

## WAKE ISLAND SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT

**AGENCY:** Missile Defense Agency

**ACTION:** Finding of No Significant Impact

**BACKGROUND:** The Missile Defense Agency (MDA) prepared this Supplemental Environmental Assessment (SEA) to update the analysis of liquid propellant target (LPT) missile launches and supporting activities at Wake Island contained in the *Wake Island Launch Center (WILC) SEA* (U.S. Army Space and Missile Command, 1999) which is incorporated by reference, and serves as a planning tool to assist MDA in meeting its mission objectives. The WILC SEA analyzes launching up to 20 LPTs over a ten-year period. Radar use, flight tests, and missile intercepts were analyzed in the *Wake Island EA* (U.S. Army Space and Strategic Defense Command (USASSDC), 1994) and the *Supplemental Environmental Impact Statement for Proposed Actions at the U.S. Army Kwajalein Atoll* (USASSDC, 1993). Launching an interceptor missile from a ship to intercept target missiles was analyzed in the *Pacific Missile Range Facility Enhanced Capability Environmental Impact Statement (EIS)*, December 1998. The location and use of mobile sensors was analyzed in the *Mobile Sensors Environmental Assessment* (MDA, 2005), the *Final Airborne Laser Supplemental Environmental Impact Statement* (June 2003), the *Ground Based Midcourse Extended Test Range Environmental Impact Statement* (February 2003), and the *Pacific Missile Range Facility Enhanced Capability EIS* (December 1998). The above NEPA analyses are referenced and their impact determinations are summarized, as appropriate, in this SEA. For further reference, they are available on MDA's website at: <http://www.mda.mil/mdalink/html/enviro.html>.

This SEA was prepared in accordance with the National Environmental Policy Act (NEPA); the Council on Environmental Quality (CEQ) regulations that implement NEPA (Code of Federal Regulations [CFR], Title 40, Parts 1500-1508); Department of Defense (DoD) Instruction 4715.9 *Environmental Planning and Analysis*; applicable service regulations that implement these laws and regulations; and Executive Order (EO) 12114, *Environmental Effects Abroad of Major Federal Actions*.

After reviewing and analyzing currently available data and information on existing conditions, project impacts, and measures to mitigate those impacts, MDA has determined that the proposed action is not a Federal action that would significantly affect the quality of the human environment within the meaning of NEPA, as amended. Therefore, the preparation of an Environmental Impact Statement (EIS) is not required and MDA is issuing a Finding of No Significant Impact (FONSI). The MDA made this determination in accordance with all applicable environmental laws.

## **PURPOSE AND NEED**

The MDA has a requirement to develop, test, deploy, and prepare for decommissioning a Ballistic Missile Defense System (BMDS) to provide a defensive capability for the U.S., its deployed forces, friends, and allies from ballistic missile threats. The proposed action would allow MDA to consider and characterize a wider range of threat-representative targets, and conduct more realistic testing of missile defenses.

## **DESCRIPTION OF THE PROPOSED ACTION**

MDA proposes the following actions:

- Use of generic LPTs based on the LPT described in the WILC SEA.
- Construction of two new concrete pads in an existing fuel storage area on which liquid propellant storage containers or general supplies would be placed.
- Expansion of existing sensor suite to include additional air-, land-, and sea-based sensors.

## **ALTERNATIVES TO THE PROPOSED ACTION**

Two alternatives to the proposed action, including the no action alternative, were identified and considered in this SEA.

**Alternative 1** – Construction of two concrete storage pads and a concrete fueling pad on Wilkes Island.

**No Action Alternative** - MDA would not proceed with generic LPT missile testing activities. Flight test information for generic LPT missiles needed for the development of BMDS sensors, interceptors, and technology would not be collected from flight test activities at Wake Island. New concrete storage pads would not be constructed. Previously analyzed flight test activities involving LPT missiles fueled and launched from Wake Island, as documented in the WILC SEA and other applicable environmental documents, would continue as originally planned.

Specific future activities not analyzed in this SEA would need to be evaluated in subsequent NEPA analyses, as appropriate.

