

EXECUTIVE SUMMARY

OVERVIEW

During the Gulf War, the United States needed a defense from Iraqi Scud missiles, which are short- to medium-range ballistic missiles. These types of short- to medium-range ballistic missiles are called theater ballistic missiles, as they are used in a limited theater of operations. During the Gulf War, Iraq launched over 90 of these missiles at our troops and allies, and civilian populations in Saudi Arabia and Israel. After the Gulf War, Congress directed the Department of Defense (DOD) to develop defensive systems effective against these theater ballistic missiles.

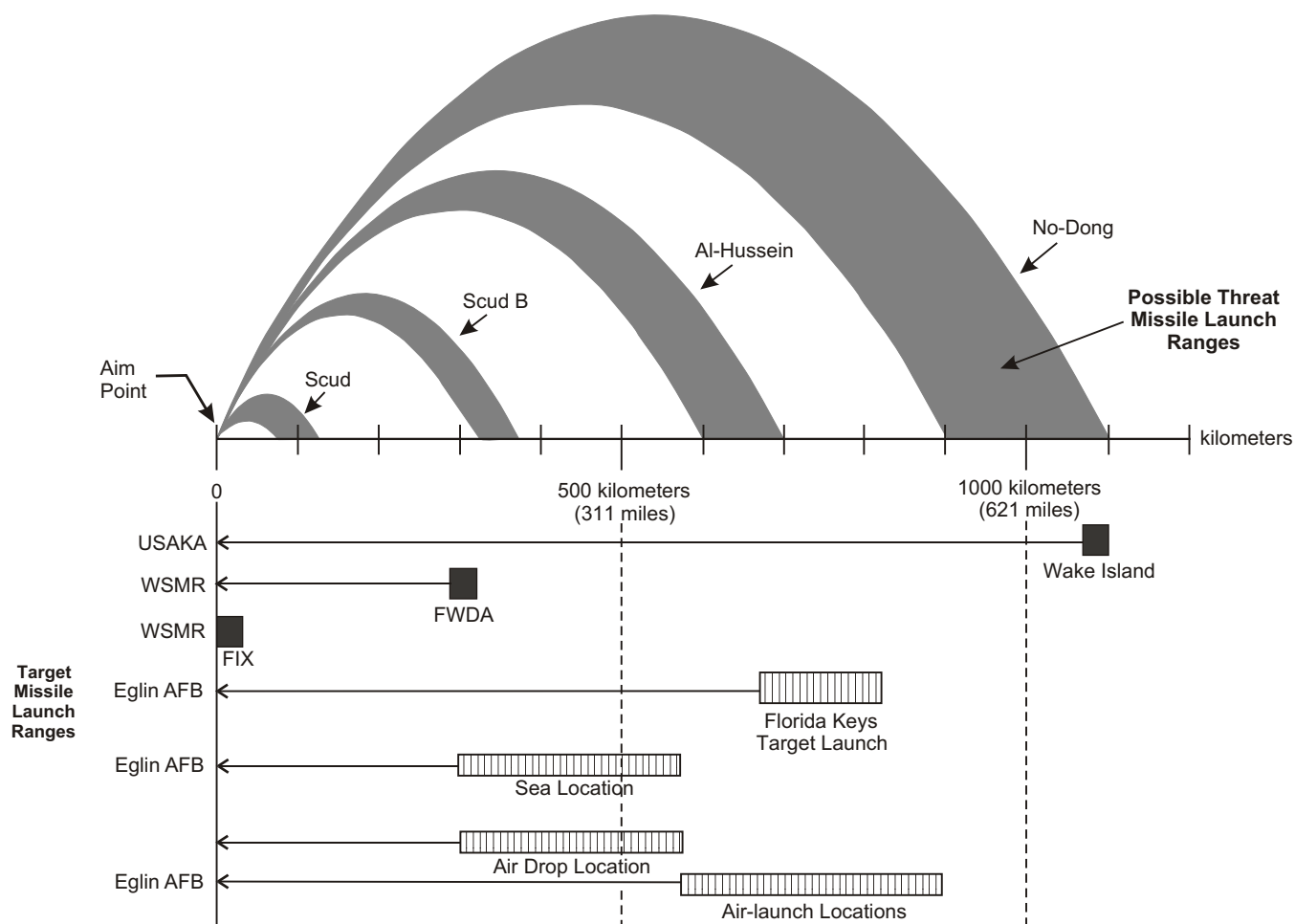
In order to ensure these defensive systems work the way they are designed, they must be thoroughly tested. This testing is done at each stage of the development. It includes computer modeling, component tests, and other simulations of the actual system components. However, to prove these systems will protect our troops, allies, and civilians, they need to be tested in actual conditions. This includes field testing away from the laboratories and factories using targets that look and act like actual theater ballistic missile threats. Without this realistic testing, there is no way to ensure these defensive weapons will be able to perform as planned. Further, once these systems are put into use by the armed forces, these soldiers, sailors, marines, and airmen will need to train using the actual systems against these simulated threat missiles.

