

Department of Defense
Department of the Navy
Naval Sea Systems Command

Pursuant to section 102(2)(c) of the National Environmental Policy Act (NEPA) of 1969 and the Council of Environmental Quality Regulations (40 CFR 1500-1508) implementing the procedural provisions of NEPA, the Program Executive Office Integrated Warfare Systems (PEO IWS), of the Department of the Navy (DON) gives notice that an Environmental Assessment (EA) has been prepared for the proposed construction and operation of the Advanced Radar Detection Laboratory (ARDEL) at Pacific Missile Range Facility (PMRF), Barking Sands, Kauai, Hawaii, by PEO IWS 2.0. The document was available for public review and comment for 30 days (25 July 2009 - 25 August 2009). An electronic copy of the document was available for download at <http://govsupport.us/navynepahawaii/hawaiiirceis.aspx> and a hard copy of the document was available for public review at the Waimea Public Library at 9750 Kaunualii Highway, Waimea (Kauai), HI 96796 during normal business hours. Written comments for the EA were to be submitted via email at ardelpmrf@bah.com and via mail to ARDEL Environmental Assessment, C/O Director, Office of Corporate Communications Commander Naval Sea Systems Command, 1333 Isaac Hull Avenue, Washington DC 20376 (Office phone: 202-781-4123) until 27 August 2009. There were no comments received. Based on the analyses contained in the EA, the Navy finds that the proposed construction and operation by PEO IWS 2.0 will not significantly affect the human environment; therefore, preparation of an Environmental Impact Statement (EIS) is not required for the Proposed Action.

The Proposed Action supports PEO IWS 2.0's research, development, test and evaluation (RDT&E) mission. The facility would be used to test and evaluate new sensor systems planned for the next generation of US Navy Surface Ships. The proposed ARDEL facility would consist of: a 75 ft (22.8 m) tall radar antenna structure; a 39 ft tall two story, 16,149 ft² (1,500 m²) support building; four 2,825 equivalent kilowatts (ekW) diesel engine generators complying with Tier 4 requirements; two 20,000 gal (75,708 L) fuel tanks; two 44,000 gal (166,588 L) water tanks; and a fire pump house. The total construction footprint/limit of disturbance would be approximately 46,000 ft² (4,274 m²). Construction of the proposed ARDEL facility is projected to start in Fiscal Year (FY) 2010, and be completed in Fiscal Year 2011, allowing ARDEL operations to commence in Fiscal Year 2012.

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The site is 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, PEO IWS 2.0 has determined that there is no practicable alternative to locating the proposed structure within the 100-year floodplain. Because both alternative sites are located within a designated 100-year floodplain, there is no non-floodplain site available that can efficiently utilize the existing infrastructure of PMRF as well as meet the operational requirements necessary for simulated at-sea testing. PEO IWS 2.0 will continue to coordinate with the County of Kauai and the State of Hawaii in order to ensure compliance with floodplain development requirements.

Two at-sea options and three land-based locations were analyzed to determine if they met the specific project requirements. The two at-sea options were: (1) a Military Aviation Training System Squadron type barge, and (2) other at-sea testing on another vessel such as a Self Defense Test Ship. The three land-based locations considered were: Wallops Island, Virginia; San Nicholas Island, California; and PMRF Barking Sands, Kauai, Hawaii. The analysis determined that PMRF Barking Sands, Kauai, Hawaii was the only alternative of the at-sea options and land-based locations that could provide integrated range services in a modern, multi-threat, multi-dimensional environment that ensures the safe conduct and evaluation of training and test and evaluation missions. Two land based PMRF alternatives for the Proposed Action were assessed in the EA along with the no action alternative. The alternatives considered two sites, the Calibration Laboratory Site (Site one or the "Preferred Alternative") and the Triangle Site (Site two). Both sites are in the northwest section of PMRF Barking Sands, close to each other, and less than a quarter mile from the shoreline. Both sites are environmentally suitable. The Navy will implement the Preferred Alternative.

