

**INTEGRATED FLIGHT TESTS AT U.S. ARMY KWAJALEIN ATOLL/RONALD  
REAGAN BALLISTIC MISSILE DEFENSE TEST SITE (USAKA/RTS)  
ENVIRONMENTAL ASSESSMENT**

**MISSILE DEFENSE AGENCY**

**AGENCY:** Missile Defense Agency

**ACTION:** Finding of No Significant Impact

**BACKGROUND:** Pursuant to the National Environmental Policy Act (NEPA) of 1969 as amended (42 United States Code 4321, et seq.); the Council on Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations [CFR] 1500-1508); 32 CFR Part 989, U.S. Army Kwajalein Atoll Environmental Standards (UES), 12<sup>th</sup> Edition; Executive Order (EO) 12114, *Environmental Effects Abroad of Major Federal Actions*; and CFR Part 187, *Environmental Effects of Major Department of Defense Actions*, Department of Defense (DoD) officials should consider environmental consequences when authorizing and approving Federal actions.

Within the DoD, the Missile Defense Agency (MDA) is responsible for developing, testing, and deploying the Ballistic Missile Defense System (BMDS). The BMDS is designed to intercept target missiles during all phases of their flight: ascent, boost, midcourse, and terminal. The purpose of the Integrated Flight Tests (IFTs) is to demonstrate the integrated BMDS operational effectiveness against short range ballistic missiles (SRBM), medium range ballistic missiles (MRBM), and air-breathing targets in an operationally realistic flight test.

MDA is currently planning to demonstrate a series of IFTs by using U.S. Army Kwajalein Atoll/Ronald Reagan Ballistic Missile Defense Test Site (USAKA/RTS) locations, Wake Island, and the Broad Ocean Area (BOA). The same test activities proposed in this IFT Environmental Assessment (EA) were previously analyzed in a series of environmental documents including the USAKA Supplemental Environmental Impact Statement (EIS) where the impacts from multiple launches of missiles per year for several years, a maximum of 28 strategic missiles launched in a single year from Meck Island; the Terminal High Altitude Area Defense (THAAD) Pacific Test Flights EA where the anticipated number of flight test missiles launched from RTS would be up to 50 over a period of 4 years, typically ranging from 1–14 per year; and the Wake Island Launch Center Supplemental EA. The analyses in these environmental documents assessed the impacts to the environment of missile testing at a level that is significantly higher than proposed in the IFT EA and concluded that no significant impacts would result.

USAKA/RTS, located in the Kwajalein Atoll in the Republic of the Marshall Islands (RMI), is a DoD Major Test Range and Facility Base under the operational control U.S. Army Space and Missile Defense Command/Army Forces Strategic Command (USASMDC/ARSTRAT). Kwajalein Island is the largest of the 11 islands that make up USAKA/RTS. The U.S. Government has the right to use USAKA/RTS under the terms and conditions set out in the Military Use and Operating Rights Agreement, an agreement between the U.S. Government and

the Government of the RMI. The proposed USAKA/RTS sites for the IFT activities include Meck, Roi-Namur, Omelek, Kwajalein, Gellinam, and Illeginni. Wake Island is a U.S. Territory under the operational control of the U.S. Air Force and is a part of the Wake Atoll. The Atoll consists of three islands: Wake, Wilkes, and Peale. The BOA is the part of the high seas outside 12 nautical miles (nm) offshore of any island or atoll in the RMI and in the international waters between Wake and the RMI.

**DESCRIPTION OF THE PROPOSED ACTION:** The Proposed Action analyzed in this EA is to conduct a series of IFTs at USAKA/RTS, Wake Island, and in the BOA. The first two missions are called Flight Test Integrated-01 (FTI-01) which would occur in the fourth quarter of fiscal year (FY) 2012 and Flight Test Operational-01 (FTO-01) in the third quarter of FY 2013. These tests will demonstrate the BMDS's ability to defeat a raid of up to five targets. Each of the BMDS components has proven its individual effectiveness in flight and ground tests. FTI-01 and FTO-01 provide a unique opportunity to demonstrate critical interoperability capabilities of these systems. All three weapon systems (Aegis, THAAD, and Patriot) would be tested in live-fire integrated tests against a variety of targets.