The National Environmental Policy Act of 1969 (NEPA) requires Federal agencies to consider the impacts of their actions on the environment. Similarly, proposed actions outside the territorial boundaries of the United States must be evaluated in accordance with Executive Order 12114.

This Supplemental Environmental Impact Statement (SEIS) supplements the TMD Extended Test Range (ETR) Environmental Impact Statement (EIS). The TMD ETR EIS was completed in November 1994, with a Record of Decision (ROD) in March 1995. At that time, the EGTR was not selected, as there was no suitable target (sea-launched) launch capability. Since then, additional capabilities have been developed. This SEIS analyzes new launch and support locations, sensor operations, launch preparation activities, and missile flight tests and intercepts in the EGTR.

White Sands Missile Range in New Mexico is a missile test range with the capability to test using targets with flight distances up to 320 kilometers (199 miles). U.S. Army Kwajalein Atoll in the western Pacific is a longer missile test range with the capability to test using targets with flight distances greater than 1,100 kilometers (683 miles). The proposed Eglin Gulf Test Range (EGTR), with target launches from aircraft, would provide a medium flight distance of up to 600 kilometers (373 miles). Additionally, if national defense needs require target missiles with longer flights, the alternative of land-based targets from the Florida Keys would provide ranges up to 800 kilometers (497 miles) (figure ES-1).

Threat Theater Missile Flight Distances



Source: Ballistic Missile Defense Organization, 1996; U.S. Army Space and Strategic Defense Command, 1994A.

EXPLANATION

- AFB = Air Force Base
- EGTR = Eglin Gulf Test Range
- FIX = Firing-In Extension Area (adjoining WSMR to the north)
- FWDA = Fort Wingate Depot Activity, New Mexico
- TBM = Theater Ballistic Missile
- TMD = Theater Missile Defense
- USAKA = U.S. Army Kwajalein Atoll
- WSMR = White Sands Missile Range, New Mexico

Existing Land Launch Ranges based on TMD ETR EIS and ROD 1995

Alternatives Considered within the EGTR SEIS

Theater Ballistic Missile Threat Distances Compared to TMD Land-, Sea-, and Air-launch Test Distances

Figure ES-1

The Final SEIS incorporates public and agency comments received during the public review of the Draft SEIS.

The director of the Ballistic Missile Defense Organization (BMDO) will choose some, all, or none of the alternatives for TMD programs at the EGTR based on several considerations. In addition to the environmental effects, other factors that will be considered include national policy, technical requirements, safety considerations, and cost. This decision could be to select an environmentally sensitive alternative because of strong national needs. Similarly, a technically preferred alternative might be eliminated due to environmental or cost concerns.

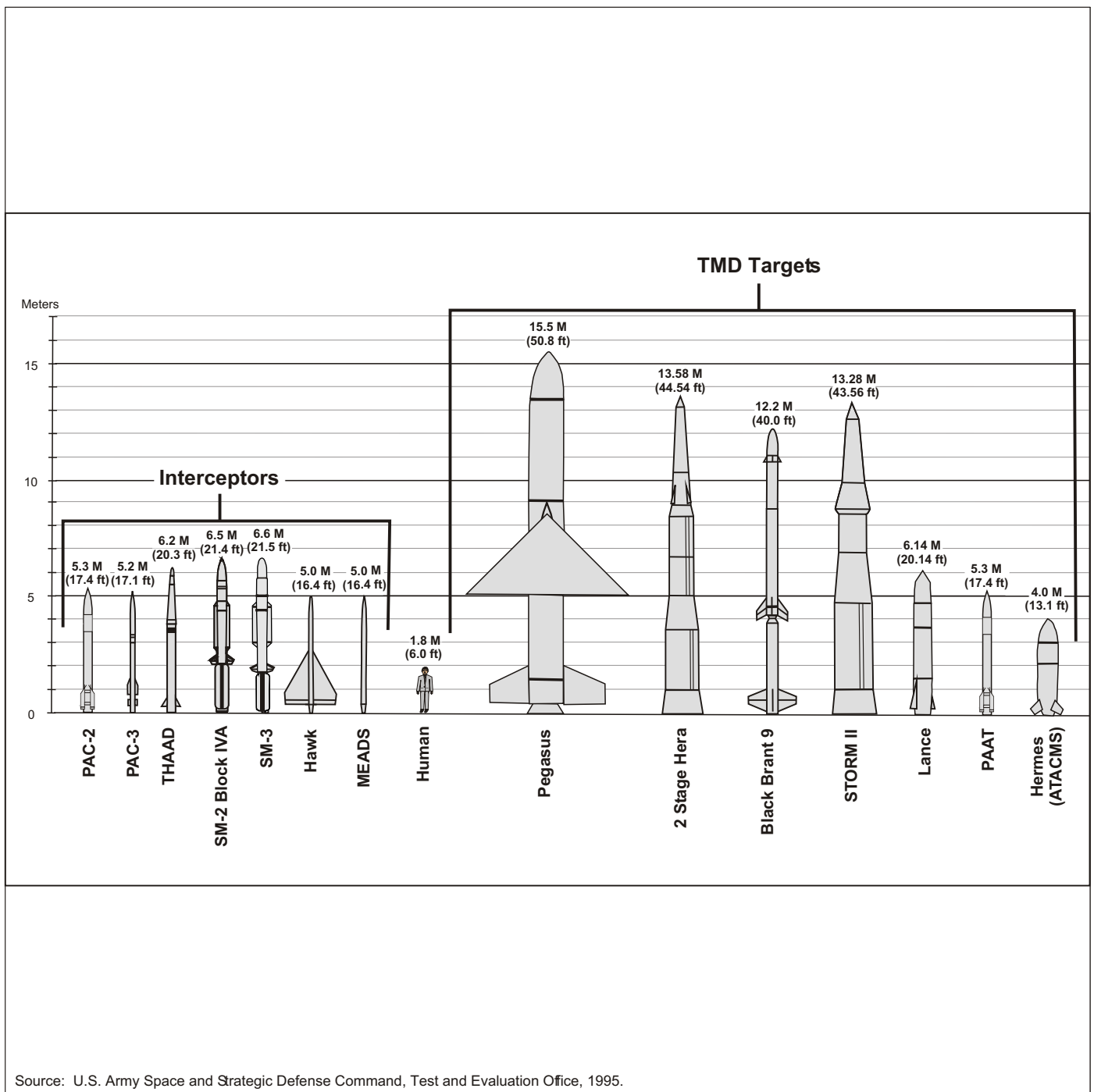
The preferred alternative includes target and interceptor launch and support activities at alternative locations at Eglin Air Force Base (AFB) test sites on Santa Rosa Island and Cape San Blas; air delivery (Air Drop or air-launch) of target missiles; and possible Navy AEGIS ship-launched interceptors. The Navy has no current plans to conduct TMD testing at the EGTR. Other alternatives considered include target launch and support activities at alternative locations in the Florida Keys (Cudjoe Key or Saddlebunch Keys), target missile launch from a sea-launch vessel, and interceptor launch from offshore platforms off the coast of Santa Rosa Island and Cape San Blas (table ES-1).