The EA assessed potential impacts to the marine and terrestrial environments associated with Alternatives One and Two and the no action alternative. The following describes the determination of no significant impact for each resource area evaluated:

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- Land Use: The PMRF Comprehensive Land Use Management Plan (CLUMP) provides a detailed description of the land use of PMRF, and the use of Alternative One is consistent with the approved PMRF CLUMP.
- Topography, Geology, and Soils: Standard operating procedures for construction within PMRF will be employed, and all potential run-off or siltation will be mitigated. Soil disturbance will be temporary and limited to the immediate vicinity of the construction area. The only impact on soils will be the discharge of wastewater into a septic tank and leaching field when the facility is operational.
- Vegetation: The Proposed Action will not impact vegetation. Ruderal weedy vegetation characterizes both proposed alternative construction sites. The most abundant types of plants are non-native, low grasses forming either clumps or dense mats, depending on the species. Neither considered site contains prominent stands of pristine or native vegetation. Some forested and shrub vegetation types that have been reduced to low stumps are found at the margins of the two sites. Because any landscaping conducted would use native plants, the Proposed Action would not have a significant impact on the vegetation.
- Coastal Zone Management: The Proposed Action will not impact coastal resources. On 4 May 2009, the Office of Planning of the Department of Business, Economic Development and Tourism of the State of Hawaii concurred with the Navy determination that the Proposed Action is consistent to the maximum extent practicable with the enforceable policies of the Hawaii Coastal Zone Management Program.
- Air Quality: The proposed site for the ARDEL facility is in attainment for the criteria pollutants and therefore, no conformity determination is required for the Proposed Action. PMRF staff will comply with air permitting requirements for the diesel generators. These state-of-the-art generators will be EPA certified to conform to Tier 4 (Particulate Matter .07 to .1 PPM) non-road emissions regulations for compression ignition-internal combustion engines that will be in effect in 2011. Additionally, these diesel generators will be leased to the Navy and

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eligible for change out as significant fuel efficiency and emission standards are improved by the manufacturer.

- **Socioeconomic:** The construction process and movement of construction equipment may cause minor temporary diversion of access and suspension of some activities in the PMRF area. The operation of the ARDEL facility will create six new permanent jobs, and during testing the staff could be temporarily augmented to 40 personnel. These additional, permanent and temporary personnel would provide a positive economic gain to the community.
- **Cultural Resources and Archaeological Sites:** The Proposed Action will not have significant impacts to cultural resources and archaeological sites. On 19 May 2009, the Department of Land and Natural Resources of the State of Hawaii completed a review of the Proposed Action under Section 106 of National Historic Preservation Act. The review resulted in a finding of "an adverse effect" to historic properties and a request to conduct data recovery. However, the review also concurred with the Navy's determination of "no adverse effect to historic properties" because the Navy will conduct data recovery prior to construction of the ARDEL facility.
- **Recreational and Commercial Fishing:** The construction and operation of the ARDEL facility would be limited to land activities, and no non-point source or point source discharges are expected from construction activities that could impact maritime recreational or commercial fishing activities. With respect to operation of the facility, the calculated controlled environment distance for the ARDEL facility is 127 ft (38.7 m) and the uncontrolled environment separation distance is 284 ft (86.6 m). These do not reach the marine environment where recreational and commercial fishing activities are conducted. Therefore, the construction and operation of the ARDEL facility would not impact recreational and commercial fishing. No other activities beyond the normal type of activities that occur at PMRF would be required for the specific purpose of testing the advanced radar technologies and associated operation of the ARDEL facility.
- **Recreation and Access:** Temporary delays on roads in the vicinity of PMRF may occur during construction. Services

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for on-base recreational activities will remain at the current status during construction activities. Test and evaluation of the sensor technologies would include the use of targets of opportunity on the PMRF range. These targets are vehicles used for other test and evaluation or training purposes that provide the ARDEL with additional tracking and evaluation opportunities. The ARDEL will use targets of opportunity from existing operations. No other activities beyond the normal type of activities that occur at PMRF would be required for the specific purpose of testing the sensor technologies and associated operation of the ARDEL facility.

- **Utilities and Aesthetics:** ARDEL will provide power to the Sensor Systems through four leased diesel generators. The ARDEL facility would have six permanent staff that could be augmented to the projected peak number of 40 persons during testing. The facility will be a neutral color blending in with the PMRF surroundings.
- **Health and Safety:** In accordance with DoD Anti-Terrorism/Force Protection and standard Navy practices safety practices, the action proponent will install colored lights that indicate radar operation, construct a perimeter security fence, install exterior closed circuit television cameras, and post hazard warning signs as appropriate to deter and prevent trespassing.
- **Fauna:** The Proposed Action may have temporary effects to fauna local to the PMRF area. Not including endangered or threatened species, the local fauna that may occur on or adjacent to PMRF Barking Sands includes three non-native species of reptiles, various resident and migratory birds, and feral mammals (e.g., rats and cats). No significant bird feeding or rookery areas exist within the vicinity of the Proposed Action. Because of the scanning operation of the sensor technologies, it is expected that birds flying within the area may be exposed to radio frequency (RF) emission for periods significantly shorter than the established six-minute average exposures limits. Therefore, it is not expected that the operation of the sensor technologies will have an impact on the residents or migratory birds. In accordance with existing requirements, PMRF will continue to control the populations of feral mammals. Therefore, any effect on feral mammals that may occur from the Proposed Action would not negatively affect the local fauna.

