

**DEPARTMENT OF DEFENSE
DEPARTMENT OF THE NAVY**

**FINDING OF NO SIGNIFICANT IMPACT (FONSI) FOR PACIFIC MISSILE
RANGE FACILITY INTERCEPT TEST SUPPORT ENVIRONMENTAL
ASSESSMENT/OVERSEAS ENVIRONMENTAL ASSESSMENT AT THE
PACIFIC MISSILE RANGE FACILITY, KAUAI, HAWAII**

Pursuant to the Council on Environmental Quality regulations (40 Code of Federal Regulations (CFR) Parts 1500-1508); Department of the Navy Procedures for Implementing the National Environmental Policy Act (32 CFR § 775); and Executive Order 12114, Environmental Effects Abroad of Major Federal Actions, the U.S. Navy has prepared an Environmental Assessment/Overseas Environmental Assessment (EA/OEA) to evaluate and disclose the environmental consequences of updating the capabilities of the Pacific Missile Range Facility (PMRF), Kauai, HI to support future tests of Ballistic Missile Defense (BMD) intercept technologies.

Purpose and Need: The Navy's purpose for the Proposed Action is to provide PMRF with the enhanced capability to further test and evaluate Department of Defense (DoD) and Navy BMD systems, as well as train personnel in the use of these systems.

More specifically, the purpose of the Proposed Action is to:

- Enhance PMRF's range capability and support facilities in order to support future requirements of testing existing and new BMD programs at PMRF
- Evaluate airspace needed to accommodate more complex intercept engagement scenarios for missile defense test programs
- Upgrade base activities and facilities to support future fleet training, land-based training, research, development, test, and evaluation (RDT&E) activities, and base operations and maintenance activities as required
- Provide additional capabilities to ensure safe conduct and evaluation of training and RDT&E missions in a modern, multi-threat, multi-dimensional environment, for future programs, which would continue as fully integrated range services, at PMRF

The ability to provide complex missile defense testing scenarios is a major concern and goal of the U.S. Navy. Therefore, the implementation of the Proposed Action is needed because missile defense tests are becoming increasingly more complicated with multiple engagements, longer time of flight, intercepts at higher altitudes, and increased closing velocities.

The enhancements at PMRF are needed to evaluate the operational effectiveness of BMD systems in a simulated hostile environment. Targets which simulate the characteristics of incoming hostile missiles are required. PMRF is a DoD Major Range and Test Facility Base and as such supports the full spectrum of DoD Test and Evaluation requirements,

such as RDT&E programs developed by the DoD (Navy, Army) and the Missile Defense Agency (MDA). To be effective, future testing and engagement scenarios will need to be conducted in a more realistic fashion. PMRF needs these additional enhancements to deliver quality data products to improve the customers' abilities to achieve readiness and other national defense objectives.

Proposed Action: The Proposed Action for this EA/OEA is to further enhance the intercept capabilities of missile defense tests at PMRF. The Proposed Action would support and maintain future DoD (Navy, Army), MDA, and other potential customers' RDT&E activities, and associated range capabilities (including hardware and infrastructure improvements).

The Proposed Action would also include testing interceptor missile systems such as the Aegis Ashore Missile Defense program, which will adapt the Aegis Standard Missile and AN/SPY-1 Radar for land-based operations. These programs would involve the placement of additional land-based systems at PMRF, including required missile launchers, radars, and support facilities. PMRF identified sites available for use by new programs such as Aegis Ashore Missile Defense Program. The MDA's siting process narrowed the potential sites for their use to the following:

- Launch Site (The interceptor launch area could be constructed on PMRF/Main Base at one of the three following sites on northern PMRF):
 - Aegis site,
 - Exoatmospheric Discrimination Experiment (EDX) site, or
 - Kauai Test Facility Pad 1
- Aegis Ashore Test Center (AN/SPY-1 Radar, Administrative Support Building, Launch Control Center, and support facilities at one of the following sites):
 - Adjacent to the Calibration Laboratory (east side) or
 - Adjacent to the Hawaii Air National Guard (HIANG) (south side)
- BMD System Communications Support Complex at one of the following sites
 - South of the proposed Aegis Ashore Test Center at the HIANG PMRF site or
 - Golf Site south of the Terminal High Altitude Area Defense (THAAD) radar pads
- Administrative Support Building at the THAAD administrative area on central PMRF

Under the Proposed Action, existing range and land-based operations and training, and the ongoing maintenance of the technical and logistical facilities, would continue. In this context, increased flexibility in missile defense tests would represent a small incremental change in ongoing activities. The ground hazard areas for these tests activities would continue to be located within the confines of the current Restrictive Easement lease. Use of the Restrictive Easement area would be limited to the current 30 closures per year.