Table ES–1: Preferred Alternative and Other Alternatives Considered

Location	Interceptor Launch	Target Launch
Preferred Alternative		
Santa Rosa Island	X	X
Cape San Blas	X	X
Ship-launch	X	
Air delivery (Air Drop or air-launch)		X
Other Alternatives Considered		
Platform	X	
Cudjoe or Saddlebunch Key		X
Ship-launch		X

For the purpose of this analysis, a total of up to 24 test or training events per year are being considered over a 10-year period. These test or training events could include up to 48 interceptor launches per year from a combination of launch sites, land, ship, and/or platform. Concurrent with the interceptor launches would be up to 24 target launches per year from a complementary launch site. However, should the Florida Keys Alternative be selected, no more than 12 targets would be launched per year. The number of tests in the EGTR is likely to be considerably less than 24 per year. Also, a 10-year period is used only to analyze cumulative impacts.

There are several interceptors being considered for this proposal (figure ES-2). For the purpose of this analysis, the PATRIOT Advanced Capability-3 is used to represent the



EXPLANATION

ATACMS	=	Army Tactical Missile System
PAAT	=	PATRIOT as a Target
PAC	=	PATRIOT Advanced Capability
SM	=	Standard Missile
THAAD	=	Theater High Altitude Area Defense
M	=	Meters
ft	=	Feet

TMD Missile Comparison

Figure ES-2

land-launched and platform-based interceptors. The Navy STANDARD Missile 2 Block IVA will represent the sea-based interceptor.

Maximum use of existing infrastructure and facilities would be made at interceptor launch locations.

Several target missiles are being considered for this proposal (figure ES-2). For the purpose of this analysis, the Hera represents the land-launched target missile that is common to all proposed launch locations. The Hera is a two-stage solid propellant missile constructed of the upper two stages of a Minuteman II. The Lance is proposed as a target from either Santa Rosa Island or Cape San Blas. The Lance is a single-stage, pre-fueled liquid propellant missile. The STORM represents the type of target that would be used from an Air Drop platform. The STORM is a single-stage solid propellant missile.

