

BEST PRACTICES FOR ESTABLISHMENT AND OPERATION OF LOCAL COMMUNITY ADVISORY BOARDS ASSOCIATED WITH DECOMMISSIONING ACTIVITIES AT NUCLEAR POWER PLANTS

**A Report for the Senate Committee on Environment and Public Works
and the House Committee on Energy and Commerce**



By the U. S. Nuclear Regulatory Commission

Enclosure

INTRODUCTION

The U.S. Nuclear Regulatory Commission (NRC) provides this report as required by the Nuclear Energy Innovation and Modernization Act (NEIMA or Act). Specifically, Section 108 of NEIMA requires the NRC to “submit to Congress, and make publicly available, a report identifying best practices with respect to the establishment and operation of a local community advisory board to foster communication and information exchange between a licensee planning for and involved in decommissioning activities and members of the community that decommissioning activities may affect.” While existing organizations have a variety of names, such as community engagement panel, community advisory panel, and citizens advisory board, this report will refer to them collectively as community advisory boards (CABs). The report includes lessons learned from CABs, associated with decommissioning nuclear power reactors, that were established before the date of enactment of the Act.

BACKGROUND

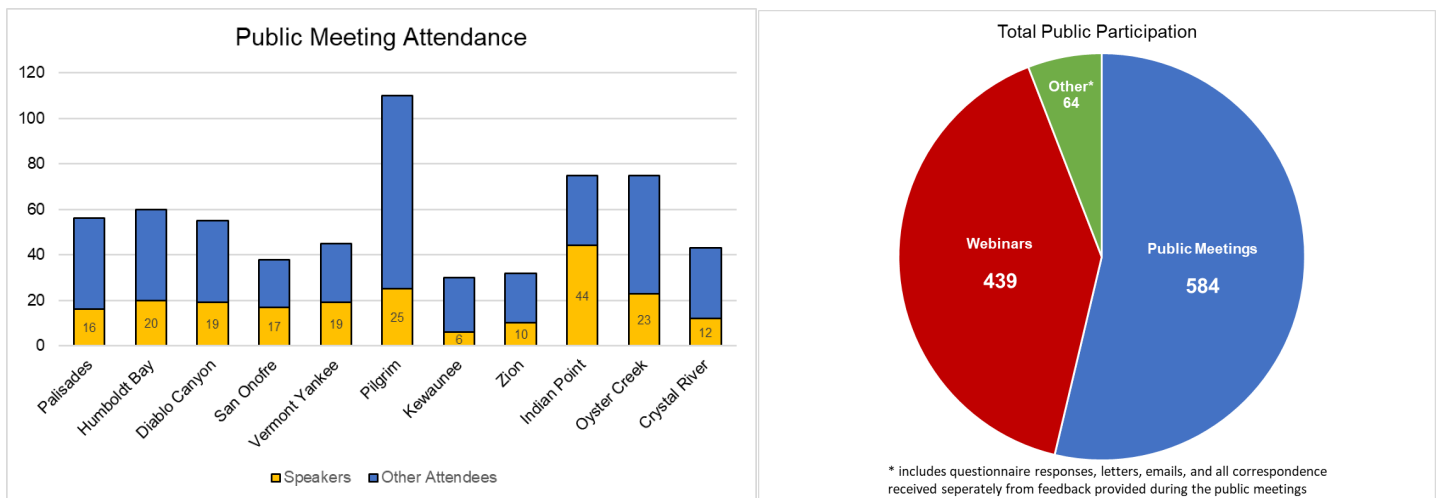
Decommissioning is the safe removal of a nuclear facility from service and the reduction of residual radioactivity to a level that permits release of the property and termination of the NRC license. Regulations establish site release criteria and provide for the release of property for unrestricted or, under certain conditions, restricted use. The NRC also requires licensees of nuclear power reactors to maintain financial assurance that sufficient funds will be available to complete radiological decommissioning of sites. While the period of active decommissioning of a nuclear power reactor when demolition and decontamination are underway (called DECON) takes an average of 10 years, the NRC’s regulations provide up to 60 years for a licensee to complete decommissioning. This may include extended periods of inactivity and long-term storage (called SAFSTOR), during which radioactivity on site decreases substantially, making subsequent decontamination and demolition easier. The NRC has overseen decommissioning of 10 nuclear power reactors and is currently overseeing decommissioning activities at 23 facilities across the country. Licensees for five of the 95 currently-operating nuclear power reactors have notified the agency of their intent to begin decommissioning within the next 5 years.