#### *ALTERNATIVES CONSIDERED*

##### **NO-ACTION ALTERNATIVE:**

The No-action Alternative would be not to conduct IFTs at the action alternative sites. MDA would not be able to demonstrate integrated BMDS effectiveness against SRBM, MRBM, and other targets in an operationally realistic flight test. Previously planned and on-going activities at the alternative sites would continue.

**ALTERNATIVE 1:** Under Alternative 1, up to two THAAD launchers, the THAAD Army-Navy Ground Transportable Radar Surveillance and Control-Series 2 (AN/TPY-2 [TM]) radar, and the Patriot Army Navy/Mobile Combination Radar-65 (AN/MPQ-65) radar would be located on Meck, and up to two PAC-3 launchers on Omelek.

**ALTERNATIVE 2:** Under Alternative 2, up to two THAAD launchers, the AN/TPY-2 (TM) radar, and the AN/MPQ-65 radar would be located on Meck with up to two PAC-3 launchers on Gellinam.

**ALTERNATIVE 3:** Under Alternative 3, up to two THAAD launchers and the AN/TPY-2 (TM) radar would be located on Meck and the AN/MPQ-65 radar and up to two PAC-3 launchers on Gellinam.

In all three alternative interceptor test configurations, MDA proposes to operate the Aegis BMD ship in the BOA north of USAKA/RTS, an Army-Navy Transportable Radar Surveillance-2 (Forward Based Mode) (AN/TPY-2 [FBM]) radar at Roi-Namur or Wake, and a High Frequency (HF) Radar at Roi-Namur, Kwajalein, or Illeginni. Targets to be used would include a combination of up to five of the following targets: air-launched MRBM target(s) launched from a C-17 aircraft staged at Joint Base Pearl Harbor Hickam in Hawaii, from Wake, or from Guam; ground-launched SRBM target launched from a launch rail on Wake Island; sea-launched SRBM target(s) launched from the Mobile Launch Platform in the BOA; air-breathing target(s) ground-

launched from a trailer at Roi-Namur, Kwajalein, or Illeginni; and air-breathing air-launched target(s) from a G1 aircraft that would stage out of Wake or Kwajalein.

**ENVIRONMENTAL EFFECTS OF ALTERNATIVES:** Thirteen broad resources of environmental consideration were originally considered to provide a context for understanding the potential effects of the Proposed Action and to provide a basis for assessing the severity of potential impacts. These areas included air quality, airspace, biological resources, cultural resources, geology and soils, hazardous materials and waste, health and safety, infrastructure, land use, noise, socioeconomics, visual aesthetics, and water resources. These areas were analyzed as applicable for the proposed locations or activity.

#### *AIR QUALITY*

**USAKA/RTS:** For Alternatives 1, 2, and 3, no substantial cumulative impacts to air quality are expected. Most of the emission sources on USAKA/RTS are not continuous in nature. The strong tradewinds prevent any localized emissions, including those from missile launches from accumulating. No significant cumulative impacts to air quality have been identified as a result of prior launch-related activities from USAKA/RTS. The activities of the Proposed Action would be performed at varying times and should have negligible cumulative impacts on the air quality of USAKA/RTS.

**WAKE:** For Alternatives 1, 2, and 3, the Proposed Action would allow various pollutants to be released into the atmosphere; the levels are not expected to violate any federal ambient air quality standards that may apply to Wake. It is believed that there are no air pollution problems at Wake due to the strong trade winds quickly dispersing any local emissions. Additionally, there are no other islands within several hundred miles of Wake Atoll that could be affected by pollutants generated on Wake. Based on this information, air quality on Wake would not be affected.

**BOA:** For Alternatives 1, 2, and 3, flights (interceptors or targets) occur within a large open area of the ocean. Missile intercepts in this area would result in only temporary, minor, and localized emissions. There is no indication of emissions from the Proposed Action affecting the air quality in the BOA area. No cumulative impacts are anticipated that could significantly affect air quality in the global upper atmosphere of the BOA.

#### *AIRSPACE*

**USAKA/RTS:** For Alternatives 1, 2, and 3, missile launches are short-term, discrete events that are actively managed by USAKA/RTS range safety in coordination with the Federal Aviation Administration. The Proposed Action is not scheduled to occur at the same time as other regional programs. The use of the required scheduling and coordination process for international airspace, and adherence to applicable DoD directives and U.S. Army regulations concerning issuance of Notices to Airman (NOTAMs) and selection of missile firing areas and trajectories, lessens the potential for significant incremental, additive, cumulative impacts.