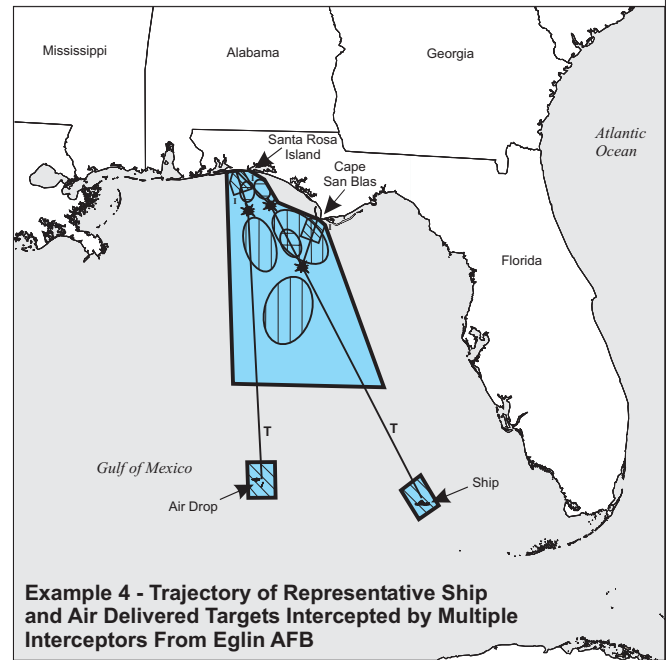
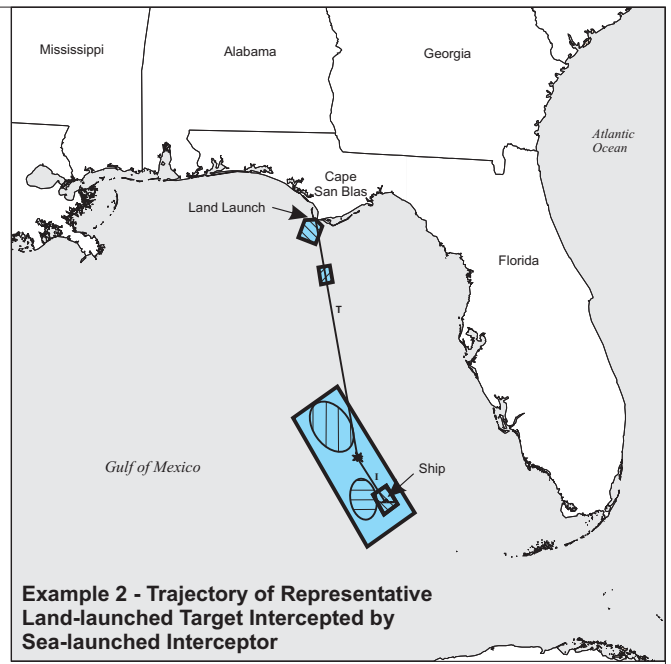
The activities supporting a target missile launch would be the same at any of the proposed locations. Several facilities would be required to support the target launch. One of the facilities is a Missile Assembly Building. This is where the missile would be assembled after each component is trucked to the site. A concrete launch pad would be required. Also, a Launch Operations Trailer Shelter, a large concrete garage, is required to protect the mobile electronic and safety instrumentation trailers that have to be near the launch location.

Missile preparation would require a team of up to 50 personnel onsite over a 2- to 4-week period. Another 30 to 60 people would support the various portable radar, radio, and safety systems that would be stationed within 32.2 kilometers (20 miles) of the proposed launch location. After the test, most of the people would leave immediately, with the last group leaving within a week of the launch.

Four potential test examples are shown here (figure ES-3). The first example is an Air Drop target with a land-launched interceptor from Santa Rosa Island. The second example is a land-launched target from Cape San Blas with a ship-launched interceptor. The third example shows a land-launched target from the Florida Keys with an interceptor from a platform off Cape San Blas. The fourth example represents a systems integration test that combines many targets and interceptors to ensure all of the command and control systems work together against several threats at once. This type of systems integration test would occur approximately once every 2 to 3 years.

In addition to the proposed locations, the SEIS evaluates the no-action alternative. This is the result should the proposed action to enhance the EGTR for TMD testing not be selected. All of the currently planned test and training activities at Eglin AFB, Naval Air Station Key West, and other military facilities would not be affected.

Some land launched target alternatives were analyzed and subsequently eliminated from further consideration (table ES-2). They are shown here with the primary rationale that eliminated them from further consideration.



EXPLANATION

I Interceptor Ground Track

T Target Ground Track

★ Intercept

○ Interceptor Debris

○ Target Debris

■ Representative Evacuation Areas

■ Launch Hazard Area

■ Booster Drop Zone

Test and Training Examples

Figure ES-3

Table ES–2: Land-Launched Target Site Alternatives Eliminated From Further Consideration

Alternative	Reason for Elimination
Dry Tortugas	<ul style="list-style-type: none">■ Lack of area to build support facilities■ No existing infrastructure or utilities
Yucatan Peninsula, Mexico	<ul style="list-style-type: none">■ Not on DOD property■ Expense due to logistics
Matagorda Island, Texas	<ul style="list-style-type: none">■ No appropriate safety areas, trajectories overfly existing oil rigs■ No existing infrastructure or utilities
Boca Chica Key, Florida	<ul style="list-style-type: none">■ U.S. 1 would have to be closed within safety area■ Main electrical powerline too close to launch site
New Island Construction	<ul style="list-style-type: none">■ High cost■ Time to build does not support test schedules

SAFETY

Safety is a primary concern with test and training activities like the ones being proposed for the EGTR. Before any test scenario can be performed, safety engineers use computer models to determine if the scenario fits within the safety limits of the EGTR. Safety areas that need to be cleared of people, aircraft, and seacraft are determined. These safety areas help protect the public should a mishap occur in which the missile would self-destruct or would need to be destroyed by the Range Safety Officer. The Range Safety Officer would destroy a missile should it head outside of its predicted flight path.