PROCESS

As part of developing this report, the NRC held 11 public meetings to obtain insights from host States, communities within emergency planning zones of nuclear power reactors (a 10-mile radius), and existing local CABs. As required by NEIMA, these meetings were conducted as “category 3” meetings, during which the public is invited to provide comments and ask questions of the NRC staff and other attendees throughout the event. A *Federal Register* (FR) notice was issued on March 18, 2019 ([84 FR 9841](#)), seeking stakeholder input on the selection of public meeting locations. Based on the input received, the NRC staff held meetings near the following nuclear power plants between August and October of 2019: Palisades (Michigan), Humboldt Bay (California), Diablo Canyon (California), San Onofre (California), Vermont Yankee (Vermont), Pilgrim (Massachusetts), Kewaunee (Wisconsin), Zion (Illinois), Indian Point (New York), Oyster Creek (New Jersey), and Crystal River (Florida). In addition, the NRC staff conducted webinars on August 8, 2019, and November 19, 2019, that provided opportunities for interested members of the public who may have been unable to attend the public meetings in person to offer comments on CAB best practices, including lessons learned. All these public meetings, including the webinars, were announced in the FR and publicized by media outlets.

Prior to these meetings, the NRC staff coordinated with State and local governments, existing CABs, and licensees to ensure that outreach efforts encouraging attendance at the meetings were effective for reaching affected stakeholders. The NRC staff used a variety of media to notify the public of these meetings, including press releases and social media posts. In addition, the NRC staff provided individual responses to all parties that requested a meeting in their area, to inform them of the selection of meeting locations and the general timeframe for participating in the public meetings and nationwide webinars. The meetings and webinars were well attended. A summary of attendance, as well as the correspondence received outside of the meetings, is shown in Figure 1. Attachment 1, “Public Meeting Summaries,” contains a table of the public meeting locations, summaries, presentations, and transcripts.

Figure 1: Public Participation in Meetings on CABs



The NRC staff also used a questionnaire on the creation and operation of CABs, which was published on September 27, 2019 ([84 FR 51189](#)). In addition to providing comments during the public meetings, interested members of the public could provide comments electronically via e-mail to the NRC’s NEIMA Section 108 working group, through online questionnaire responses, and by submitting comments through Regulations.gov under Docket ID [NRC-2019-0073](#). The NRC staff also developed a public [website](#) to keep stakeholders informed of the activities related to this effort.

The NRC staff received numerous letters, e-mails, questionnaire responses, and other docketed comments on the topics outlined in Section 108 of NEIMA. These were considered in the best practices and lessons learned described in this report. The NRC received 1,235 oral and written comments from 216 commenters through these outreach efforts. The majority of these comments are in the meeting transcripts and summaries listed in Attachment 1. Attachment 2 provides a summary reference for the remaining comments received from current and former decommissioning power reactors with CABs, and also provides a reference to information received from stakeholders for individual nuclear power reactor sites. Collectively, these comments were used to identify overarching themes across the CABs, as well as several unique considerations for establishing a CAB under different circumstances. This report summarizes those overarching themes.

DISCUSSION

The NRC identified several overarching themes that were common to most of the CABs or affected communities. Specifically, the themes involved: (1) early formation considerations; (2) charter development; (3) local preferences for engagement; (4) membership composition; (5) licensee participation; (6) meeting frequency; (7) public engagement; (8) funding; (9) CAB training and use of experts; (10) topics to be brought before the CAB; and (11) sites with multiple advisory boards. The first eight themes were common to the feedback received from all existing CABs and affected communities, while the next two were shared by several of the CABs, and the final theme was discussed at several meetings and is unique to one site.

