

Technical Evaluation Report
Space and Naval Warfare Systems Center Pacific
Department of the Navy
Docket No. 030-29462/License No. 45-23645-01NA

INTRODUCTION

During a Nuclear Regulatory Commission (NRC) inspection of the Department of the Navy's (Navy) Master Materials License (MML), conducted February 4 through March 6, 2013, a violation of 10 CFR 30.36(d)(2) was identified. The NRC issued a Severity Level (SL) IV violation to the Navy on April 9, 2013 (ML13101A109) for their failure to begin decommissioning or to submit a decommissioning plan (DP) for the Space and Naval Warfare Systems Center Pacific (SPAWARS) in San Diego, California, as required by NRC regulations at the cessation of licensed activities. Principal activities at SPAWARS ceased as of March 17, 2011. The Navy was required to advise the NRC of this within 60 days and either initiate decommissioning activities or submit a DP within 12 months. In response to the violation, by letter dated April 15, 2013 (ML13121A499), the Navy submitted a request for an alternate decommissioning schedule for SPAWARS to the NRC for review. This request asked for a delay in initiating decommissioning activities and in submitting a decommissioning plan (DP) to the NRC for review. It was rejected for review by the NRC on May 22, 2013 (ML13142A240) because it lacked sufficient detail to allow for a preliminary review.

By letter dated August 7, 2013 (ML13249A300), the Navy resubmitted its request, specifically requesting extensions to the time periods in 10 CFR 30.36(f) and 30.36(g)(2) for initiating decommissioning and submitting a DP. The Navy requested this extension of time to allow for the completion of a Historical Radiological Assessment (HRA). By letter dated January 14, 2014 (ML14028A515), the NRC acknowledged receipt of this letter and started its review. The NRC published in the Federal Register a "request for alternate decommissioning schedule; opportunity to comment, request a hearing, and petition for leave to intervene" on March 18, 2014 (79 FR 15159). By letter dated June 18, 2014 (ML14171A586), the NRC requested additional information from the Navy to allow for continued review of its request. The Navy responded letter dated July 17, 2014 (ML14219A376); in this letter, the Navy also asked for a 10 year delay in the start of decommissioning activities. The Navy provided more information in a letter dated October 20, 2014 (ML14303A519), which requested that initiation of decommissioning activities be delayed until March 30, 2028. Finally, by letter dated April 10, 2015 (ML15244B307), the Navy reiterated its request for a delay in submitting a DP and provided additional information in support of this request. The Navy asked for a date of March 30, 2028 as the completion date of its decommissioning activities at SPAWARS.

Thus, the Navy has made three requests: a delay in initiating decommissioning activities, a delay in the time frame for submitting a DP, and a delay in completion of decommissioning activities (to March 30, 2028). This Technical Evaluation Report (TER) addresses these requests. The NRC's review was conducted in accordance with NUREG-1757, Volume 3 (Revision 1), "Consolidated Decommissioning Guidance – Financial Assurance, Recordkeeping, and Timeliness."

BACKGROUND

SPAWARS performed research, development, acquisition, test and evaluation, and full life cycle support of effective Command, Control, Communications, Computers, Intelligence, Surveillance, Information Operations, Enterprise Information Services, and Space capabilities for the Navy

and other Department of Defense (DOD) organizations. The SPAWARS San Diego facility has been in use by the Navy since 1941. Over the last several decades, the organization has changed names a number of times and has held various Atomic Energy Commission (AEC) and NRC licenses authorizing the possession and use of radioactive materials. The active licenses were transferred to the Navy when it was issued a MML by the NRC in 1985. The MML gives the Navy authority to issue and inspect material use permits.

SPAWARS, under a Type A broad scope permit (NRMP No. 04-66001-E1NP), used special nuclear material, source material, and sealed and unsealed byproduct sources in laboratory and field conditions. These activities were centered on radiation detection technology development, radioactive material use in sensors, and nuclear physics research.

In a letter dated April 10, 2015, the Navy described preliminary data from the ongoing HRA. This data included an inventory of the radioactive material at the site awaiting disposal. This material was gathered during a site review and assessment as SPAWARS prepares for permit termination. Some of the material was accumulated as a result of routine decontamination activities in the course of licensed activities, most recently in July 2011 (ML111990530). This material was reviewed during an NRC inspection conducted December 13 – 14, 2012 (ML13002A190).

SITE DESCRIPTION

Naval Base San Diego (the home of SPAWARS) is the largest base of the Navy on the west coast of the United States. The base covers 977 acres of land and 326 acres of water. Radioactive materials under this license/permit were potentially used in several locations including, but not limited to: San Diego, Point Loma, Palo Alto, Pasadena, Point Mugu, and San Clemente, in California; Panama City in Florida; Kaneohe Bay, and Kailua in Hawaii; Fairway Rock, Alaska Island, and the Bering Strait, in Alaska; Concord, Massachusetts; Albuquerque, New Mexico; Alexandria, Virginia; and Antarctica. This is based on preliminary findings of the HRA, now underway.