## **ENVIRONMENTAL EFFECTS**

### **Methodology**

Because the proposed action is narrowly focused, this SEA only provides analysis of potential changes to the proposed action discussed in the WILC SEA. Thirteen resource areas were initially considered to provide a context for understanding the potential effects of the proposed action and the severity of potential impacts. The resource areas initially considered include: air quality, airspace, biological resources, cultural resources, hazardous materials and hazardous waste, health and safety, infrastructure, land use, physical resources, noise, socioeconomics, transportation, and water resources. MDA determined that six of the thirteen resource areas remain essentially unchanged since the WILC SEA was completed or, as previously discussed, are unlikely to be affected by implementing the proposed action in this SEA.

- Airspace – The proposed changes do not alter previously assessed flight corridors or add more flight tests. No impact is anticipated.
- Infrastructure – Wake Island infrastructure was designed for a much larger population than is currently present or anticipated. The proposed action and alternatives would not require additional personnel or pressure on existing infrastructure. No impact is anticipated.
- Land Use – The proposed action and alternatives are consistent with current land use practices, policies, or controls for Wake Island. No impact is anticipated.
- Physical resources – The proposed construction activities would occur entirely within previously developed/disturbed land. No impact is anticipated.
- Socioeconomic – No additional personnel or changes to the local economy or demographics will result from the proposed action. No impact is anticipated.
- Water – The proposed action will not require increased water usage or cause any changes to ground, surface, or potable water on Wake Atoll. No impact is anticipated.

### **Environmental Effects**

This SEA discusses the following seven resource areas that have the potential for impact resulting from the proposed action: air quality, biological resources, cultural resources, hazardous materials/waste, health and safety, noise, and transportation. Cumulative impacts are those that result when impacts of an action are combined with the impacts of

past, present, and reasonably foreseeable future actions at a location. Cumulative impacts were considered for each resource area and each alternative. Exhibit 1 summarizes the environmental impacts associated with the Proposed Action, Alternative 1, No Action Alternative, and Cumulative Impacts by the seven resources areas.

**Exhibit 1: Summary of Environmental Impacts From the Proposed Action and Alternatives**

<b>Resource Area</b>	<b>Proposed Action</b>	<b>Alternative 1</b>	<b>No Action Alternative</b>	<b>Cumulative Impacts</b>
<b>Air Quality</b>	<p>A generic LPT maximum propellant budget of approximately 3,400 kilograms (7,500 pounds) kerosene-based fuel, 12,000 kilograms (26,450 pounds) inhibited red fuming nitric acid (IRFNA), and 120 kilograms (270 pounds) initiator fuel would result in expected carbon monoxide (CO) emissions of about 4,000 kilograms. The estimated maximum CO concentration for a 4,000-kilogram release would be 4.81 milligrams per cubic meter (mg/m<sup>3</sup>) approximately 3.0 kilometers (1.9 miles) from the point of release, well below the one hour and eight hour NAAQS. Significant impacts to air quality would not be expected.</p> <p>The number of missile fueling events would not increase as a result of the proposed action so no increase in emissions from missile fueling activities would be anticipated. The prevailing winds at Wake Island would quickly sweep away any pollutant emissions. Therefore, no impacts are anticipated.</p> <p>Construction of the concrete storage pads would be expected to take approximately one month. Emissions from construction activities, including equipment combustion emissions and particulate emissions due to soil disturbance, would be very limited due to the small scale and short duration of these proposed activities. Best management practices would be implemented to further reduce the potential for fugitive dust emissions. Construction activities would have a negligible impact on the local air quality.</p>	<p>Alternative 1 would produce slightly higher air emissions than the proposed action because one additional concrete storage pad would be constructed; emissions associated with propellant storage and fueling would be identical.</p>	<p>Emissions from on-going, routine activities associated with the power plant, motor vehicles, aircraft operations, fuel storage tanks, open burning of trash at the base landfill, and incinerator emissions would continue. Air emissions associated with previously analyzed solid and liquid propellant target missile launches from Wake Island would continue; however, these impacts were determined to be not significant.</p>	<p>Cumulative impacts to air quality resulting from the proposed action would be similar to those described in the No Action alternative. Emissions from on-going base support activities and infrequent solid- and liquid-propellant missile launches would continue to be generated but the easterly trade winds that dominate the island throughout the year sweep these emissions away and prevent any accumulation. No cumulative impacts resulting from the proposed action are anticipated.</p>