Early Formation Considerations

Members from all CABs stated that early formation is a prime consideration once a licensee has notified the NRC of its intent to permanently shut down a nuclear reactor. Due to the complex issues involved in decommissioning, and the time needed for the CAB members and public to become informed of the various issues involved in the process, CAB formation prior to the shutdown of the reactor is likely to improve its overall effectiveness in working with the community and the licensee. Commenters also stated that other advantages of forming a CAB prior to the reactor's shutdown include more time to develop a charter, consider membership, develop a selection process for CAB members, provide training or other background information, and identify and address community needs during decommissioning.

Charter Development

All current CABs have a charter or similar guiding document to formalize the purpose, organizational structure, and general operations. These charter documents vary widely between the CABs. State-sponsored CABs are typically established by statute. Other CABs may be established based on a simple outreach procedure created by the licensee or members of the public to outline the general role and functions of the CAB. In all cases the guiding documents establish the procedures by which the CAB operates, how it conducts meetings, and how it interacts with the community, local and State governments, the licensee, and other stakeholders.

Based on the NRC staff's review of the charters for all current CABs and comments received during the interactions initiated by Section 108 of NEIMA, the staff identified the following issues that are typically addressed in a CAB charter or guiding document:

- the purpose of the CAB
- the selection of CAB members
- the operation of the CAB, such as logistics, budget, communications, and record requirements
- the procedures for meetings
- the procedures for voting
- requirements for licensee, community, and other stakeholder interactions or engagement.

In most circumstances, the charter document defines the authority of the CAB and may include how the CAB's input could be used to inform the decisionmaking processes of stakeholders for various decommissioning activities. For example, State-sponsored CABs may have statutory authority over certain decommissioning decisions under the State's authority. Other types of

CABs may coordinate with the licensee to create a charter that describes when the CAB's input will inform decommissioning decisions made by the licensee. The purview of the CAB will in part be driven by its purpose, which can vary among CABs. A CAB can be an advisory panel for the community, the licensee, or a State or local government. It can be dedicated to improving community engagement and outreach. It also can be tasked to provide specific reports to State or local officials.

The charter or other guiding document establishes the structure of the CAB and often addresses the independence of the CAB from other stakeholders involved in the decommissioning process. Many CAB members stressed the importance of the CAB's independence in order to fully understand and objectively explore the decommissioning process.

Another important consideration in the development of a charter or other guiding document is the life cycle of the CAB as the site goes through the decommissioning process, including when funding will end and how a CAB's operations will evolve based on site conditions and community needs. Greater consideration of the CAB's life cycle in a charter can allow a CAB to be more responsive in adapting to changing needs, such as post-decommissioning activities while spent nuclear fuel remains on the former reactor site. Among these life cycle considerations is the structure of the board and the length of membership terms to maintain institutional knowledge throughout its existence.

CAB members at several locations stressed the importance of having a mechanism to periodically review and revise the CAB charter. However, a CAB established by statute may face greater challenges in revising its structure or operations as legislative changes may be necessary for such revisions.

Local Preferences for Engagement

A majority of commenters stated that communities should have significant input into a CAB's establishment and operation and that the CAB should reflect the concerns and level of engagement of each community. This interest in strong community input was a consistent theme in each public meeting, the two webinars, and the comments submitted by other stakeholders via electronic means and questionnaire responses. For example, the majority of commenters noted that there are differences in CAB focus, attendance levels, and discussion topics that depend on unique, region-specific considerations. At some locations, communities prefer alternative outreach methods, including newsletters and open houses, annual reports, and websites. At other locations, communities prefer a more formal approach to establishing a CAB, including regularly scheduled meetings, a documented structure, and membership requirements.

Membership Composition

The majority of commenters stated that CABs should reflect the community surrounding the nuclear facility and include adequate consideration of demographics and a variety of technical expertise. For example, commenters stated CABs should consider including members from nearby communities and tribal lands that may be affected by shutdown of the nuclear power reactor. Opinions varied on the utility of having local elected officials on CABs. Thoughts also varied on the role and appropriate level of engagement of State and Federal elected officials.

