid storage. Many communities in rural Alaska only have one source of drinking water, and often those sources are surface water bodies. Drinking water protection areas have been established around Alaska to help protect drinking water resources by identifying drinking water recharge zones. Within those protection areas, any spills or releases of nonradiological hazardous substances are likely to

⁶ See *Pacific Gas*, 461 U.S. at 211–12.

⁷ *Connecticut Coal. Against Millstone v. Connecticut Siting Council*, 942 A.2d 345, 348 (Conn. 2008).

impact drinking water. Prohibiting a microreactor in these areas is intended to prevent this risk of human and environmental harm.

DEC restricts the installation of facilities in state waters due to the potential impacts from spills or releases of nonradiological hazardous substances from auxiliary equipment, heat generated by power plants which may negatively impact fish and other aquatic life, and general environmental protection from construction and operation of an energy-generating utility. Protecting state waters is an important economic consideration in Alaska.

A microreactor facility must be at least 300 feet from a critical habitat, game refuge, game sanctuary, wildlife reserve, national monument, or national park based on considerations of land use and nuisance issues. Facility construction and operations, as well as the presence of people and vehicle traffic, can risk detrimental impacts to wildlife habitat.

d. DEC Nuclear Facility Siting Regulations

The regulations package includes the elements of DEC's permit process for siting nuclear facilities, and location requirements related to microreactors. The sections set out:

- The purpose and applicability of the chapter;
- Pre-application and notice requirements for a nuclear facility siting permit applicant;
- Application procedures for a nuclear facility siting permit;
- Nuclear facility siting permit processing and issuance;
- Nuclear facility siting permit modification, termination, and appeal;
- Location requirements for a microreactor facility; and
- Definitions for the chapter.

RESPONSE TO COMMENTS

1. Comment Summary:

Several comments expressed support for the use of microreactors.

Response:

Thank you for your comments.

2. Comment Summary:

Several comments opposed the use of nuclear energy and microreactors in Alaska.

Response:

We recognize that some commenters are opposed to the use of nuclear energy and microreactors. However, DEC's siting permit can only be based on environmental matters unrelated to nuclear safety, and not public opinion of the use of nuclear energy. Thank you for your comments.

3. Comment Summary:

The commenter asked DEC to make the army release all the facts about the Nuclear Power Plant accident at Fort Greely in 1967.

Response:

DEC appreciates the time and thought that was put into providing this comment. However, this comment is outside of the scope of our proposed regulations package.

4. Comment Summary:

The safety of the coolants used for microreactors is a concern as liquid metals must be handled with care. The example provided was fires associated with liquid sodium.

Response:

With respect to nuclear safety issues, as discussed more thoroughly in the background information, DEC regulation of nuclear safety is broadly preempted by federal law and nuclear safety is under the authority of the federal government.

5. Comment Summary:

A couple of comments included general opposition to the regulations package and cited concerns about nuclear power being a target during war.

Response:

DEC recognizes that some individuals have strong opinions regarding nuclear power. However, the concerns identified by the commenters are outside of the scope of DEC authority and this regulations package. Security of nuclear power is under the authority of the federal government.

6. Comment Summary:

The separation distances from the facility property boundary and public right of way are not far enough given the potential for the facility to have a heightened security requirement. Suggested a requirement for a security plan in the applicant's submittal.

Response:

With respect to nuclear safety issues, as discussed more thoroughly in the background information, DEC regulation of nuclear safety is broadly preempted by federal law and nuclear safety is under the authority of the federal government.

7. Comment Summary:

A condition for issuance of a permit for a microreactor should be that the applicant demonstrate that they have a plan for the safe decommissioning, removal, and permanent disposal of the

facility and wastes it may generate, and the means to pay for such decommissioning, removal, and permanent disposal.

Response:

With respect to nuclear safety issues, as discussed more thoroughly in the background information, DEC regulation of nuclear safety is broadly preempted by federal law and nuclear safety is under the authority of the federal government.