The safety limits defined by the proposed Launch Hazard Area (see appendix G for LHA development) would ensure that population centers, schools, and residential areas would not be at increased risk as a result of the proposed test program. The Range Safety Officer in enforcing Air Force Development Test Center policies and procedures ensures that the general public will be protected to an individual and collective risk no greater than the average public exposure.

In the weeks prior to the test, Eglin AFB would issue Notices to Mariners and Airmen (NOTMARs and NOTAMs) to notify the public of the clear areas. Further, local media, including newspapers, television, and radio, would be provided public service announcements to notify the local populations of the upcoming test. On the day of a test, the water and airways would be verified clear using several methods such as visual, ground-based radar, and air-based radar. Land areas would be surveyed by air and ground prior to closing any area. These safety areas would be reopened as soon as the area is safe after the launch. These measures are to protect the public.

POTENTIAL IMPACTS, COMMON CONSIDERATIONS

The planning and siting process for the proposed TMD test program in the EGTR considered many factors in identifying alternative sites including mission requirements,

cost, environmental conservation, human and ecological health, and land use compatibility. All of the potential environmental impacts identified in the SEIS were based on preliminary planning generally representing the maximum disturbance of existing sites. If any of the preferred or alternative sites are selected for TMD testing, close consultation and coordination with Federal and state resource agencies would continue to ensure the avoidance or minimization of potential impacts. The environmental criteria for the final planning and design process would be to avoid adverse impacts to the extent possible, to minimize potential impacts when avoidance is not possible, and to mitigate or offset potential long-term adverse effects. Adverse impacts represent potential environmental impacts that have a measured severity extent, or duration that could require the application of appropriate mitigations. The potential impacts by resource areas are shown in table ES-3.

Should an alternative be selected, the specific mitigations to avoid or minimize potential environmental impacts will be identified in the Record of Decision. A mitigation plan, prepared in consultation with Federal and state resource agencies, will be developed and implemented prior to initial site preparation and test activities.

In every test example proposed for the EGTR, the intercept would occur over the open water of the Gulf of Mexico and the debris from the intercept would land in the Gulf of Mexico. Large areas of the Gulf of Mexico would be closed to watercraft and aircraft during a test event to allow the debris to safely impact the water.

SANTA ROSA ISLAND

The proposed location on Santa Rosa Island is an existing Eglin AFB test site known as Site A-15. This site was used from 1959 until 1984 as a missile launch site for the Boeing Michigan Aeronautical Research Center (BOMARC) missile. After that, the Strategic Defense Initiative Organization built facilities to test an electromagnetic railgun. Currently, Site A-15 is minimally manned with Wright Laboratories personnel performing small tests in several of the buildings onsite.

There are no adverse impacts identified for either interceptor or target launches at Site A-15.

CAPE SAN BLAS

The proposed location on Cape San Blas is an existing Eglin AFB test site known as Site D-3A. This site has been used in the past to launch small missiles and rockets. It was also used in 1995 to launch PATRIOT missiles in surface-to-air intercept test.

There are no adverse impacts identified for interceptor launches.

There are several potential adverse impacts associated with target launches at Site D-3A:

- There is a historic lighthouse and keeper's quarters within the proposed Launch Hazard Area. The lighthouse lens and the quarters may be damaged by noise vibrations during target missile launches. Potential mitigation

measures include methods to protect the lens in place, removal of the lens, refurbishment of the quarters, and/or relocation of the quarters.

- Current safety instrumentation would require a large corridor to be cut through the forested area 1,676 by 12.2 meters (5,500 by 40 feet). This corridor would be within 23 meters (75 feet) of a bald eagle's nest. This violates the U.S. Fish and Wildlife Service's recommended standoff distance of 600 meters (1968 feet). Potential mitigation measures include moving the nest or developing alternate methods to collect the safety data.
- Cape San Blas has the highest concentration of sea turtle nesting in northwest Florida. Launch operations could reduce the number of successful hatchings. Potential mitigation measures include using low pressure sodium lighting for nighttime operations, and/or monitoring nests for successful hatch rates.
- Target launch facilities would result in the permanent loss of 0.6 hectare (1.6 acres) of wetlands. Potential mitigation measures include in-kind enhancement or restoration of currently disturbed wetland areas near Site D-3A.

TESTING OVER THE GULF OF MEXICO

All TMD flight tests and intercepts would occur over the Gulf of Mexico in the EGTR. Navy interceptor launches, Air Drop, and air-launched targets would be launched over the Gulf of Mexico. Also, interceptor platform launches and ship-launched targets would originate over the Gulf of Mexico. During flight tests, the defined Launch Hazard Area would be cleared of air and sea traffic for a period of up to 4 hours. This would result in some delays, and potentially some economic loss, to commercial shipping, fishing, and air transportation.