Licensee Participation

Opinions regarding licensee membership and participation in the CAB were mixed. Commenters favoring licensee participation stated that it would provide: more open dialogue on the decommissioning process, more knowledge of ongoing and planned activities, more technical expertise on decommissioning, and greater understanding of unique site characteristics. Others added that licensees often contribute funding for CAB activities, provide logistical and technical support for meetings, and provide funding for CAB communication with the community, such as by establishing a website or printing a newsletter.

Commenters not favoring licensee participation described problems with sponsorship, voting rights, and influence on the CAB member selection process. In general, the issue of licensee participation centered on the potential conflict between the licensee's interest in decommissioning and the community's interests. Some commenters stated that the licensee's influence over the CAB is potentially magnified if the CAB relies on licensee funds, resources, or expertise.

Most commenters agreed that licensee participation such as providing site tours, conducting open houses, providing technical expertise, and communicating ongoing and planned activities is important to a fully-functioning CAB.

Meeting Frequency

The frequency of CAB meetings varies based on site decommissioning status, ongoing decommissioning activities, level of public interest, local preferences, and availability of CAB members. Many CAB members stated that more meetings were required early in the planning phase of decommissioning and throughout the initial decommissioning phases. Participants expressed this opinion consistently at all the public meetings and other related interactions.

Public Engagement

In addition to allowing public comment at meetings, several CABs described other opportunities for public engagement and additional means to facilitate dialogue between the licensee and the public through websites, newsletters, and other communication tools. For example, at least three CABs livestream their meetings to make them more accessible to the public. Some CABs also publish annual reports. CABs may consider appropriate ways to provide opportunities for public engagement and communication based on the preferences of local community members, including tribes in the area.

CABs can consider inviting entities such as the NRC, State officials, local government officials, and tribal governments to provide presentations and engage in discussions on issues of interest to the local community and the CAB. The NRC has supported several meetings held by CABs to share information related to the decommissioning regulation and oversight process.

Funding

The majority of CAB members expressed a need to have dedicated funds assigned specifically to support CAB operations and activities. Many commenters stated that there are key expenses, including administrative costs, travel, expert consultations, website maintenance, annual reports, and other communication methods, that should not be subject to discretionary funding or control by an outside entity. Although logistical and administrative funding was

consistently deemed critical, opinions varied on what specific activities should be covered by the CAB funds and whether CAB members should be compensated for their participation.

While the need for dedicated funding was expressed consistently at all meetings, opinions differed on funding sources. Some participants felt that licensees should provide funding. Others preferred State or community funding. Some preferred funding be provided by the NRC or other Federal entity. Finally, some thought that funding should be shared among all of these sources.

CAB Use of Experts and Training

Almost all CAB members stated that access to technical experts and specialized training was vital to an effective CAB. Many commenters also stated that a CAB should be able to select and retain its own technical experts on certain topics. This independence provides better support to the community on important site-specific decommissioning issues. While the need for experts and training was a recurring theme, opinions differed on who should fund, provide, and manage this training. Some felt that the licensee or NRC should provide access to such training or provide specific funds for the use of experts, perhaps separate from funding the CAB itself. Several commenters noted that the NRC staff often participates in CAB meetings to present on regulatory or oversight process topics related to decommissioning, and described this as a best practice. Access to technical experts and/or specialized training to assist the CAB membership can be clearly defined in the charter.

Topics to be Brought Before the CAB

The following is a list of the topics that existing CABs routinely discuss: decontamination and dismantlement; NRC regulatory filings (such as the PSDAR and other licensing actions related to decommissioning); NRC inspections; spent nuclear fuel; radiation monitoring; storage and disposal of spent nuclear fuel; dry cask storage issues; spent fuel transportation; geologic disposal; transfer of spent fuel to on-site dry cask storage; emergency planning; security; economic impacts of decommissioning; effluents and discharges; environmental impacts; and seismic hazards.