8. Comment Summary:

DEC should disclose all operations of the reactors and the type of reactor fuel.

Response:

With respect to nuclear safety issues, as discussed more thoroughly in the background information, DEC regulation of nuclear safety is broadly preempted by federal law and nuclear safety is under the authority of the federal government. Nuclear reactor operations and fuel are also beyond the scope of this regulations package.

9. Comment Summary:

The regulations should include an option for individuals and private businesses to be able to apply and implement the technology if they can meet the requirements.

Response:

The regulations do not specify who can apply for siting a microreactor. The regulations apply to any applicant that seeks to site a microreactor in the State of Alaska. The licensing for all aspects of the reactor other than the state siting permit outlined in the regulations package is handled by the NRC.

10. Comment Summary:

The NRC permitting process is more than adequate; the state and local authorities should not have any additional levels of oversight.

Response:

Under Alaska Statute 18.45.025, passed by the Alaska Legislature, a person may not construct a nuclear facility in Alaska without first obtaining a permit from DEC, and the permit may not be issued until the municipality with jurisdiction over the proposed facility site (or the legislature, in the unorganized borough) has approved the permit. The statute states DEC shall adopt regulations governing the issuance of such facility siting permits.

11. Comment Summary:

A remediation and removal plan should be included in the regulations.

Response:

With respect to nuclear safety issues, as discussed more thoroughly in the background information, DEC regulation of nuclear safety is broadly preempted by federal law and nuclear

safety is under the authority of the federal government. In addition, remediation and removal are not within the scope of the regulations package.

12. Comment Summary:

The mixed use of metric and English measurement units in the regulations is confusing. Please use all English measurements.

Response:

The use of a mix of metric and English measurement units is appropriate for this regulations package, based on how the units are used. Metric units are commonly used for aerial photography and for map scale. English units are used for setback distances and are common for construction maps and designs.

13. Comment Summary:

Defining microreactor with an unpublished statutory definition is bad form. The statutory definition of microreactor should have been a footnote in the regulations. The commenter suggests a statutory change to the microreactor definition so that microreactors with a larger energy generation can be used in Alaska.

Response:

The new statutory definition of a microreactor can be found via a web search using the search words “Alaska microreactor definition” or similar, and thus was not a significant detriment to understanding the regulations package.

The proposed change to the statutory definition is outside the scope of the proposed regulations.

14. Comment Summary:

Several comments expressed concerns about the feasibility of removing waste from the state, storage of nuclear waste, and disposal of nuclear waste.

Response:

With respect to nuclear safety issues, as discussed more thoroughly in the background information, DEC regulation of nuclear safety is broadly preempted by federal law and nuclear safety is under the authority of the federal government. Issues related to nuclear waste are beyond the scope of this regulations package.

15. Comment Summary:

Proposed nuclear projects should be voted on by the public in the projects' respective boroughs, with a two-third majority vote needed to veto any proposed project that has otherwise been approved by the NRC.

Response:

This regulations package does not seek to impose any specific procedural requirements on a municipality's process for approving a DEC siting permit. The DEC state siting permit process, including municipal or legislative approval, is separate from the NRC's federal licensing process.

16. Comment Summary:

More specificity is needed in the twice the lifecycle of the proposed facility for avoiding eroding areas. Some units can be refueled/replaced so the site may exist indefinitely, and thus siting to ensure no initial risk from erosion or some sort of monitoring established for potentially at-risk sites should be considered to avoid the need for short notice decommissioning.

Response:

With respect to nuclear safety issues, as discussed more thoroughly in the background information, DEC regulation of nuclear safety is broadly preempted by federal law and nuclear safety is under the authority of the federal government. Here, DEC includes erosion in microreactor location requirements to regulate the risk of damage to auxiliary, nonnuclear parts of the microreactor facility like potential heating oil tanks, electric transmission lines, and solvents for machinery related to power transmission.