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<b>Biological Resources</b>	<p>There would be few, if any, impacts to coral reefs resulting from a normal launch of a generic LPT missile. The missile would quickly leave the vicinity of Wake Island and continue on a ballistic trajectory until it is intercepted or until it falls into the broad ocean area.</p> <p>There is little potential to disturb nesting habitat during the minor construction activities that would occur to accommodate continued LPT missile testing at Wake Island because the proposed sites for the storage facilities have been previously disturbed and are situated within the fuel storage area.</p> <p>Although Federally protected, endangered species and designated critical habitat are known to exist at Wake Island, no significant impacts to such resources would occur from implementation of the proposed action.</p>	<p>Potential biological impacts under Alternative 1 would be the same as those analyzed under the Proposed Action. In both instances, there would be only a minor and temporary effect on biological resources.</p>	<p>No potential for impacts from generic LPT launches and, consequently, no changes in potential biological effects from those already analyzed in the WILC SEA.</p>	<p>Potential impacts to biological resources resulting from generic LPT activities would be similar than those documented in previous analyses. Considering the relative infrequency of missile launches from Wake Island, no cumulative impacts to biological resources from generic LPT activities would be expected.</p> <p>MDA would mitigate potential impacts from emissions to birds by hazing the birds prior to a test event. MDA would use hazing methods approved by the U. S. Fish and Wildlife Service for temporarily moving the birds away from launch activities.</p>

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<b>Cultural Resources</b>	<p>The proposed action involves only minor construction, minor trenching, and minimal ground disturbing activities. These activities would not impact the historical resources of the site. The use of equipment and vehicles during concrete pad construction is expected to have no significant impact on the island’s cultural resources. This construction is limited in scope and would take place within the Wilkes Island fuel farm, a previously disturbed area. All personnel associated with construction and generic LPT test support activities would be briefed on procedures to follow in the unlikely event a cultural artifact was discovered.</p>	<p>Alternative 1 would have the same potential impacts as the proposed action.</p>	<p>Under the No Action alternative, no activities associated with generic LPT testing would take place. Impacts associated with previously documented missile testing and launching activities would continue. Those impacts were analyzed in previous documents and found to be not significant.</p>	<p>Construction activities associated with the proposed action would be short-term and confined to the Wilkes Island fuel farm area. Launch mishaps have a very low probability of occurrence. Appropriate SOPs would ensure safe mission support activities, no cumulative impacts to cultural resources would be expected.</p>
<b>Hazardous Materials / Waste</b>	<p>The potential increase in inhibited red-fuming nitric acid (IRFNA) at Wake Island would impact hazardous materials operations; however the implementation of hazardous material SOPs would help mitigate any potential adverse impacts. The small quantities of hazardous waste expected to be generated would not represent a significant increase in the amount of hazardous waste currently generated. No significant impacts from hazardous materials or wastes would be expected.</p> <p>All hazardous materials would be stored and handled in accordance with applicable laws and regulations. Any hazardous wastes generated would be shipped off the island for disposal through the current waste management system and in accordance with federal regulatory requirements.</p>	<p>Alternative 1 would have the same potential impacts as the proposed action.</p>	<p>No impacts from hazardous materials/wastes associated with activities supporting generic LPT fueling and launching would occur. Impacts associated with previously documented missile testing and launching activities would continue. Those impacts were analyzed in previous documents and found to be not significant.</p>	<p>The amount of hazardous materials used and/or hazardous wastes generated would be similar to that discussed in the WILC SEA. No new cumulative impacts from hazardous materials or hazardous waste would be expected.</p>

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<b>Health and Safety</b>	<p>No significant health and safety impacts would be expected to occur due to generic LPT activities at Wake Island. Concrete pad construction has the potential for construction-related accidents and injuries to the construction crew. A work site safety plan is required before any work project can begin to reduce potential risks to the health and safety of the construction crew. All employees would be notified of potential hazards associated with their work and they would be trained in proper use of any materials they would be handling. They would also be trained in the proper use of safety equipment and would conduct their activities in accordance with OSHA safety procedures and local guidance. Construction activities associated with the proposed action would be considered routine and no significant risks to health and safety would be anticipated. As a result, no significant impacts to health and safety would be expected due to construction activities.</p>	<p>Alternative 1 would have the same potential impacts to health and safety as the proposed action.</p>	<p>No impacts to health and safety associated with activities supporting generic LPT fueling and launching would occur. Impacts associated with previously documented missile testing and launching activities would continue. Those impacts were analyzed in previous documents and found to be not significant.</p>	<p>With appropriate worker training, SOPs, and oversight, no cumulative impacts to health and safety would be expected.</p>