Sites with Multiple Advisory Boards

Commenters at several meetings asked about the potential for multiple CABs to serve different purposes in relation to the same decommissioning nuclear power reactor. As discussed in the Charter Development and Membership Composition sections above, there was strong agreement from commenters that CABs should reflect the community surrounding the nuclear facility and include adequate consideration of demographics and a variety of technical backgrounds. However, there were a variety of opinions on how a CAB should be composed, as well as the general role and functions of a CAB. Given the wide range of issues that could be brought before a CAB, and the varying local preferences for engagement, a community may consider whether multiple advisory boards with clearly defined roles, functions, and membership may offer advantages.

CONCLUSION

Based on the feedback through the eleven public meetings, webinars, questionnaire feedback, and current experience with CABs at decommissioning nuclear power reactors, the NRC staff encourages the formation of CABs to foster communication and information exchange between

the licensee and the members of the community. To aid in the formation of CABs, some of the best practices, including lessons learned, gathered as part of the NRC's efforts in response to the requirements in Section 108 of NEIMA are:

- Early formation of CABs in the decommissioning process;
- Development of a charter or guiding document to formalize their purpose, organizational structure, and general operations;
- Consideration of local preferences for engagement and CAB meetings should be open to the public whenever possible;
- Diversity in CAB membership;
- CAB meeting frequency and topics for discussion based on the site status, ongoing activities, and level of stakeholder interest;
- Specifically assigned funding sources to support operations and activities; and
- Access to technical experts or specific training to better inform their discussions with the communities they serve.

ATTACHMENTS

Attachment 1: Public Meeting Summaries

Attachment 2: Current and Former Decommissioning Nuclear Power Reactor Sites with and without Community Advisory Boards

Attachment 1: Public Meeting Summaries

Meeting Date (2019)	Site	Meeting Venue	Meeting Summary	Presentation	Transcript
August 21	Palisades	Mendel Center at Lake College (Benton Harbor, MI)	ML19296D063	ML19231A285	ML19296D062
August 26	Humboldt Bay	Wharfinger Building (Eureka, CA)	ML19296A095	ML19233A086	ML19262G410
August 27	Diablo Canyon	San Luis Obispo Supervisors Building (San Luis Obispo, CA)	ML19318F527	ML19233A072	ML19267A021
August 29	San Onofre	San Juan Capistrano Community Center (San Juan Capistrano, CA)	ML19263A660	ML19235A189	ML19263A659
September 10	Vermont Yankee	Brattleboro Middle School (Brattleboro, VT)	ML19317D076	ML19248C230	ML19317D077
September 11	Pilgrim	1620 Hotel (Plymouth, MA)	ML19274B666	ML19248C239	ML19274B664
September 24	Kewaunee	Town of Carlton Community Center (Kewaunee, WI)	ML19289D484	ML19260E695	ML19284B574
September 26	Zion	Courtyard Chicago Waukegan/Gurnee (Waukegan, IL)	ML19323E008	ML19249C775	ML19296D472
October 2	Indian Point	Town of Cortlandt Community Center (Cortlandt, NY)	ML19318G436	ML19269B683	ML19318G438
October 3	Oyster Creek	Manahawkin Holiday Inn (Manahawkin, NJ)	ML19295G492	ML19269B689	ML19284B638
October 10	Crystal River	Citrus County Chamber of Commerce (Crystal River, FL)	ML19323F826	ML19276F110	ML19295G527
August 8	Nationwide	Webinar	ML19256A017	ML19218A262	ML19248C662
November 19	Nationwide	Webinar	ML19350B961	ML19319A055	ML19340A073

Attachment 2: Current and Former Decommissioning Nuclear Power Reactor Sites with and without Community Advisory Boards