It is uncertain where and when oil and gas exploration activities would be conducted in the areas of the Gulf of Mexico potentially affected by the TMD test program. Prior to oil and gas activities, appropriate environmental documentation for these projects would need to evaluate all environmental issues including the presence of TMD and other military activities in the Gulf. A Memorandum of Agreement would be developed with the Minerals Management Service (MMS) to coordinate TMD testing and oil and gas activities in the Eglin Gulf Test Range. Procedures for scheduling, notification, clearance, and mitigation for TMD launch activities would be developed in cooperation with MMS and other Federal resource agencies.

Booster drops, intercept debris, and sonic booms generated by the TMD test program could potentially affect marine mammals in the Gulf of Mexico. There is the potential that sonic booms created by target missiles reentering the atmosphere could penetrate the water. This may result in the harassment of some marine mammals. This potential impact is being analyzed by a consortium of Federal and state agencies.

FLORIDA KEYS

Two separate areas in the Florida Keys are other alternatives considered to provide a target launch from the southern Gulf of Mexico—Saddlebunch Keys, and Cudjoe Key. It is unlikely that this alternative will be chosen. The possibility of using a launch site in the Florida Keys remains if a national need develops. The property of either alternative Keys site is currently military land, and is recognized as such in the Florida Keys National Marine Sanctuary Management Plan.

The proposed site preparation and pre-flight activities, although an increase, would not affect the adjacent land uses. Flight test activities would cause increased site occupation and activity, a short-term high noise level, and a visible emissions trail. Flight test activities would include clearing land and water areas of non-mission-essential personnel for periods of no more than 4 hours a month.

There is considerable concern about the environment around the Florida Keys. This concern is the primary reason this alternative is in the Other Alternatives Considered category; specifically, potentially adverse impacts at the Saddlebunch Keys location. This location would result in the permanent loss of up to 0.9 hectare (2.2 acres) of wetlands. A potential mitigation measure would be in-kind wetland restoration.

CUMULATIVE IMPACTS

Cumulative impacts consider the impacts of the proposed action plus those of other reasonably foreseeable activities. Using 10 years to analyze the cumulative impacts, few impacts beyond those identified for individual test events were found.

Depending on the specific resource, cumulative impacts may or may not be additive in nature. Environmental monitoring at Kennedy Space Center over 10 years of Space Shuttle launches has shown that normal pH levels and metal concentrations in adjacent water bodies have returned to pre-launch levels within 24 to 72 hours with no long-term changes. However, settling of exhaust particles on soils near the launch pad has caused some small but permanent changes in local plant diversity and cover. Although the predicted settling from TMD testing will be less than 1 percent of the settling rates for the Space Shuttle, it is possible that similar changes in local plant diversity and vegetation cover could occur within a 60-meter (197-foot) radius of the proposed target launch sites. During flight test events, some small-scale animal habitat destruction, frightening of animals, and incidental death could occur near the launch area. However, the continued existence of local plant and wildlife species would not be jeopardized as a result of TMD programs.

CONCLUSIONS

The purpose of this SEIS is to analyze the potential environmental impacts of implementing TMD testing and training activities in the EGTR. The director of the BMDO will use this information along with other considerations to decide whether or not to proceed with enhancing the EGTR for TMD programs.

The information in this document has come from many sources. This information is now available in one document to the DOD, the State of Florida, local governments, and the general public for their future planning efforts.

REPOSITORIES

The Draft and Final SEIS, as well as the 1994 Theater Missile Defense Extended Test Range EIS, are available at the following public libraries:

Okaloosa-Walton Community College
Library–Niceville Campus
100 College Boulevard
Niceville, FL 32578
(850) 729-5395

Monroe County Public Library–
George Dolezal Public Library Branch
3251 Overseas Highway
Marathon, FL 33050
(305) 743-5156

Okaloosa–Walton Community College
Library/UWF–Fort Walton Beach Campus
1170 King Boulevard
Fort Walton Beach, FL 32547
(850) 863-6578

Monroe County Public Library–
Main Branch
700 Fleming Street
Key West, FL 33040
(305) 294-8488

Gulf County Library
110 Library Drive
Highway 71 North
Port St. Joe, FL 32456
(850) 229-8879

Florida Keys Community College Library
5901 West College Road
Key West, FL 33040
(305) 296-9081

Key Largo Public Library
101485 Overseas Highway
Key Largo, FL 33037
(305) 451-2396

Manoa Public Library
2716 Woodlawn Drive
Honolulu, HI 96822
(808) 988-6655

Table ES-3: Comparison of Potential Environmental Impacts of the Proposed Action and Alternatives