**WAKE:** Since the number of aircraft (one jet route) flying over or near to the island is small and only a small number of IFTs are anticipated for Alternatives 1, 2, and 3, no major impacts are

expected to airspace use. The Proposed Action would not impact airspace management or air traffic control. No cumulative impacts are expected.

**BOA:** For Alternatives 1, 2, and 3, all missile launches, missile intercepts, and debris impacts would take place in international airspace. There is no airspace segregation method such as a warning or restricted area to ensure that the area would be cleared of nonparticipating aircraft. However, missile launches are short-term, discrete events. The use of the required scheduling and coordination process for international airspace, and adherence to applicable DoD directives and Army regulations concerning issuance of NOTAMs and selection of missile firing areas and trajectories, obviates the potential for significant incremental, additive, cumulative impacts.

### *BIOLOGICAL RESOURCES*

**USAKA/RTS:** USAKA/RTS has been extensively altered by human activity, and little native vegetation remains to serve as wildlife habitat. No threatened or endangered vegetation has been identified in the project areas. No long-term impacts to vegetation would occur as a result of launch activities on USAKA/RTS. Disturbance to wildlife from the launches would be brief and is not expected to have a lasting impact nor a measurable negative effect on migratory bird populations. For Alternatives 1, 2, and 3, potential impacts of construction, building modification, and missile launches on terrestrial and marine biological resources within the USAKA/RTS have been addressed in detail in the USAKA EIS, USAKA Supplemental EIS, Theater Missile Defense Extended Test Range EIS, and the USAKA Temporary Extended Test Range EA.

Also, based on the prior analyses done and the effects of past target and interceptor launch activities, the potential impacts of activities related to IFT activities on biological resources are expected to be minimal. The likelihood that debris from a spent booster or terminated launch would strike a sea turtle or marine mammal is remote since the potential for a launch mishap is small and the marine species tend to be widely scattered. No significant cumulative impacts to biological resources have been identified as a result of prior launch-related activities from USAKA/RTS. These combined activities would be performed at varying times and locations on USAKA/RTS and should have negligible cumulative impacts on biological resources.

**WAKE:** The site(s) for the launch activities are previously cleared, improved locations. No substantial impacts to vegetation are anticipated from nominal launch activities. Disturbance to wildlife, including migratory birds, from construction noise and increased personnel would be short-term and is not expected to have a lasting impact nor a measurable negative effect. The likelihood that debris from a spent booster or terminated launch would strike a sea turtle or marine mammal is remote.

For Alternatives 1, 2, and 3, adherence to the standard procedures in place to minimize the introduction of invasive species would reduce the potential for cumulative impacts of these species to existing vegetation and wildlife on Wake. No substantial cumulative impacts have been identified as a result of previous launches from Wake Island Launch Center. The Proposed Action in combination with other regional activities should result in negligible cumulative impacts to biological resources.

**BOA:** For Alternatives 1, 2, and 3, no substantial impacts to the BOA and its resources have been identified from current and past missile test activities. Prior analysis has not identified a significant potential for cumulative impacts. Although IFT activities would take place in the BOA, these would be discrete, short-term events and no adverse cumulative impacts are anticipated.

### *CULTURAL RESOURCES*

#### **USAKA/RTS:**

**Meck, Omelek, Gellinam and Illeginni:** For Alternatives 1, 2, and 3, no adverse effects are anticipated. Although there are no known archaeological sites on Meck and its original surface is at considerable depth due to landfilling, the potential for subsurface materials to be unexpectedly encountered exists across USAKA/RTS. As a result, project personnel will be briefed during the routine construction briefing for Meck regarding the significance of cultural resources and the penalties associated with their disturbance or collection.

**Roi-Namur, Kwajalein:** For Alternatives 1, 2, and 3, activities on Roi-Namur have the potential to affect archaeological and historical resources. Depending on the specific location of the activity, a dig permit and archaeological monitoring may be required. Best management practices including coordination with the USAKA/RTS Environmental coordinator prior to any digging or trenching will decrease the potential for any adverse impacts.

**WAKE:** For Alternatives 1, 2, and 3, no adverse effects are anticipated. Activities would take place within previously developed post-World War II areas and specific historic features would be avoided. Project personnel would be briefed during the routine construction briefing regarding the significance of these types of resources and the penalties associated with their disturbance or collection.