I. Current and Former Decommissioning Nuclear Power Reactor Sites with Community Advisory Boards

Site	Date of Shutdown and Current Site Status	Date CAB Established	CAB Sponsor	Comments Provided	Charter or Equivalent	Website
Sites with Currently Operating Reactors						
Diablo Canyon	Unit 1—2024* (Operating) Unit 2—2025* (Operating)	2018	Licensee	ML19267A021 (Transcript) ML19344C714 (Questionnaire)	Yes	https://diablocanyonpanel.org/
Indian Point	Unit 1—1974 (SAFSTOR) Unit 2—2020 (DECON Pending) Unit 3—2021* (Operating)	2019	Local Government	ML19318G438 (Transcript) ML19344C719 (Questionnaire) ML19319A027 (Additional)	Yes	https://www.townofcortlandt.com/cn/webpage.cfm?tpid=16908
Sites Currently Undergoing Decommissioning						
Humboldt Bay	1983 (DECON)	1998	Licensee	ML19262G410 (Transcript) ML19344C717 (Questionnaire)	Yes	No CAB website
Pilgrim	2019 (DECON)	2018	State	ML19274B664 (Transcript)	Yes	https://www.mass.gov/orgs/nuclear-decommissioning-citizens-advisory-panel

Site	Date of Shutdown and Current Site Status	Date CAB Established	CAB Sponsor	Comments Provided	Charter or Equivalent	Website
Sites Currently Undergoing Decommissioning (continued)						
San Onofre	Unit 1—1992 (DECON) Unit 2—2013 (DECON) Unit 3—2013 (DECON)	2014	Licensee	ML19263A659 (Transcript) ML20113E933 (Questionnaire)	Yes	https://www.songscommunity.com
Vermont Yankee	2014 (DECON)	2014	State	ML19317D077 (Transcript) ML19106A341 (Questionnaire)	Yes	https://publicservice.vermont.gov/electric/ndcap
Zion	1998 (DECON)	2011	Licensee	ML19296D472 (Transcript)	Yes	https://www.zionsolutionscompany.com/community/zion-station-community-advisory-panel/
Sites That Have Completed Decommissioning						
Maine Yankee	1997 (DECON Completed)	1997	Licensee	ML19317D077 (Transcript) ML19297F718 (Questionnaire) ML19318G264 (Additional)	Yes	No CAB website

Site	Date of Shutdown and Current Site Status	Date CAB Established	CAB Sponsor	Comments Provided	Charter or Equivalent	Website
Sites That Have Completed Decommissioning (continued)						
Connecticut Yankee	1996 (DECON Completed)	1997	Licensee	ML19317D077 (Transcript)	Yes	No CAB website
Yankee Rowe	1991 (DECON Completed)	1998	Licensee	ML19317D077 (Transcript)	Yes	No CAB website
Big Rock Point	1997 (DECON Completed)	1997	Licensee	No comments provided	No	No CAB website
Saxton	1972 (DECON Completed)	1995	Licensee	No comments provided	No	No CAB website

II. Current and Former Decommissioning Nuclear Power Reactor Sites without Community Advisory Boards

Site	Shutdown Date (Current Site Status)	Comments/Notes
Sites Currently Undergoing Decommissioning		
Crystal River Unit 3	2013 (DECON)	ML19295G527 (Transcript) ML19344C805 (Questionnaire)
Dresden Unit 1	1978 (SAFSTOR)	Two units currently operating at site
Fermi Unit 1	1972 (SAFSTOR)	One unit currently operating at site

Site	Shutdown Date (Current Site Status)	Comments/Notes
Sites Currently Undergoing Decommissioning (continued)		
Fort Calhoun	2016 (DECON)	ML19331A197 (Questionnaire)
GE Vallecitos EVESR & VBWR	EVESR - 1967 / VBWR - 1963 (SAFSTOR)	No comments were provided
Kewaunee	2013 (SAFSTOR)	ML19284B574 (Transcript)
La Crosse	1987 (SAFSTOR)	No comments were provided
Millstone Unit 1	1998 (SAFSTOR)	Two units currently operating at site
NS Savannah	1970 (DECON)	No comments were provided
Oyster Creek	2018 (DECON)	On October 2, 2019, the State of New Jersey established the Oyster Creek Safety Advisory Panel to provide additional oversight
Peach Bottom Unit 1	1974 (SAFSTOR)	Two units currently operating at site
Three Mile Island Unit 1	2019 (SAFSTOR)	No comments were provided
Three Mile Island Unit 2	1979 (SAFSTOR)	Site did have CAB during post-accident cleanup activities
Sites That Have Completed Decommissioning		
Rancho Seco	1989 (DECON Completed)	No comments were provided