TECHNICAL EVALUATION FOR ALTERNATE DECOMMISSIONING SCHEDULE

10 CFR 30.36(d) requires a licensee to provide notification to the NRC in writing within 60 days of one of the following: the license has expired; the licensee has decided to permanently cease principal activities at the entire site or in any separate building or outdoor area that contains residual radioactivity such that the building or outdoor area is unsuitable for release in accordance with NRC requirements; no principal activities under the license have been conducted for a period of 24 months; or no principal activities have been conducted in any separate building or outdoor area that contains residual radioactivity such that the building or outdoor area is unsuitable for release in accordance with NRC requirements. The licensee is required to begin decommissioning the site or separate area or to submit a DP with 12 months of notification if a DP is required.

10 CFR 30.36(f) allows the NRC to grant an extension to the time periods established in 10 CFR 30.36(d) if the Commission determines that this relief is not detrimental to the public health and safety and is otherwise in the public interest.

10 CFR 30.36(g)(2) allows the Commission to approve an alternate schedule for submittal of a DP if the Commission determines that the alternative schedule is necessary to the effective

conduct of decommissioning and presents no undue risk from radiation to the public health and safety and is otherwise in the public interest.

10 CFR 30.36(i) allows the NRC to approve a request for an alternate schedule for completion of decommissioning activities. Specifically, 10 CFR 30.36(i) states:

The Commission may approve a request for an alternative schedule for completion of decommissioning of the site or separate building or outdoor area, and license termination if appropriate, if the Commission determines that the alternative is warranted by consideration of the following;

- (1) Whether it is technically feasible to complete decommissioning within the allotted 24-month period;
- (2) Whether sufficient waste disposal capacity is available to allow completion of decommissioning within the allotted 24-month period;
- (3) Whether a significant volume reduction in wastes requiring disposal will be achieved by allowing short-lived radionuclides to decay;
- (4) Whether a significant reduction in radiation exposure to workers can be achieved by allowing short-lived radionuclides to decay; and
- (5) Other site-specific factors which the Commission may consider appropriate on a case-by-case basis, such as the regulatory requirements of other government agencies, lawsuits, ground-water treatment activities, monitored natural ground-water restoration, actions that could result in more environmental harm than deferred cleanup, and other factors beyond the control of the licensee.

The Navy has requested a (1) delay in initiating decommissioning activities, (2) delay in the time frame for submitting a DP, and (3) delay in completion of decommissioning activities.

The NRC staff has reviewed the Navy's requests for alternative schedules for initiating decommissioning activities, submittal of a DP, and completion of decommissioning activities, using guidance contained in NUREG 1757, Volume 3 (Revision 1).

AEC and NRC licenses previously issued to the DOD, including the Navy, authorized the use of any licensed material in any amount or form anywhere the United States. DOD (not the NRC) requires the Navy to follow the DOD decommissioning process, which requires that a HRA be completed to ensure that the radiological history and characterization of each facility is accurately known. The HRA is used to determine if decommissioning and remediation is needed prior to terminating a permit. The MML has a financial Statement of Intent in place for each place of use under the MML. However, the DOD policy is to utilize available resources for funding activities and request appropriate funding from Congress should additional funds be required. As a result, the DOD procedures require that each step of the decommissioning

process be scoped and funded separately while taking into account the appropriations provided by Congress in a given fiscal year. Based on DOD's requirements, the HRA, scoping or characterization survey, completion of a DP, remediation work, and Final Status Survey (FSS) are all funded separately. This funding process extends the initiation and completion of decommissioning activities well past the time frames delineated in 10 CFR 30.36. It is only after completion and review of an HRA that the Navy can determine what, if any, decommissioning activities are required.

The NRC staff concluded that a review of the radiation safety and health program, financial assurance, and environmental monitoring and control program was not required because they had been previously evaluated and approved during permitting reviews, inspections by the Radiological Affairs Support Office, and by the NRC during biennial MML inspections, with the most recently one conducted April 21-23, 2015 (ML15154A481). The Navy has maintained a radiation safety program at SPAWARS and also maintains the appropriate financial assurance that is needed for their facilities. The Navy has requested alternate decommissioning schedules that would allow for decommissioning activities to be completed at SPAWARS by March 30, 2028.

The NRC reviewed the Navy's request for a delay in initiating decommissioning activities under 10 CFR 30.36(f) and determined that such a delay would not be detrimental to the public health and safety and is otherwise in the public interest. The Navy has a radiation safety program in place at SPAWARS, which includes a trained radiation safety staff, procedures, and routine radiation surveys to demonstrate that there is no spread of radioactive contamination. Also, allowing a delay in initiating decommissioning activities serves the needs of national defense, allowing the Navy to utilize funds where they are more greatly needed and to prioritize the facilities that most need remediation activities.

The NRC reviewed the Navy's request for delaying the submittal of a DP under 10 CFR 30.36(g)(2) and determined that the alternate schedule for submittal of a DP is necessary to the effective conduct of decommissioning operations and presents no undue risk from radiation to the public health and safety and is otherwise in the public interest. A delay in submitting a DP would allow for the completion of an HRA. Completion of the HRA will help the Navy determine if a DP is required; and if so will allow them to develop the most efficient and cost effective DP.