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<b>Noise</b>	<p>Generic LPT noise levels would be expected to be the same as those used in the 1994 modeling: predicted maximum A-weighted sound pressure levels that would occur during a launch range from 120 decibels (dB) at the launch site to less than 100 dB on the western end of Wilkes and Peale Islands. These noise levels are not expected to adversely affect personnel at Wake Island since all personnel are excluded from the launch area and would be protected from any adverse noise impacts. Consequently, there would be no significant impacts from generic LPT launch noise.</p> <p>Noise associated with the construction of the concrete storage pads would result from the use of vehicles and equipment. With the high ambient noise levels from wind and surf, however, the additional noise generated by construction activities would be negligible.</p>	<p>Alternative 1 would have the same potential impacts from noise as the proposed action.</p>	<p>No impacts from noise associated with activities supporting generic LPT fueling and launching would occur. Impacts associated with previously documented missile testing and launching activities would continue. Those impacts were analyzed in previous documents and found to be not significant.</p>	<p>Noise resulting from construction activities would occur for about 30 days. Vehicles and equipment supporting the construction would be used for only a portion of the 30-day period and the noise level would not be significantly greater than ambient noise levels. No cumulative impacts from construction noise would be expected.</p>
<b>Transportation</b>	<p>The repaved runway can handle the current mix of scheduled and unscheduled flights. No adverse impacts to transportation would be expected from generic LPT missile activities.</p> <p>Runway repaving and rehabilitation of the causeway between Wake Island and Wilkes Island have maintained or improved transportation capabilities.</p>	<p>Alternative 1 would have the same impacts to transportation as the proposed action.</p>	<p>No impacts to transportation from activities supporting generic LPT fueling and launching would occur. Transportation impacts associated with previously documented missile test and launch activities would continue. Those impacts were analyzed in previous documents and found to be not significant.</p>	<p>The number or frequency of missile launches at Wake Island would not change. Previous analyses of these launches indicated no cumulative impacts to transportation were expected. No cumulative impacts to transportation from activities associated with generic LPT launches would be expected.</p>

## **Cumulative Impacts**

No other projects in the region of influence have been identified that would have the potential for incremental, additive cumulative impacts to air quality, biological resources, cultural resources, hazardous materials/waste, health and safety, noise, and transportation resources in the region of influence.

**PUBLIC COMMENT:** The MDA published a Notice of Availability for public review and comment in the Marshall Islands Journal and the Kwajalein Hourglass on December 15, 2006, initiating a 30-day review period that ended on January 16, 2007. The MDA made copies of the EA and Draft FONSI available in the Majuro Public Library and the Grace Sherwood Library. The MDA also established an e-mail address to receive comments.

**POINT OF CONTACT:** Requests for a copy of the Wake Island Supplemental Environmental Assessment should be sent to:

Department of Defense  
Missile Defense Agency  
7100 Defense Pentagon  
Washington, DC 20301-7100  
Attn: DTR/Environmental

Electronic requests can be sent to [EnvGrp@mda.mil](mailto:EnvGrp@mda.mil).

**CONCLUSION:** The environmental analysis shows that no significant short-term or long-term impacts would occur from the proposed action. After consideration of the facts herein, the undersigned finds that the proposed Federal action is consistent with existing national environmental policies and objectives set forth in Section 101(a) of NEPA and would not significantly affect the quality of the human environment or otherwise include any condition requiring consultation pursuant to Section 102(2)(c) of NEPA. Therefore, an Environmental Impact Statement for the proposed action is not required.

**WAKE ISLAND  
SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT**

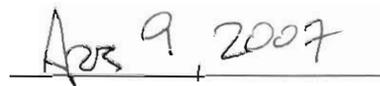
**AGENCY:** Missile Defense Agency

**ACTION:** Finding of No Significant Impact

**APPROVED:**



CHRIS T. ANZALONE  
Major General, USAF  
Deputy for Test, Integration,  
and Fielding



DATE