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Date: April 17, 2019

To: Naval Facilities Engineering Command Pacific
Attention: MITT Supplemental EIS/OEIS Project Manager
258 Makalapa Drive, Suite 100
Pearl Harbor, HI 96860-3134

From: Pamela Repp, Acting Superintendent
Marianas Trench Marine National Monument

Subject: MITT Supplemental EIS/OEIS

Dear Project Manager,

Thank you for allowing us the opportunity to comment on the 2019 Draft Mariana Islands Training and Testing (MITT) Supplemental Environmental Impact Statement/Overseas Environmental Impact Statement (EIS/OEIS). Please find our comments below.

U.S. Fish and Wildlife Service (FWS) Resources of Concern Relevant to the MITT DSEIS

The Marianas Trench Marine National Monument (the Monument) contains approximately 95,216 square miles of submerged lands and waters. The Monument includes three parts: the Islands Unit, the Mariana Arch of Fire National Wildlife Refuge (NWR), and the Mariana Trench National Wildlife Refuge. The Monument contains a unique hydrothermal vent system that supports a community of organisms that live in extremely hot and highly acidic waters, and rely on chemosynthesis instead of photosynthesis to survive. Within the Monument are threatened and endangered marine mammals, a high abundance of reef fish, over 300 species of corals, and threatened green and hawksbill sea turtles. Unlike other reefs across the Pacific, the northernmost Mariana reefs provide unique volcanic habitats that support marine biological communities requiring basalt. Maug Crater represents one of only a handful of places on Earth where photosynthetic and chemosynthetic communities of life are known to come together. These reefs and waters are among the most biologically diverse in the Western Pacific and include the greatest diversity of seamount and hydrothermal vent life yet discovered.

The Monument also includes numerous geological formations and chemical processes that are of scientific interest, and likely many that have yet to be discovered. The largest active mud volcanoes on Earth are located in the Arch of Fire NWR. The Champagne vent, located at the Eifuku submarine volcano, produces almost pure liquid carbon dioxide, one of only two known sites in the world. The world's only known pool of liquid sulfur is located at the Daikoku submarine volcano. The only other known location of molten sulfur is on Io, one of Jupiter's moons.

General Comment
There was no mention made of the hydrothermal vents or the hydrothermal vent communities in the EIS/OEIS. Details should be provided on the location of these areas, their unique geological and chemical processes, and the

marine life associated with these features, as well as the expected impacts of military operations and training on these unique features and biological communities.

Environmental Effects, Marine Habitats

The EIS/OEIS should recognize the unique nature of the hydrothermal vent community and the impacts that military operations can have on the unique marine habitat surrounding these vents. Use of explosives, vessels and in-water devices, military expended materials and seafloor devices associated with training and testing activities could have a significant impact on this unique marine habitat that is found only in this region.

The statement "military expended materials could be colonized by benthic organisms" needs to be clarified and supported. Surveys of deep-sea regions have shown that military expended materials can last a long time with little colonization by benthic organisms. The discovery of a World War II B-29 Super fortress in the Monument is one example of how military hardware can survive in the deep ocean for decades. Further, explanation is needed to detail the impacts of expended material in the deep-sea environment, the length of time they survive in deep ocean environments, the settlement rates of benthic organisms on various materials, and the impact they have on deep-sea marine habitats and species.

Environmental Effects, Marine Invertebrates

The EIS/OEIS should recognize the unique nature of the hydrothermal vent community and the impacts that military operations can have on the rare invertebrate life surrounding the vents. Use of explosives, vessels and in-water devices, military expended materials and seafloor devices, associated with training and testing activities could have a significant impact on these species as they are unique populations and subpopulations found only in this region.

Figure 2.1-1: Mariana Islands Training and Testing Study Area should be amended to include the Marianas Trench Marine National Monument.

Marine Debris

Military expended materials including explosives, seafloor devices, cables, wires, and decelerators/parachutes can cause damage to benthic marine life and can harm geological features such as vents and mud volcanoes. The impact of this debris on deep-sea communities, especially those associated with hydrothermal vents, is currently unknown and therefore should be avoided.

Summary

Given the purposes for which the Monument was established, the Service recommends that military training activities avoid significant impacts to habitat and marine life in the Monument. This area is a key area of biological importance to multiple species of deep-sea marine life, including hydrothermal vent associated organisms. Limiting activities in this area, especially activities that result in benthic military debris, will avoid affecting these communities and the unique benthic processes to which they are dependent.

Thank you for the opportunity to comment on the EIS/OEIS. If you have further questions, please contact Tammy Summers at (671) 355-5096.

Sincerely,

Pamela Repp

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