**BOA:** For Alternatives 1, 2, and 3, no adverse effects are anticipated. There are no known marine cultural resources (e.g., shipwrecks) within the areas of the BOA beneath the proposed IFT paths. When reviewed against ongoing and reasonably foreseeable actions at USAKA/RTS, the proposed activities associated with this EA would have no appreciable cumulative effects on cultural resources.

### *GEOLOGY AND SOILS*

#### **USAKA/RTS:**

**Meck:** For Alternatives 1, 2, and 3, launch activities on the Meck are not expected to result in any adverse geological or soil impacts. No adverse changes to soil chemistry are predicted to occur as a result of hydrogen chloride, aluminum oxide, or other solid rocket motor emission products deposited on the soil. Deposition of these materials is expected to be minimal because they disperse in the air.

**Roi-Namur, Kwajalein, and Illeginni:** Minimal impacts to area soils could occur as a result of augering four holes about 4 feet deep and about 6-8 inches in diameter to stake down the launch trailer. However, this would occur in a previously disturbed area and result in minimal soil

damage. Any spills would be remediated in accordance with the UES and Kwajalein Environmental Emergency Plan (KEEP). Adverse impacts to soils, other than slight compaction, are unlikely to occur. For Alternatives 1, 2, and 3, no cumulative adverse effects to soils are anticipated from program activities on Roi-Namur, Kwajalein, and Illeginni. Emission products from nominal launches would be rapidly buffered by the soil. Hazardous byproducts from any spill would be removed and any residual accumulation of nitrogen compounds would be ultimately washed out to sea or taken up by plants.

**Omelek and Gellinam:** The movement of the Patriot Fire Unit and the placement of portable sensors on the proposed USAKA/RTS islands are not expected to result in any increase in soil erosion. Adverse impacts to soils, other than slight compaction, are unlikely to occur as a result of the removal of all mobile equipment/assets brought to the range. For Alternatives 1, 2, and 3, no cumulative adverse effects to soils are anticipated from program activities on Omelek and Gellinam.

**WAKE:** For Alternatives 1, 2, and 3, the movement and the placement of portable sensors on pre-existing launch sites on Wake are not expected to result in any increase in soil erosion. No cumulative adverse effects to soils are anticipated from program activities. Emission products from nominal launches would be rapidly buffered by the soil. Hazardous byproducts from any spill would be removed and any residual accumulation of nitrogen compounds would be ultimately washed out to sea or taken up by plants.

**BOA:** Proposed IFT activities would not impact the ocean floor.

#### *HAZARDOUS WASTE AND WASTE*

**USAKA/RTS:** For Alternatives 1, 2, and 3, activities would require use of diesel fuel, solid propellant, and lubricants for the operation of the Proposed Action. Adherence to the standard procedures in place to minimize impacts would preclude the potential accumulation of hazardous materials or waste. As required by the UES, the Army has prepared the KEEP, which addresses the procedure for responding to release of hazardous materials and the management of hazardous material (e.g., import, use, and inventory).

**WAKE:** For Alternatives 1, 2, and 3, minimal quantities of hazardous waste would be produced by operating on Wake. These materials are similar to waste already generated and handled at Wake. Management of this hazardous waste is the responsibility of the program and would be accomplished in accordance with applicable regulatory requirements.

**BOA:** For Alternatives 1, 2, and 3, the Proposed Action is not anticipated to produce an accumulation of hazardous material or waste in the BOA; therefore, no impacts are anticipated to the BOA.

#### *HEALTH AND SAFETY*

**USAKA/RTS:** At radar unit operational locations at USAKA/RTS, hazards associated with the Proposed Action would be limited to worker exposure to radio frequency radiation. The potential exists for disturbance of unexploded ordnance, if trenching is necessary. However,

USAKA/RTS has procedures for explosive safety in place and has explosive ordnance disposal personnel onsite. Missile launch operations associated with the Proposed Action have been conducted for many years at USAKA/RTS. While risks associated with these operations will always be present, the use of standard safety procedures minimizes the risks. Best management practices such as establishing launch hazard areas, evacuating personnel from Omelek and Gellinam during actual firing and visually surveying the area prior to operating on site radars all function to minimize the risk to both workers and the public. No cumulative impacts to health and safety are anticipated from the proposed IFT activities.

