

## **SAFETY & SECURITY WORKING GROUP**

Nuclear Decommissioning Citizens Advisory Panel (NDCAP)

Safety & Security Working Group

MISSION STATEMENT AND 2018 Annual Report

### **SAFETY & SECURITY WORKING GROUP MISSION SCOPE**

The Massachusetts NDCAP Safety & Security Working Group focuses on familiarizing ourselves with all relevant NRC and decommissioning documents, components, standards and information which have bearing on the safety and security of decommissioning activities at Plymouth's Pilgrim Nuclear Station (PNPS).

Our group is a citizen's advisory panel and in no way do we present ourselves as "experts" on nuclear power safety and security associated with decommissioning. We do, however, rely upon experts for factual and relevant information. We meet publically to discuss issues relating to the progress of decommissioning of the PNPS which will begin on or about June 19, 2019, or when the PNPS permanently ceases power operations. Safety and security at PNPS is a prime issue of decommissioning and therefore a separate working group has been established.

The working group also is engaged in familiarizing of our members, the public, and the Commonwealth on similar safety and security issues/concerns of nuclear power systems that have undergone decommissioning in recent years, as well as other related public information from authoritative sources.

Our Safety & Security Working Group also discusses relevant issues with appropriate representatives and experts from both the public and private sectors. Our intent is to use this data to: serve as a conduit for public information and education on and to encourage community involvement in decommissioning matters; to receive written reports and presentations on the decommissioning of PNPS; to make appropriate recommendations to the other NDCAP working groups, and to the NDCAP overall.

The sum total of the working group's efforts in 2017/2018 are documented as part of the NDCAP's statutorily required annual report, as well as any other appropriate recommendations during the next year.

## THE NATURE OF NUCLEAR PLANT SAFETY AT PNPS

Safety, as determined by the working group applies to all PNPS systems, structures, components, procedures, and controls that are relied upon to remain functional during and following design-basis events without loss or harm and to ensure public health and safety. Thus, safety is both an operational, day-to-day consideration for an operating plant, as well as a major consideration once decommissioning begins and ends. More recently, in the Draft Regulatory Basis for Decommissioning Rule, NRC staff concluded that there is sufficient justification to proceed with decommissioning rulemaking in the areas of emergency preparedness and physical security, among others.

As our working group has determined, safety at PNPS during decommissioning must include site and waste safety management, pollution prevention and treatment, emergency preparedness, and site safety issues - other than waste and site restoration – that relate to the protection of air, soil, groundwater and marine environments. Special attention is directed toward the identification and assessment of future decommissioning impacts and environmental factors related to safety.

The NRC states in its Decommissioning Rule that the risk of an offsite radiological release is significantly lower, and the types of possible accidents are significantly fewer, at a nuclear power reactor that has permanently ceased operations and has removed fuel from the reactor vessel than at an operating power reactor. While this may be true in terms of the frequency of risk probabilities given an operating versus non-operable plant, the working group, from a safety perspective, has determined the absolute necessity for support and financing of emergency planning, security and monitoring activities during all phases of decommissioning. This especially relates to plant shutdown within a year and all the spent fuel in the wet pool has been moved into dry casks. In addition, and unless we can be shown otherwise, the removal of the spent fuel rods from the spent fuel pool at PNPS must be expedited as soon as possible into dry casks and moved to the dry cask pad as opposed to keeping in the supposedly safe wet pool.

## THE NATURE OF NUCLEAR PLANT SECURITY AT PNPS

The security culture at Pilgrim is concerned with physical and logical (cyber) security programs and contingency plans that deal with intentional threats, thefts, and sabotage directed at PNPS relating to special nuclear material, high-level radioactive wastes, nuclear facilities, and other radioactive materials and activities that the NRC regulates. When the plant is rendered non-operational and decommissioning begins, the Safety & Security Working Group believes that there remains a continuous threat of sabotage, theft, diversion, and other malicious acts that should continue to define the scope of the PNPS and nature of the security program during decommissioning. Nevertheless, the NRC's draft regulatory basis for decommissioning states that the NRC has established a sufficient regulatory basis to continue with rulemaking in the areas of physical security, cyber security, and drug and alcohol testing. What the NRC has said regarding security during decommissioning remains to be seen.

As a direct result, for the regulatory areas of physical security, cybersecurity, and drug and alcohol testing, the NRC has not recognized a need for the imposition of new requirements to address identified safety or security concerns. Rather, the NRC has indicated that during decommissioning there may be a need to align the requirements in decommissioning with the reduction in risk that occurs over time, while maintaining safety and security.

The working group will receive reports regarding the licensee's decommissioning security plans, including any site assessments and post-shutdown decommissioning assessment reports. We will establish a forum for receiving public comments on these plans and reports. We will also provide our comments, as appropriate, to state agencies and the owner of PNPS, via the working group, the NDCAP, and in the NDCAP's annual report.

### **SAMPLE S&S ACTIVITIES FOR DISCUSSION PURPOSES ONLY**

Some of the safety related activities of the NDCAP include:

1. Recommend and support offsite emergency planning post operations and during any time when public safety is threatened by any safety or security risk
2. Review any changes to the emergency preparedness (EP) requirements in Title 10 "Emergency plans," and "Emergency Planning and Preparedness for Production and Utilization Facilities," as they continue to apply to a nuclear power reactor after permanent cessation of operations and removal of fuel from the reactor vessel
3. Review and assess safety rules and consider the adequacy of safety emergency planning standards applied to PNPS
4. Assess and consider the adequacy of continued air monitoring, and groundwater monitoring
5. Review, recommend and support clean water management practices and standards
6. Evaluate and make recommendations with respect to present and future impacts on protection and preservation of Cape Cod Bay and marine life
7. Review any environmental impacts as a result of decommissioning operations and changes in Emergency Planning requirements and make recommendations.

Some of the security related activities of the NDCAP include:

1. Review of licensee security programs and contingency plans that deal with threats, thefts, and sabotage relating to special nuclear material, high-level radioactive wastes, shut down nuclear facilities, and other radioactive materials and activities

2. Review of minimum security requirements necessary for certain decommissioning activities such as personnel security training and locations, as well minimum staffing for non-licensed operators
3. Considering 10 CFR 73.55 applies to both operational and decommissioned power reactor physical security requirements, review any proposals for changes to security resources needed to maintain an equivalent level of protection against radiological sabotage at a decommissioning reactor
4. Review any reactor decommissioning rule, guidance, or practice which would have an impact on public health and safety or the common defense and security - including changes in climate impact and sea level rise
5. Review the potential impact of redundant security regulations (10CFR Part 37 and 10 CFR Part 73.55) during decommissioning -- specifically any revised security regulations -- including addressing the physical security requirements for quantities of radioactive material at PNPS facilities during decommissioning.