UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

April 9, 2019

Nora Macariola-See
Naval Facilities Engineering Command Pacific
258 Makalapa Drive, Suite 100
Pearl Harbor, Hawaii 96860-3134

Subject: Mariana Islands Training and Testing (MITT) Draft Supplemental Environmental Impact Statement (SEIS), Mariana Islands (EIS No. 20180335)

Dear Ms. Macariola-See:

The U.S. Environmental Protection Agency (EPA) has reviewed the subject Draft Supplemental Environmental Impact Statement (DEIS) pursuant to the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500-1508), and our NEPA review authority under Section 309 of the Clean Air Act.

EPA provided comments on the 2015 Mariana Islands Training and Testing (MITT) Final Environmental Impact Statement on June 18, 2015. We noted the large increase in explosive munitions proposed for use on Farallon de Medinilla (FDM), which had the potential to greatly increase erosion and sedimentation impacts to the surrounding coral reefs[1]. This supplement to the 2015 MITT Final EIS considers ongoing and future activities conducted at sea and on FDM, incorporating new information and updated training and testing requirements for these locations.

The actions proposed in this draft Supplemental EIS (DSEIS) would result in a further increase, beyond increases already proposed in the 2015 MITT Final EIS, of munitions use at FDM. The DSEIS states that proposed increases in munition use include increases of Naval Surface Fire Support Exercise Land-based Targets from 1,000 to 4,200 annually; an increase in Missile Exercises from 85 explosive missiles to 115; and increases of explosive grenades/mortars for Direct Action from 600 to 1,000. The DSEIS states that ordnance increases on FDM would be less than 1 percent over the 2015 levels analyzed, and that there is no appreciable change on the impact conclusions presented in the 2015 MITT Final EIS, which concluded coral fauna around FDM was healthy and robust.

Clarify most recent dive survey
In our comments on the 2015 MITT Final EIS, we commented on using observations of existing coral health as a predicter of future impacts from the large increase in munitions proposed, and noted that the 2012 dive survey, which identified a coral barnacle infestation, concluded that such an infestation could indicate the corals are "highly impacted by other stressors". We also recommended the Navy commit to annual dive surveys to continue to monitor the marine resources around FDM. We note that the most recent dive survey, conducted at FDM in September and October 2017, no longer detected the coral

[1] 2015 munitions increases included a three-fold increase in bombs (from 2,150 to 6,242), a 42% increase in annual explosive missile use (from 60 to 85), 2,000 explosive rockets not currently used, a 500% increase in explosive grenades and mortars (from 100 to 600), and a 1,348% increase small-caliber rounds (from 2,900 to 42,000).

barnacle infestation identified in 2012 but showed corals around FDM undergoing a severe bleaching event.[2] The DSEIS does not indicate whether the higher levels of munitions, approved in the July 2015 MITT Record of Decision, were immediately put into effect in subsequent training years. Therefore, it is not known whether the most recent dive surveys were performed after the large increases in munitions.

> ***Recommendation:*** EPA recommends that the FSEIS confirm whether or not the most recent dive surveys (September and October 2017) are reflective of the increases in munitions proposed in the 2015 MITT Final EIS.

Increase frequency of dive surveys to monitor coral health

While the survey associates the elevated water temperatures (heat stress) in the Marianas archipelago with bleaching events, the DSEIS acknowledges that the proposed action would also impact corals and other marine invertebrates (p. 3.8-16). It states that erosion as a result of training activities at FDM may contribute to deposition of soils into the nearshore areas of FDM, causing increased turbidity. Evidence of training-related erosion, such as ordnance skipping or eroding off of FDM, and rock and ordnance fragments blasted off of the island, were detected in every dive survey year (Vol 1, p. 3.1-4). The resulting turbidity can impact corals and invertebrate communities on hard-bottom areas by reducing the amount of light that reaches these organisms and by clogging siphons for filter-feeding organisms. Reef-building corals are sensitive to water clarity because they host symbiotic algae that require sunlight to live (Vol 2, p. 3.8-15-16). The DSEIS also notes that sedimentation, pollutants, or other stressors have been associated with bleaching of corals, with several studies suggesting a direct link between declining water quality from increased runoff and sedimentation and coral reef health and bleaching (Vol 2, p. 8). The DSEIS concludes, however, that the sedimentation that may result from military use of FDM is not sufficient to adversely impact water quality and coral communities (Vol 2, p. 3.8-17). This conclusion is not supported in the DSEIS and appears to be based on a summary of dive surveys from 1997 through 2012 (as discussed in Smith and Marx, 2016). Further, since the 2017 dive survey documented severe coral bleaching, it is possible that the incremental increases in erosion and sedimentation from increased military training contributes to the multiple stressors on corals.

> ***Recommendations:*** EPA continues to recommend monitoring/dive surveys more frequently than every 5 years to monitor the health of the resources possibly affected by the proposed project and to advance the science regarding the effects of multiple stressors on coral resources. Robust monitoring data is needed to help capture changes, such as bleaching and recovery/mortality episodes and changes in species composition[3], and to provide data to support whether the protective measures identified are sufficient. As the DSEIS indicates, "coral reef surveys provide an indication if the waters surrounding FDM (designated Class A) are degrading in quality, as evidenced by coral health" (Vol 1, p. 3.1-3).

Clarify how sediment and water quality impacts are assessed

The DSEIS states that explosives and explosives byproducts, metals, chemicals, and other materials expended during training and testing described in this SEIS would not exceed regulatory thresholds and

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[2] Carilli, Jessica et al. "Farallon De Medinilla 2017 Species Level Coral Reef Survey Report, August 2018

[3] For example, the 2017 dive report identifies a 2007 regional bleaching event which later showed signs of recovery, but notes that "It is possible that other bleaching events have occurred at FDM since the last 2012 survey, but these were unrecorded" (p. 39). It also references an apparent decrease in the frequency of two coral species compared to earlier surveys, which could reflect an actual decrease possibly due to prior bleaching event or natural turnover, or it could be attributable to different survey methodologies (p. 35).

guidelines established for measuring impacts on sediment and water quality; however, these thresholds and guidelines are not identified in the DSEIS.

> ***Recommendations:*** In the FSEIS, identify the specific regulatory thresholds and guidelines used to assess impacts to sediment and water quality.

Effective October 22, 2018, EPA no longer includes ratings in our comment letters. Information about this change and EPA's continued roles and responsibilities in the review of federal actions can be found on our website at: https://www.epa.gov/nepa/epa-review-process-under-section-309-clean-air-act.

EPA appreciates the opportunity to review this DEIS. When the FEIS is released for public review, please send one electronic copy to the address above (mail code: ENF-4-2). If you have any questions, please contact me at (415) 947-4161, or contact Karen Vitulano, the lead reviewer for this project, at 415-947-4178 or vitulano.karen@epa.gov.

Sincerely,

Connell Dunning

Connell Dunning, Acting Manager
Environmental Review Section

cc: Gerry Davis, National Marine Fisheries Service
Eli Cabrera, Administrator, CNMI Bureau of Environmental and Coastal Quality (BECQ)
Janice Castro, Director, Coastal Resources Management, BECQ
Rich Salas, Planner, BECQ
Kodep Uludong, Director, CNMI Office of Planning and Development
Erin Derrington, CNMI Office of Planning and Development