**WAKE:** For Alternatives 1, 2, and 3, the increased use of fuels, explosives, and the performance of other launch and radar-related activities would only represent a small increase in the potential safety risk at Wake. No cumulative impacts to health and safety are anticipated from the proposed IFT activities.

**BOA:** For Alternatives 1, 2, and 3, each launch would result in the impact of boosters and the payload into the BOA. The Proposed Action would result in a temporary increase in missile activities in the BOA. The Proposed Action requires the administration of NOTAMs and Notice to Mariners (NOTMARs) to warn aircraft and surface vessels of the potentially hazardous areas and allow them ample time to avoid the hazards. As such, any cumulative health and safety impact in the BOA due to the Proposed Action would be minimal.

#### *INFRASTRUCTURE*

**USAKA/RTS:** For Alternatives 1, 2, and 3, no adverse impacts to waterway transport are expected from the transport of test components. No impacts are anticipated from the use of generators that would supply power to the radars and launch stations. Sufficient infrastructure would be available and capable of supporting launch activities and the approximately 120 soldiers and other test-related personnel would be deployed in support of the Proposed Action. No cumulative impacts are anticipated from the proposed IFT activities.

**WAKE:** The use of infrastructure facilities at Wake for launch activities have been analyzed in previous documents (e.g., Wake Island Launch Center Supplemental EA, 1999; MDA Wake Island Supplemental EA, 2007) and both concluded no cumulative impacts to infrastructure and transportation would be expected from implementing launch test activities. No impacts are anticipated from the Proposed Action; therefore this resource was not analyzed for Wake Island.

**BOA:** Infrastructure is not applicable to the BOA; therefore this resource was not analyzed for this location.

#### *LAND USE*

**USAKA/RTS:** There would be no changes in the current land use patterns for USAKA/RTS. The use of the facilities (i.e., placement of radar, launch activities for interceptors or targets) is a normal operation. No impacts are anticipated from the Proposed Action therefore this resource was not analyzed further for USAKA/RTS.

**WAKE:** The Proposed Action would not alter the current land use pattern for Wake. The use of the facilities for the placement of radar, target and missile launchers is a normal operation. No

impacts are anticipated from the Proposed Action therefore this resource was not analyzed for Wake Island.

### *NOISE*

**USAKA/RTS:** For Alternatives 1, 2, and 3, potential noise impacts from the launches of strategic launch vehicles and the operation of their support equipment on USAKA/RTS were addressed in the USAKA Final Supplemental EIS. The EIS concluded that the resulting sound pressure levels would cause neither workplace standards to be violated nor noise-sensitive receptors to experience maximum short-term noise levels greater than 92 decibels. Due to the temporary nature of these launch events on USAKA/RTS, the proposed test flights and the use of the radars would not result in short-term or cumulative noise impacts.

**WAKE:** For Alternatives 1, 2, and 3, the operation of the radar system on and launches from Wake Island are normal activities. Due to the high ambient noise levels from wind and surf, additional noise generated would be negligible. Therefore no cumulative impacts from the Proposed Action would be expected.

**BOA:** No substantial impacts to the BOA and its wildlife from program noise have been identified from current and past missile test activities. Prior analysis has not identified a significant potential for cumulative noise impacts. For Alternatives 1, 2, and 3, test flight activities that would take place in the BOA would be discrete, short-term events and no adverse cumulative impacts are anticipated.

### *SOCIOECONOMICS*

**USAKA/RTS:** Meck, Omelek, Gellinam, and Illeginni are unpopulated and do not have any socioeconomic attributes (population size, employment, income generated and type and cost of housing). The Proposed Action would have a slight beneficial effect on the potential for new jobs supporting actions on Roi-Namur and Kwajalein. Based on the use of the unpopulated islands and the insignificant affect on Roi-Namur and Kwajalein, this resource was not analyzed further for USAKA/RTS.

**WAKE:** Only military or contractor personnel live on Wake Island and the island is an isolated military installation. Because of Wake's location, socioeconomics issues are of no factor; therefore this resource was not analyzed further for Wake.

**BOA:** There are no known commercial fishing and commercial shipping routes in the vicinity of the Proposed Action; therefore this resource was not analyzed further for this location.

### *VISUAL AESTHETICS*

**USAKA/RTS:** The Proposed Action is not anticipated to alter the current scenic quality of USAKA/RTS.

**WAKE:** The island is an isolated military installation where actions taken there have little effect to the views of government and contracted employees. For Alternatives 1, 2, and 3, the Proposed Action is not anticipated to alter the current scenic quality.