Existing Conditions: The PMRF range is located in Hawaii on and off the western shores of the island of Kauai and includes broad ocean areas to the north, south, and west. The relative isolation of PMRF, a year-round tropical climate, and an open ocean area relatively free of human interference are significant factors in PMRF's excellent record of safely conducting training and testing activities. The Navy's Aegis BMD System onboard US Navy ships has been successfully tested at PMRF for several years. PMRF has a mission to provide training for Navy and other DoD personnel using existing equipment and technologies for real-world requirements to maintain and achieve required states of readiness. PMRF also has a mission to support RDT&E programs developed by the DoD (Navy, Army), and the MDA. PMRF is the world's largest instrumented, multi-environment, military test range capable of supporting subsurface, surface, air, and space operations.

PMRF consists of 1,100 square nautical miles of instrumented underwater ranges, 42,000 square nautical miles of controlled airspace, and a Temporary Operating Area (TOA) covering 2.1 million square nautical miles of ocean area. Due to the range and speed of weapons and missiles, this large area is required to contain debris and expended materials from test missions. The TOA was established to support missile defense testing and extends primarily north and west of Kauai.

For safety purposes during missile defense testing, PMRF requests altitude reservations for airspace from the Federal Aviation Administration (FAA) through the Central Altitude Reservation Function (CARF). The FAA reviews the request, and if approved, will issue Notices to Airmen (NOTAMs) to prevent aircraft from flying into specific areas of airspace until testing is complete.

Alternative Analyzed: In addition to the Proposed Action, the EA/OEA analyzes the No-action Alternative. The No-action Alternative for this EA/OEA is a continuation of current and previously analyzed and approved activities. The No-action Alternative is the combination of the programs and actions analyzed in the 2008 Final Hawaii Range Complex Environmental Impact Statement (EIS)/Overseas EIS and any additional PMRF programs analyzed since April 2008, as they relate to BMD and other DOD test systems, sensors, and facilities. If this alternative is selected, PMRF would continue existing range training and operation activities, and base operations and maintenance activities.

Environmental Effects: No significant impacts to the natural and human environment from the Proposed Action would be expected. Minor impacts expected at any launch, test center, and BMD System Communications Support Complex location proposed for construction would include vegetation removal, soil disturbance, a potential for increased stormwater runoff, increased short term noise during construction and operation, and utility relocations and extensions. Best management practices would be employed to reduce any potential adverse impacts. Hazardous materials and waste would continue to be handled in accordance with existing guidelines. There would be a beneficial impact on the economy of Kauai.

Air Quality: The nature of the Proposed Action—small construction projects with no significant ongoing air emissions since Kauai is in attainment—does not warrant a

lengthy discussion of climate change. The use of new generators was estimated to produce 2,395 tons/year of carbon dioxide equivalent greenhouse gas (GHG), which does not represent “meaningful” GHG emissions according to Council on Environmental Quality draft National Environmental Policy Act guidance. MDA is commissioning a power study to determine whether existing power at PMRF will support its future test requirements. The results of the study will not be available for several months. Consequently, details of any future power requirements are not currently known. If necessary, additional environmental analysis will be performed to support future decisions regarding power enhancements. Furthermore, the potential rerouting of aircraft 1 to 4 times per year for a 2 hour period to avoid airspace required by NOTAMs does not result in significant increase in overall emissions in the area compared to normal air traffic emissions.

Airspace: A limited number of small, lightweight fragments resulting from some missile intercepts could potentially drift beyond current PMRF controlled areas. Intercepts at higher altitudes would not necessarily generate more debris fragments, but the greater altitude would cause the small, lightweight fragments to be dispersed over a larger area, including land areas. The pattern of the fragments could result in effects to all or parts of the airspace over Kauai, Niihau, Northwestern Hawaiian Islands, over the open ocean between individual islands, or over part of the channel between Kauai and Oahu depending on the actual test parameters. As discussed further below, the only potential, unmitigated, effect of wider dispersal of such small fragments would be the possibility of intake into aircraft engines. Otherwise, these particles would pose no risk of harm to humans, animals or property on land or water.

PMRF would notify the FAA that a test is being planned that could temporarily affect airspace and would submit detailed requirements defining the specific area. The FAA would review the request and advise regarding windows of opportunity for the testing in order to minimize or avoid effects. These windows would determine whether the test could be performed, since a minimum of 2 hours (includes launch, intercept, and fragment settlement) of time would be required for a test. If windows of opportunity can be identified, PMRF would then request altitude reservations from the FAA through the CARF. If the request is approved, the FAA would issue NOTAMs defining the requested temporary airspace. Each individual test is coordinated with FAA prior to an altitude reservation being requested. For any missile test which could affect airspace over Lihue airport which in turn may affect Medevac or other emergency flights, specific procedures will be developed in coordination with the FAA to address these special considerations.