The definition for twice the lifecycle was added to the regulations and means two times the amount of time a microreactor can be in service, from the installation until after the unit is decommissioned.

17. Comment Summary:

Several comments expressed concerns about the security of microreactors and the need to achieve security through siting or other regulations.

Response:

With respect to nuclear safety issues, as discussed more thoroughly in the background information, DEC regulation of nuclear safety is broadly preempted by federal law and nuclear safety is under the authority of the federal government.

18. Comment Summary:

Post online all documentation of monthly radiation checks to be filed with DEC's Division of Environmental Health. Employees should be assigned a number to appear on the online report.

All employees should be a Nuclear Power plant full or part-time worker and should be part of a union.

Response:

With respect to nuclear safety issues, as discussed more thoroughly in the background information, DEC regulation of nuclear safety is broadly preempted by federal law and nuclear safety is under the authority of the federal government.

19. Comment Summary:

Consider using secondary waste heat (not radioactive water) from cooling in floor heating in new construction. The secondary waste heat water would be monitored, and monitoring reports would be filed with DEC.

Response:

With respect to nuclear safety issues, as discussed more thoroughly in the background information, DEC regulation of nuclear safety is broadly preempted by federal law and nuclear safety is under the authority of the federal government.

20. Comment Summary:

The regulations should provide a process for inspection from the one of the Nuclear Federal agencies or the International Atomic Energy Agency.

Response:

DEC is only responsible for a siting permit under state law. Any inspections that would be required during microreactor operation would be under the authority of the NRC, and not DEC. With respect to nuclear safety issues, as discussed more thoroughly in the background information, DEC regulation of nuclear safety is broadly preempted by federal law and nuclear safety is under the authority of the federal government.

21. Comment Summary:

Follow all Federal Regulations, with a cutoff date before the start of construction.

Response:

DEC's state regulations have no effect on the applicability of federal regulations. With respect to nuclear safety issues, as discussed more thoroughly in the background information, DEC regulation of nuclear safety is broadly preempted by federal law and nuclear safety is under the authority of the federal government.

22. Comment Summary:

The requesting user would provide a payment into a special fund with the State of Alaska to account for any cleanup that may be needed. The funds can only be used for cleanup of nuclear issues.

Response:

With respect to nuclear safety issues, as discussed more thoroughly in the background information, DEC regulation of nuclear safety is broadly preempted by federal law and nuclear safety is under the authority of the federal government.

23. Comment Summary:

The management of spent fuel should be the liability of the requesting user and the nuclear fuel disposal company with documentation filed with DEC. No spent fuel should be stored in Alaska other than temporary storage at the microreactor site for no more than 8 months.

The management of the spent nuclear fuel disposal company must be bonded, insured, and on the Department of Energy's approved list for handling spent nuclear fuel.

Response:

With respect to nuclear safety issues, as discussed more thoroughly in the background information, DEC regulation of nuclear safety is broadly preempted by federal law and nuclear safety is under the authority of the federal government.

24. Comment Summary:

There is currently no one with relevant experience in the industry on decommissioning a first of a kind reactor, or with knowledge those future costs.

Response:

With respect to nuclear safety issues, as discussed more thoroughly in the background information, DEC regulation of nuclear safety is broadly preempted by federal law and nuclear safety is under the authority of the federal government.

25. Comment Summary:

Several items regarding the request for proposals (RFP) for the proposed microreactor on Eielson Air Force Base were raised, including:

- Concerns about the RFP for a proposed reactor and the idea that the RFP puts all the risk of the project on the bidders.
- Vendors must supply emergency personnel for nuclear power incident response.
- Vendors cannot recover cost overruns and as such overruns will be passed onto the cost of the energy produced, exceeding the costs of energy sources like natural gas or coal.

Response:

The RFP for the proposed microreactor on Eielson Air Force Base is outside of the scope of the proposed regulations.