**BOA:** For Alternatives 1, 2, and 3, the Proposed Action is not anticipated to alter the current scenic quality of the BOA.

*WATER RESOURCES*

**USAKA/RTS:**

**Meck, Omelek, Gellinam and Illeginni:** There are no known surface water, groundwater, and flood zones on Meck, Omelek, Gellinam and Illeginni. In the unlikely event of an accidental release of hazardous material at the storage area, emergency response personnel would comply with the KEEP.

**Roi-Namur and Kwajalein:** This resource was not analyzed further for Roi-Namur and Kwajalein.

**WAKE:** No impacts are anticipated from the Proposed Action; therefore, this resource was not analyzed for Wake.

**BOA:** For Alternatives 1, 2, and 3, no cumulative effects to water resources are anticipated as a result of the Proposed Action. The effect of any electric generator or rocket motor emission products deposited in the BOA would be very transient due to the buffering capacity of sea water and dilution by current mixing and would not be expected to result in any cumulative effects with ongoing USAKA/RTS activities.

**PUBLIC INVOLVEMENT:** In accordance with the CEQ and DoD regulations for implementing NEPA, MDA, and USASMDC/ARSTRAT solicited comments on this EA and the Draft Finding of No Significant Impact (FONSI) from interested and affected parties. A Notice of Availability for the EA and Draft FONSI was published in the newspapers identified in Table 1.

**Table 1. Local Newspapers**

Country or State	City/Town	Newspaper
Republic of the Marshall Islands	Majuro	<i>Marshall Islands Journal</i>
	USAKA/RTS	<i>Kwajalein Hourglass</i>

**CONCLUSION:** The environmental analysis shows that no significant impacts would occur from conducting a series of flight tests at and around USAKA/RTS and Wake, and in the BOA. Preparation of an EIS, therefore, is not required. The Final EA and Final FONSI are available at: [http://www.mda.mil/news/environmental\\_reports.html](http://www.mda.mil/news/environmental_reports.html).

**PREFERRED ALTERNATIVE:** The selected preferred alternative for the proposed action is Alternative 1 in which the THAAD launchers, AN/TPY-2 (TM) radar, and the AN/MPQ-65 radar would be located on Meck; PAC-3 Launch Stations would be on Omelek; and the AN/TPY-2 (FBM) radar would be on Roi-Namur. Targets associated with Alternative 1 would

include a combination of up to five of the following targets: air-launched MRBM target(s) launched from a C-17 aircraft staged at Joint Base Pearl Harbor Hickam in Hawaii, from Wake, or from Guam; ground-launched SRBM target launched from a launch rail on Wake Island; sea-launched SRBM target(s) launched from the Mobile Launch Platform in the BOA; air-breathing target(s) ground-launched from a trailer at Roi-Namur, Kwajalein, or Illeginni; and air-breathing air-launched target(s) from a G1 aircraft that would stage out of Wake or Kwajalein.

**POINT OF CONTACT:** Submit requests for a copy of the IFT Final EA and Final FONSI to:

Missile Defense Agency/DPF  
Bldg 5224, Martin Road  
Redstone Arsenal, AL 35898  
ATTN: Mr. Dan Spiegelberg, P.E.

**INTEGRATED FLIGHT TESTS AT U.S. ARMY KWAJALEIN ATOLL/  
RONALD REAGAN BALLISTIC MISSILE DEFENSE TEST SITE (USAKA/RTS)  
ENVIRONMENTAL ASSESSMENT**

**MISSILE DEFENSE AGENCY**

**AGENCY:** Missile Defense Agency

**ACTION:** Finding of No Significant Impact

**APPROVED:**

U.S. ARMY KWAJALEIN ATOLL/REAGAN TEST SITE



DATE: 29 Aug 12

**SHANNON BOEHM**

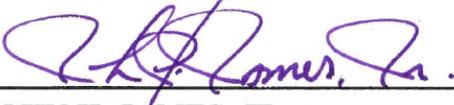
**COL, SF**

Commanding

U.S. Army Kwajalein Atoll/Reagan Test Site

**APPROVED:**

MISSILE DEFENSE AGENCY



DATE: 27 August 2012

**JOHN H. JAMES, JR.**

Executive Director