The NRC reviewed the Navy's request for completing decommissioning activities at SPAWARS by March 30, 2028 under 10 CFR 30.36(i). The NRC has determined that the Navy's request to complete decommissioning by March 30, 2028 is appropriate and warranted. In this regard, the NRC considered the five factors delineated in 10 CFR 30.36(i) as follows:

- (1) Based on previous remediation activities at the site, most recently in 2011, the NRC staff believes it will be technically feasible to complete decommissioning within the allotted 24-month period once activities begin at SPAWARS. Similar activities and efforts are expected should additional areas be found to need remediation.
- (2) All waste at the site, as well as radioactive materials to be disposed of, is packaged for transport and awaiting shipment. Minimal waste is expected to be generated from any future decommissioning activities that may be needed to support termination of SPAWARS's permit.
- (3) Wastes generated for disposal from previous remediation activities at SPAWARS did not contain short-lived radionuclides, and none are expected as a result of anticipated future

decommissioning activities. Therefore, volume reduction benefits that would be achieved by allowing short-lived radionuclides to decay are not a consideration.

- (4) Wastes generated for disposal from previous remediation activities at SPAWARS did not contain short-lived radionuclides, and none are expected as a result of anticipated future decommissioning activities. Therefore, reduction in radiation exposure to workers is not a consideration.
- (5) A site specific factor that the NRC considered as part of its review is the need for an HRA to be completed at SPAWARS to adequately determine if any further decontamination activities are needed. In performing the HRA, the Navy will assemble all documents related to licensed activities at SPAWARS, including previous decommissioning activities. If no further work is required, this information can be used by the Navy to demonstrate that SPAWARS is suitable for unrestricted release, if it is found to contain sufficient detail and analytical data to support site release. However, as outlined by the Navy, DOD's process for decommissioning a facility or site limits the Navy's ability to start and complete decommissioning within the timeframe established in NRC's regulations.

CONCLUSION

Based on the considerations discussed above, the NRC staff concludes that there is reasonable assurance that the health and safety of the public will not be endangered by the Navy's requests for alternative schedules for initiating decommissioning activities, submittal of a DP, and completion of decommissioning activities. The staff further concludes that it is in the public interest to grant the extension of time to start decommissioning in order to allow the Navy to complete the HRA for SPAWARS. The NRC has determined it is acceptable to amend the Navy's MML to allow for the delay in the initiation of decommissioning activities and allow for the completion by March 30, 2028, at SPAWARS.

REFERENCES

- A. NUREG-1757, Volume 3, (Revision 1), "Consolidated Decommissioning Guidance – Financial Assurance, Recordkeeping, and Timeliness"
- B. Division of Waste Management and Environmental Protection, Decommissioning & Uranium Recovery Licensing Directorate, Instructions/Procedures
- C. 10 CFR 30.36
- D. Navy to NRC email dated July 12, 2011 (ML111990530)
- E. NRC Form 591M Part 3 dated December 13-14, 2012 (ML13002A190)
- F. NRC Inspection Report No. 03029462/2013001, Department of the Navy Biennial Inspection and Notice of Violation (ML13101A109)
- G. Navy letter dated April 15, 2013, "Request For Alternate Decommissioning Schedule And Historical Assessment Activities For Naval Radioactive Materials Permit (NRMP) 04-66001-E1NP) (ML13121A499)
- H. NRC Letter dated May 22, 2013 "Department of the Navy, Request for Alternate Decommissioning Schedule, Control No. 580530" (ML13142A240)
- I. Navy Letter dated August 7, 2013, "Request for Alternate Schedule of Decommissioning at Space and Naval Warfare Systems Center Pacific" (ML13249A300)
- J. NRC Letter dated January 14, 2014, "Department of the Navy, Acknowledgement of Request for Alternate Schedule for Submission of a Decommissioning Plan for the Space and Naval Warfare Systems Centers Pacific, Control No. 581662" (ML14028A515)

- K. Federal Register on March 18, 2014 [Vol. 79, No. 52, pp 15159-15162], Request for alternate decommissioning schedule; opportunity to comment, request a hearing, and petition for leave to intervene.”
- L. NRC letter dated June 18, 2014, “Department of the Navy, Request for Additional Information Concerning request for Alternate Decommissioning Schedule, Control No. 581662 (ML14171A586)
- M. Navy letter dated July 17, 2014 “Request For Additional Information Concerning Request For Alternate Decommissioning Schedule, Control No. 581663” (ML14219A376)
- N. Navy letter dated October 20, 2014 “Request For Alternate Decommissioning Schedule, For Submittal Of A Decommissioning Plan, Control Number 581663” (ML14303A519)
- O. Navy Letter dated April 10, 2015, “Request for Information Concerning Space and Naval Warfare Systems Center Pacific) (ML15244B307)
- P. NRC Inspection Report No. 03029462/2015003, Department of the Navy Biennial Inspection (ML15154A481)

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