RESOURCE AREA	NO ACTION ALTERNATIVE	PREFERRED ALTERNATIVE							ALTERNATIVES			
		Interceptor Flight Test Modes			Target Flight			All Flight	Interceptor	Target		
		Site A-15 Santa Rosa Island	Site D-3A Cape San Blas	Navy AEGIS Ship	Site A-15	Site D-3A	Air Drop or Flight Test	Gulf of Mexico	Offshore Platform	Mobile Sea Launch Platform	Cudjoe Key	Saddlebunch Keys
Air Quality	<ul style="list-style-type: none"> Within NAAQS 	<ul style="list-style-type: none"> Within NAAQS No health exposure 	<ul style="list-style-type: none"> Within NAAQS No health exposure 	<ul style="list-style-type: none"> Meets NAAQS No health exposure 	<ul style="list-style-type: none"> Within NAAQS No health exposure 	<ul style="list-style-type: none"> Within NAAQS No health exposure 	<ul style="list-style-type: none"> Meets NAAQS No health exposure 	<ul style="list-style-type: none"> Meets NAAQS No health exposure 	<ul style="list-style-type: none"> Meets NAAQS No health exposure 	<ul style="list-style-type: none"> Meets NAAQS No health exposure 	<ul style="list-style-type: none"> Within NAAQS No health exposure 	<ul style="list-style-type: none"> Within NAAQS No health exposure
Airspace Use	<ul style="list-style-type: none"> No Impact 	<ul style="list-style-type: none"> CFA would not impact air traffic in the east-west corridor 	<ul style="list-style-type: none"> CFA would not impact air traffic in the area 	<ul style="list-style-type: none"> Temporary clearance of existing warning areas 	<ul style="list-style-type: none"> CFA would not impact air traffic in the east-west corridor 	<ul style="list-style-type: none"> CFA would not impact air traffic in the area 	<ul style="list-style-type: none"> Temporary clearance of existing warning areas Temporary rerouting of air traffic 	<ul style="list-style-type: none"> Temporary clearance of existing warning areas Temporary rerouting of air traffic 	<ul style="list-style-type: none"> Temporary clearance of existing warning areas 	<ul style="list-style-type: none"> Temporary clearance of existing warning areas 	<ul style="list-style-type: none"> CFA would not impact air traffic in the area 	<ul style="list-style-type: none"> CFA would not impact air traffic in the area
Biological Resources	<ul style="list-style-type: none"> T&E Species protected by Natural Resources management practices 	<ul style="list-style-type: none"> Temporary disturbance to wildlife from site preparation and launch activities 	<ul style="list-style-type: none"> Temporary disturbance to wildlife from site preparation and launch activities 	<ul style="list-style-type: none"> No impact 	<ul style="list-style-type: none"> Temporary disturbance to wildlife from site preparation and launch activities 	<ul style="list-style-type: none"> Temporary disturbance to wildlife from site preparation and launch activities Adverse impact to bald eagle and sea turtle nesting Adverse impact eliminates 1.6 acres of wetland Temporary singeing of vegetation 	<ul style="list-style-type: none"> Potential impact to marine mammals due to launch support equipment 	<ul style="list-style-type: none"> Potential impact to marine mammals due to missile reentry 	<ul style="list-style-type: none"> Temporary impact to sea floor habitat during construction Potential beneficial impact as artificial reef habitat 	<ul style="list-style-type: none"> No impact 	<ul style="list-style-type: none"> Temporary disturbance to wildlife from site preparation and launch activities Temporary singeing of vegetation 	<ul style="list-style-type: none"> Potential adverse impact to sensitive species and habitat Temporary disturbance to wildlife from site preparation and launch activities Adverse impact eliminates 2.2 acres of wetland Temporary singeing of vegetation
Cultural Resources	<ul style="list-style-type: none"> Cape San Blas Keeper's Quarters threatened by erosion and natural deterioration 	<ul style="list-style-type: none"> No impact 	<ul style="list-style-type: none"> No impact 	<ul style="list-style-type: none"> No impact 	<ul style="list-style-type: none"> Site preparation may affect BOMARC facilities potentially eligible for NRHP listing 	<ul style="list-style-type: none"> Potential adverse effect to lighthouse from target launch noise levels 	<ul style="list-style-type: none"> No impact 	<ul style="list-style-type: none"> No impact 	<ul style="list-style-type: none"> Site preparation may affect submerged prehistoric sites or shipwrecks 	<ul style="list-style-type: none"> No impact 	<ul style="list-style-type: none"> Site preparation may affect Aerostat facilities potentially eligible for NRHP listing 	<ul style="list-style-type: none"> No impact
Geology and Soils	<ul style="list-style-type: none"> Cape San Blas affected by coastal erosion and natural deterioration 	<ul style="list-style-type: none"> Small deposition of aluminum oxide and hydrogen chloride on soils 	<ul style="list-style-type: none"> Small deposition of aluminum oxide and hydrogen chloride on soils 	<ul style="list-style-type: none"> No impact 	<ul style="list-style-type: none"> Small deposition of aluminum oxide and hydrogen chloride on soils 	<ul style="list-style-type: none"> Small deposition of aluminum oxide and hydrogen chloride on soils Adverse impact eliminates 1.6 acres of wetland 	<ul style="list-style-type: none"> No impact 	<ul style="list-style-type: none"> No impact 	<ul style="list-style-type: none"> Small impact to sea floor during construction Potential beneficial impact to marine life 	<ul style="list-style-type: none"> No impact 	<ul style="list-style-type: none"> Small deposition of aluminum oxide and hydrogen chloride on soils 	<ul style="list-style-type: none"> Small deposition of aluminum oxide and hydrogen chloride on soils Adverse impact eliminates 2.2 acres of wetland
Hazardous Materials and Waste	<ul style="list-style-type: none"> Within allowable limits 	<ul style="list-style-type: none"> Within allowable limits 	<ul style="list-style-type: none"> Within allowable limits 	<ul style="list-style-type: none"> Within allowable limits 	<ul style="list-style-type: none"> Within allowable limits 	<ul style="list-style-type: none"> Within allowable limits 	<ul style="list-style-type: none"> Within allowable limits 	<ul style="list-style-type: none"> Small amounts of hazardous materials over large areas of the Gulf 	<ul style="list-style-type: none"> Within allowable limits 	<ul style="list-style-type: none"> Within allowable limits 	<ul style="list-style-type: none"> Within allowable limits 	<ul style="list-style-type: none"> Within allowable limits
Land and Water Use	<ul style="list-style-type: none"> Compatible with current military land/gulf use 	<ul style="list-style-type: none"> Compatible with Okaloosa County Comp. Plan and Eglin AFB Plan 	<ul style="list-style-type: none"> Compatible with Gulf County Comp. Plan and Eglin AFB Plan Temporary clearance of recreation areas in LHA Temporary closure of CR 30E LHA overlaps 5 non-federal parcels 	<ul style="list-style-type: none"> Temporary clearance of existing warning areas 	<ul style="list-style-type: none"> Compatible with Okaloosa County Comp. Plan and Eglin AFB Plan 	<ul style="list-style-type: none"> Compatible with Gulf County Comp. Plan and Eglin AFB Plan Temporary clearance of recreation areas in LHA Temporary closure of CR 30E LHA overlaps 5 non-federal parcels 	<ul style="list-style-type: none"> Potential impact on oil and gas exploration Temporary clearance of existing marine areas 	<ul style="list-style-type: none"> Potential impact on oil and gas exploration Temporary clearance of existing marine areas 	<ul style="list-style-type: none"> Temporary clearance of existing marine areas 	<ul style="list-style-type: none"> Temporary clearance of existing marine areas 	<ul style="list-style-type: none"> Not Compatible with Monroe County Comp. Plan LHA overlaps 7 parcels of non-federal land Temporary clearance of water based activities recreational areas in LHA 	<ul style="list-style-type: none"> Not Compatible with Monroe County Comp. Plan LHA overlaps 5 parcels of non-federal land Temporary clearance of water based activities recreational areas in LHA