26. Comment Summary:

It is infeasible for microreactors to have containment that can resist elevated accident pressures and temperatures and prevent releases of radionuclides into the environment. The fuel is not as indestructible as some claim. Fuel cannot come into contact with air or water.

Response:

With respect to nuclear safety issues, as discussed more thoroughly in the background information, DEC regulation of nuclear safety is broadly preempted by federal law and nuclear safety is under the authority of the federal government.

27. Comment Summary:

Small is not always safer. Even if the amount of radioactivity is relatively small, the impact of an accident could be disproportionately large. Reactors need greater oversight than the regulations proposed given the health and safety concerns.

Response:

With respect to nuclear safety issues, as discussed more thoroughly in the background information, DEC regulation of nuclear safety is broadly preempted by federal law and nuclear safety is under the authority of the federal government.

28. Comment Summary:

Microreactors do not displace as much carbon as large reactors and are not as good as renewable energy. Renewable energy sources are available now unlike microreactors which won't come online for a long time.

Response:

The qualities of a microreactor compared to other sources of energy are outside of the scope of the proposed regulations.

29. Comment Summary:

Several commenters expressed concerns around the use of uranium and the impacts of uranium mining.

Response:

The mining of uranium is outside of the scope of this regulations package. With respect to nuclear safety issues, as discussed more thoroughly in the background information, DEC regulation of nuclear safety is broadly preempted by federal law and nuclear safety is under the authority of the federal government.

30. Comment Summary:

The proposed process of a staggered approach to the permitting process with NRC early site permits places a significant amount of risk and cost to the applicant when acquiring the NRC permit.

Response:

DEC has altered the regulations to remove references to the early siting permit issued by NRC. Instead, a copy of the letter issued by the NRC to the applicant indicating that the license application is completed and accepted for detailed review is required for the state siting permit application.

31. Comment Summary:

The requirement for landowner information in the pre-application public notice has the potential to put undue hardship on the landowner and could have significant financial implications on any land purchases.

The requirement to provide a copy of the deed to the property, lease agreement on the property, or written consent from the property owner for the proposed facility in the permit application is burdensome on both the property owner and the applicant. This requirement could compromise the ability to acquire property and develop the proposed facility.

Response:

DEC understands the concern about landowner information being included in the pre-application public notice and has removed the requirement from the regulations.

However, DEC will not remove the requirement for providing a copy of the deed, lease, or landowner permission from the permit application requirements. Proof of landowner consent is required to demonstrate that the landowner understands and approves of the proposed activity taking place on their property.

32. Comment Summary:

The form required as part of the application should be added in an appendix allowing public comment on the form.

Response:

Application forms are not developed or provided to the public until after regulations are finalized.

33. Comment Summary:

18 AAC 87.200(b)(4) and (5) have environmental requirements similar to what is required by the NRC early siting permit. The NRC early siting permit should be allowed to fulfill these requirements to reduce repetition of work, reduce risk, and expedite the process.

Response: 18 AAC 87.200(b)(4) and (5) require aerial photography and maps showing the proposed site. DEC believes this information is necessary as part of its non-safety-related siting permit process, independent of NRC’s process.

34. Comment Summary:

18 AAC 87.100 does not require the applicant to obtain or respond to comments. Recommend including specific requirements for obtaining comments and responding to them.

Response:

DEC agrees with this comment and the regulations will be modified to clarify that the comments must be obtained and responded to by the applicant.

35. Comment Summary:

There is no definition of “long-term stability” and without specific criteria for the applicant to meet, it will be difficult to know if the application is complete and accurate. A definition for “long-term stability” should be added specifying the criteria.

Response: Thank you for your comment. After consideration DEC has decided to remove the requirement in 18 AAC 87.210(a)(7).

36. Comment Summary:

Approvals from municipalities and legislatures are required under this section. Making the permit issuance contingent on other state and local governments creates significant risk to the applicant. Recommends the removal of this requirement or the ability to obtain these approvals in parallel to NRC and DEC approvals.