Biological Resources: The Navy is consulting with the U.S. Fish and Wildlife Service (USF&WS) under section 7 of the Endangered Species Act on proposed actions associated with this update of range capability at PMRF. The design for the Aegis Ashore Missile Defense construction will incorporate the outcome of the consultation for seabirds and the resulting measures and conditions would become Standard Operating Procedures to which new construction would be subject. As part of this understanding, Aegis-related activities that have the potential to affect listed species will not be allowed to occur until after conclusion of the consultation for seabirds, which includes impacts from base lighting to listed nocturnal birds.

The Navy will prepare a Hazard Analysis and Critical Control Point Plan that will address viable endangered species concerns such as the introduction of invasive species applicable to the Proposed Action. The Aegis Ashore sites will be monitored during and after the construction phase to detect the introduction and prevent the local establishment of unwanted weeds. Surveys to determine the presence of Hawaiian hoary bats will be conducted on PMRF.

Based on prior analyses, such as those for the THAAD interceptor program, the potential to affect wildlife or vegetation or introduce even a small amount of test-related contaminants from debris to the Papahānaumokuākea Marine National Monument (Monument) islands is highly remote.

Cultural Resources: If the proposed EDX site is selected as the launch area, the adjacent dunes would be avoided to the maximum extent practicable to minimize the potential for impacts to cultural resources. The Hawaii State Historic Preservation Division has concurred with the Navy's determination of no adverse effects.

Land Use: The Hawaii Department of Business, Economic Development & Tourism Office of Planning has concurred with the Navy's determination that the activity is consistent to the maximum extent practicable with the enforceable policies of the Hawaii Coastal Zone Management (CZM) Program. Conditions put forth in the EA/OEA regarding sites selected for use, a maximum of four high altitude, launches per year, and continuation of no more than 30 closures of the existing Restricted Easement per year must be followed to achieve this concurrence. Should additional information become available indicating that the small fragments expected as a result of successful high altitude intercepts may have an effect on coastal resources and uses, or that particles are detectable at levels greater than anticipated, mitigations shall be developed and submitted to the Hawaii CZM Program for review.

Health and Safety: Implementation of Standard Operating Procedures would ensure that impacts to human health and safety from construction and operation of the Aegis Ashore Missile Defense program would be negligible. Best management practices would be employed to reduce any potential adverse impacts. The small fragments from missile intercepts that could potentially drift beyond current PMRF controlled areas would not be harmful to people on the ground. Coordination with the FAA and issuance of NOTAMs through the CARF process will reduce the potential for safety impacts to aircraft and the flying public. PMRF would continue to ensure the protection of the public from any intercept or other missile debris through the application of established standard range safety procedures and risk standards, including Range Commanders Council (RCC) Standard 321, *Common Risk Criteria Standards for National Test Ranges, Subtitle: Inert Debris*. The RCC Standards are guidelines that provide definitive and quantifiable measures to protect mission-essential personnel and the general public. These guidelines also address flight safety hazards (including inert debris) and consequences potentially generated by range operations.

Water Resources: The Proposed Action would not significantly affect water resources. All of the proposed launch sites are located in the 100-year flood plain generated by

potential tsunamis. The proposed building components to be constructed would be elevated to promote positive drainage away from these project components, but would not be elevated to place them above the expected flood elevation. Consistent with the provisions of Executive Order 11988, Floodplain Management, the Navy has determined that there is no practicable alternative to locating the proposed launch-related structures within the 100-year floodplain. There is no non-floodplain launch site available that can efficiently use the existing infrastructure of PMRF as well as meet the operational requirements necessary for the Proposed Action.

Finding: Based on the analysis presented in the EA/OEA and coordination with the FAA, Hawaii State Historic Office, CZM Program, National Marine Fisheries Service, and the USF&WS, the Navy finds that implementation of the Proposed Action would not significantly impact the quality of the human or natural environment.

The Aegis Ashore Missile Defense program could select a combination of sites from the locations chosen during its siting process for construction and installation of the proposed radar and launch facilities. Other interceptor or target programs whose operating parameters are within those analyzed in this EA/OEA could be sited at any of the sites identified by PMRF.

The EA/OEA prepared by the Navy addressing this action is on file, and interested parties may obtain a copy from:

Public Affairs Officer
Pacific Missile Range Facility
P.O. Box 128
Kekaha, Kauai, Hawaii 96752-0128

8/26/10

Date

Keggy

Rear Admiral Katherine L. Gregory