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- **Endangered and Threatened Species:** Twelve federally listed endangered or threatened terrestrial species may occur on or adjacent to PMRF Barking Sands. Seven marine species that are federally and State listed as threatened or endangered occur in the waters adjacent to PMRF area. The Navy conducted informal consultation with the United States Fish and Wildlife Service (USFWS) under Section 7 of the Endangered Species Act (ESA). Regarding marine species, informal consultation with the National Marine Fisheries Service was not necessary as it was determined that no effects will occur from the Proposed Action because all impacts would be limited to the terrestrial environment. PEO IWS 2.0 concurs with USFWS recommendation to not encourage the growth of vegetation that would attract the Nene or Hawaiian Goose. Additionally, ARDEL personnel would be advised that bats may be in the area prior to radar operation and to report anecdotal observations, especially if related to periods when the radar is powered up. On 25 June 2009, USFWS concurred with the Navy's determination that the Proposed Action may affect, but is not likely to adversely affect, any threatened or endangered federally listed species or their critical habitats.

The following mitigation or protective measures, developed in coordination with USFWS, will be employed during the construction and operation of the proposed ARDEL facility to minimize any impacts to threatened and endangered species.

- All exterior lights will be shielded as a best management practice in accordance with island-wide standards on Kauai.
- To avoid impacts to nesting or basking green sea turtles (threatened) and basking Hawaiian monk seals (endangered), no construction-related activities will occur on the beach.
- To minimize the occurrence of the Hawaiian goose at the PMRF, the use of vegetation like berry bushes to replace the non-native vegetation for landscaping during post-construction will be avoided.
- The area of impact from the S-Band and X-Band radar (284 ft arc from 155° to 70° clockwise from the radar tower) will be planted in short stature vegetation, covered with gravel, or left fallow. In order to avoid attracting other native animal species such as the wedge-tailed shearwater (*Puffinus pacificus*), if vegetation is planted, native beach strand vegetation will not be selected.

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- Vegetation in the area will be kept short (less than 4 inches) to facilitate visual observation of a Hawaiian goose, if present in the area.
- During the rainy season, grass that may occur in the area will not be mowed to avoid encouraging use of the area by the Hawaiian goose.
- Vegetation will not be watered to avoid attraction of the Hawaiian goose to the area.
- Prior to testing and/or use of the ARDEL facility, personnel will visually survey for the Hawaiian goose within the area of impact either on foot, or by utilizing the facility's closed circuit television cameras.
- If a Hawaiian goose is present, operation will be delayed until it leaves of its own accord.
- Prior to operating the radar units at night time, personnel will visually survey for bats in the area of impact using either an Anabat™, or the closed circuit television cameras.
- If one or more bats are present in the area of impact, RF emission will not begin until the bat(s) has left of its own accord.

The short-term, long-term, and cumulative impacts have been evaluated for construction and operation of the ARDEL facility at PMRF, Barking Sands, Kauai, Hawaii. Based on the studies performed and resources evaluated, it has been determined that implementation of the Proposed Action would have no significant impact on the human environment.

The EA and the FONSI prepared by the Navy addressing this action may be obtained from: ARDEL Environmental Assessment, C/O Director, Office of Corporate Communications Commander Naval Sea Systems Command, 1333 Isaac Hull Avenue, Washington DC 20376 (Office phone: 202-781-4123).


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SUMMARY

This notice announces the Navy's environmental findings on the construction and operation of the Advanced Radar Detection Laboratory (ARDEL). Construction is scheduled to begin in Fiscal Year (FY) 2009 and operation is scheduled to begin in FY 2012. The Proposed Action supports the Navy's research, development, test and evaluation mission. The ARDEL facility would be used to test and evaluate new sensor systems planned for the next generation of US Navy Surface Ships. Based on the analysis performed and resources evaluated in the ARDEL Environmental Assessment, the Navy has determined that, with the use of mitigation measures proposed by the United States Fish and Wildlife Service, the Department of Land and Natural Resources of the State of Hawaii and, the Office of Planning of the Department of Business, Economic Development and Tourism of the State of Hawaii, the proposed project will not have a significant impact on the human environment. Therefore, the preparation of an Environmental Impact Statement (EIS) is not required and the Navy is issuing this FONSI for the Proposed Action.

Public Availability

This FONSI will be mailed directly to interested parties, a notification of availability may be mailed to other potentially affected parties, and a summary of the FONSI will be placed in the "THE GARDEN ISLAND and HONOLULU ADVERTISER newspapers in Hawaii.

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