Response:

Under Alaska Statute 18.45.025(c), DEC may not issue a siting permit until the municipality with jurisdiction over the proposed facility site has approved the permit, or, if the proposed facility site is located in an unorganized borough, until the legislature has approved the permit.

The DEC siting permit can be applied for once the applicant receives documentation from NRC that the permit application has been accepted for detailed NRC review. This means that the NRC permitting process and DEC process can run in parallel. The approval from the local municipality with jurisdiction is built into the DEC siting permit process.

37. Comment Summary:

DEC should coordinate any additional terms and conditions with federal and local agencies to ensure there are no conflicts between agency requirements.

Response: Thank you for your comment. DEC intends to coordinate with NRC as much as possible during any permit process.

38. Comment Summary:

What safeguards would be in place in the event of a large seismic event?

Response:

With respect to nuclear safety issues, as discussed more thoroughly in the background information, DEC regulation of nuclear safety is broadly preempted by federal law and nuclear safety is under the authority of the federal government.

39. Comment Summary:

Microreactors should not be approved unless there are written emergency procedures to respond to disaster and respond to cleanup of spent fuel.

Response:

With respect to nuclear safety issues, as discussed more thoroughly in the background information, DEC regulation of nuclear safety is broadly preempted by federal law and nuclear safety is under the authority of the federal government.

40. Comment Summary:

A commenter suggested that DEC incorporate lessons learned from the International Atomic Energy Agency's "Lessons Learned in Regulating Small Modular Reactors" paper.

Response:

With respect to nuclear safety issues, as discussed more thoroughly in the background information, DEC regulation of nuclear safety is broadly preempted by federal law and nuclear safety is under the authority of the federal government.

41. Comment Summary:

Flexibility should be provided regarding the public notice process. Posting public notice in a newspaper is outdated or infeasible, and instead DEC should allow posting on social media or a

public utility owner’s website if there is not a local newspaper or radio. The use of mailers or posting in community facility should also be considered in lieu of newspaper posting.

The public notice timeframe should also be longer than 30 days.

Response:

Publishing public notices in a newspaper is a legally accepted means of notice. In practice, DEC uses the online SmartComment application for public notices, in addition to SOA Online Public Notice. The applicant may also elect to use alternative methods of distributing public notice in addition to the methods required in the regulations. For DEC’s public notice of a draft permit, 30 days is the minimum and DEC may choose a longer public notice timeframe.

42. Comment Summary:

DEC should obtain free, prior, and informed consent from affected Tribes. Tribes should be engaged as early as possible regarding microreactor projects.

Response:

DEC expects permit applicants to engage with tribal entities as early as possible. Note that “free, prior, and informed consent” is a term of art that exists in international policy and not in state law. However, nothing precludes states from forming intergovernmental agreements and state-tribal compacts to promote positive state-tribal relationships and foster collaborative policy development. DEC has a Tribal Government Liaison position that coordinates with divisions and other state agencies and works closely on tribal concerns. DEC also maintains a tribal relations website at <https://dec.alaska.gov/commish/tribal> that includes a 2002 policy statement describing the DEC’s tribal engagement process.

43. Comment Summary:

How were separation distances decided? The separation distances proposed are not adequate.

Given climate change coastal areas vulnerable to storm surge, areas of erosion, areas of ice floes, and avalanches are no longer predictable so the setbacks should be increased significantly.

Distances to property boundaries, right of way, water sources, critical wildlife habitat, and residences should be increased.

Response:

The separation distances DEC proposed are not designed to take into account safety measures related to radiation. All safety concerns related to radiation are under the authority of the NRC and not DEC. DEC’s reasoning for the separation distances is explained more fully in the background section.

44. Comment Summary:

“100-year floodplains” are no longer dependable. Floods are occurring more often, and the issue of flooding setbacks should be re-evaluated to account for uncertainties.

Response: With respect to nuclear safety issues, as discussed more thoroughly in the background information, DEC regulation of nuclear safety is broadly preempted by federal law and nuclear safety is under the authority of the federal government.

45. Comment Summary:

Nuclear facilities should not be allowed in areas of melting permafrost or areas at high risk of wildfires.

Response:

With respect to nuclear safety issues, as discussed more thoroughly in the background information, DEC regulation of nuclear safety is broadly preempted by federal law and nuclear safety is under the authority of the federal government.

46. Comment Summary:

The siting of facilities should include public evacuation planning and safe evacuation routes in the event of an accident or sabotage.

Response:

With respect to nuclear safety issues, as discussed more thoroughly in the background information, DEC regulation of nuclear safety is broadly preempted by federal law and nuclear safety is under the authority of the federal government.

47. Comment Summary:

Notification of the facility should be provided not only to the municipality with jurisdiction but also the entire transportation route for moving radioactive materials and the entire service area of the facility.

Response:

With respect to nuclear safety issues, as discussed more thoroughly in the background information, DEC regulation of nuclear safety is broadly preempted by federal law and nuclear safety is under the authority of the federal government.

48. Comment Summary:

The application should include plans to ensure safety, oversight, and surveillance of the facility, including staffing, emergency response, and evacuation plans.

Response:

With respect to nuclear safety issues, as discussed more thoroughly in the background information, DEC regulation of nuclear safety is broadly preempted by federal law and nuclear safety is under the authority of the federal government.

49. Comment Summary:

Why are there no location requirements for nuclear fuel production facilities, utilization facilities other than micronuclear, reprocessing facilities, or waste disposal facilities?

Response:

At this time DEC is only putting forth siting requirements for microreactors, as the interest in potential siting of such facilities has been raised. If another type of nuclear facility were proposed in Alaska, then DEC would need to develop additional siting requirements for those facilities.

50. Comment Summary:

18 AAC 87.100 specifies the requirements for a preliminary application. The comment requests clarification on the level of detail required to satisfy the preapplication requirements in Section 100 and asks if there will be State published guidance accompanying this regulation. For example, the requirement of how the proposed facility will meet applicable state and federal requirements for the protection of human health and the environment.

Response: DEC will develop a permit application under 18 AAC 87.200(b)(3), which would be the basis for the preliminary application prepared under 18 AAC 87.100. Completion of this application will require the applicant to address factors for the protection of human health and the environment that are unrelated to radiological safety. As such, DEC believes the applicant should have adequate information to convey this information as part of preliminary application activities.

51. Comment Summary:

DEC should consider withdrawing the proposed regulations or revising the proposal to narrowly tailor the regulations to support objectives that are focused on promoting local involvement in the existing NRC process. As part of this DEC should consult with the legislature regarding the intent of the statute relating to nuclear facility siting.

Response: Alaska Statute 18.45.025 is clear that a person may not construct a nuclear facility in Alaska without first obtaining a permit from DEC. The legislative update in 2022 removed the legislative land designation requirement for microreactors, via AS 18.45.025(d), but kept the

DEC permit requirement. The 2022 legislative update also left unchanged the requirement that a DEC siting permit be approved by the municipality with jurisdiction over the proposed facility site and clarified that this approval power reverts to the legislature in the unorganized borough (which was the case per Alaska Constitution Art. 10, § 6, but is now express).

52. Comment Summary:

DEC should clearly define or explain “environmental review” in 18 AAC 87.010(a).

Response: 18 AAC 87.010(a) is a general-purpose statement, and the content of this regulatory chapter provides adequate information on how state environmental review is achieved through issuance of a siting permit. DEC’s environmental review encompasses environmental factors unrelated to radiological safety, because radiological safety is the exclusive purview of the federal government.

53. Comment Summary:

18 AAC 87.010(b) and 18 AAC 87.900 define numerous key terms, some of which also appear in the Atomic Energy Act or NRC regulations. To avoid confusion, the State should adopt the federal definitions for the terms listed in 18 AAC 87.010(b), including production facility and utilization facility, as well as the terms for construction and microreactor.

Response:

The final regulations contain a more specific definition of “construction” in 18 AAC 87.900 to increase clarity. Unlike the federal definition, the state definition has no nexus to radiological safety, and rather pertains only to the non-safety-related siting factors to be considered by the department.

The definitions in 18 AAC 87.900 of microreactor and the terms listed in 18 AAC 87.010(b) (including production facility and utilization facility) have the meanings given for those terms in AS 18.45.900, which are enacted in statute and cannot be altered by regulation. Changing the statutory definitions is therefore outside the scope of this regulation package.

54. Comment Summary:

DEC should leverage the NRC public notice requirements and process to the maximum extent practicable and in lieu of the requirements proposed in 18 AAC 87.100 and 18 AAC 87.200.

Response: Thank you for your comment. DEC has an independent state responsibility to provide for notice as part of the state permit process required by AS 18.45.025.

55. Comment Summary:

DEC should clarify the basis for the 3-year application filing period in 18 AAC 87.200(a) or consider removing this requirement.

Response: DEC placed this requirement in the regulations to ensure that the pre-permit public engagement process required by 18 AAC 87.100 is reasonably current. DEC's concern is that a significant delay between public engagement and permitting will result in the public being taken by surprise with the permit action.

56. Comment Summary:

18 AAC 87.210(a) does not indicate how much time would be required for DEC to reach a preliminary decision on the application and to issue a draft permit. It is also unclear how much time the municipality with jurisdiction has to approve the draft permit and on what grounds it may not approve the permit.

Response: Barring unforeseen circumstances, DEC anticipates being able to go to public notice with a draft permit within 90 days of receiving a complete application. However, once the draft permit is completed it is sent for approval to the municipality with jurisdiction over the proposed facility site, or to the legislature if the proposed site is in the unorganized borough. Once the draft permit is given to the municipality or legislature for review and approval, it is subject to whatever timeline those entities have built into their review processes.

DEC agrees that there was insufficient guidance on the grounds that a municipality has to decline to approve a permit and has modified the regulations accordingly. 18 AAC 87.225 states that if the municipality does not issue an approval, it shall provide the department with a detailed basis for the decision, and its decision may not be based on radiological or nuclear safety.

57. Comment Summary:

18 AAC 87.210(a)(1)-(8) should be carefully reviewed and revised because many of these appear to impose requirements that are redundant to or in conflict with NRC requirements.

Response: The requirements for this section are for protecting human health and the environment from nonradiological-safety-related risks related to location requirements (explained further above in the background section), air quality, water quality, etc. The requirement regarding long term stability has been removed.

58. Comment Summary:

DEC should clarify what, if any, information an applicant should provide if it has no prior compliance history in Alaska under 18 AAC 87.210(a)(8).

Response: DEC does not require an applicant to provide information related to compliance history and does not intend to request this of an applicant for a nuclear facility siting permit. This requirement covers past compliance history under Title 18, which would encompass all of the regulatory chapters in DEC's purview. DEC would consult existing records of non-compliance that exist in DEC files and databases.

59. Comment Summary:

DEC should clarify whether an entity seeking to build a microreactor can, at its own risk, undertake preconstruction and limit construction activities as allowed by NRC prior to receiving a final DEC siting permit.

Response: DEC has modified the definition of construction to exempt certain preconstruction activities.

60. Comment Summary:

DEC should ensure that any location requirements included in 18 AAC 87.300 do not seek to regulate or directly affect the radiological safety of reactor construction and operation, or otherwise conflict with the NRC regulations and guidance.

Response: DEC is aware the NRC has the sole authority to regulate radiological safety, and standards proposed in 18 AAC 87.300 are not based on radiological safety.

The requirements that DEC proposed are based on protecting human health and the environment from nonradiological safety risks and are explained further above in the background section.