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Table ES-3: Comparison of Potential Environmental Impacts of the Proposed Action and Alternatives

(Continued)

RESOURCE AREA	NO ACTION ALTERNATIVE	PREFERRED ALTERNATIVE							ALTERNATIVES			
		Interceptor Flight Test Modes			Target Flight			All Flight	Interceptor	Target		
		Site A-15 Santa Rosa Island	Site D-3A Cape San Blas	Navy AEGIS Ship	Site A-15	Site D-3A	Air Drop or Flight Test	Gulf of Mexico	Offshore Platform	Mobile Sea Launch Platform	Cudjoe Key	Saddlebunch Keys
Noise	<ul style="list-style-type: none"> Existing noise due to military and civilian activity 	<ul style="list-style-type: none"> Increased percentage of people highly annoyed No health related sound exposure beyond LHA 	<ul style="list-style-type: none"> Increased percentage of people highly annoyed No health related sound exposure beyond LHA 	<ul style="list-style-type: none"> No impact 	<ul style="list-style-type: none"> Increased percentage of people highly annoyed No health related sound exposure beyond LHA 	<ul style="list-style-type: none"> Increased percentage of people highly annoyed No health related sound exposure beyond LHA 	<ul style="list-style-type: none"> No health related sound exposure beyond LHA 	<ul style="list-style-type: none"> Potential harm or harassment of marine mammals due to sonic boom 	<ul style="list-style-type: none"> Potential impact to marine life during construction or launch activities No health related sound exposure beyond LHA 	<ul style="list-style-type: none"> No health related sound exposure beyond LHA 	<ul style="list-style-type: none"> No health related sound exposure beyond LHA 	<ul style="list-style-type: none"> Increased percentage of people highly annoyed No health related sound exposure beyond LHA
Safety	<ul style="list-style-type: none"> No Impact 	<ul style="list-style-type: none"> No increased hazard to public 	<ul style="list-style-type: none"> No increased hazard to public 	<ul style="list-style-type: none"> No increased hazard to public 	<ul style="list-style-type: none"> No increased hazard to public 	<ul style="list-style-type: none"> No increased hazard to public 	<ul style="list-style-type: none"> No increased hazard to public 	<ul style="list-style-type: none"> No increased hazard to public 	<ul style="list-style-type: none"> No increased hazard to public 	<ul style="list-style-type: none"> No increased hazard to public 	<ul style="list-style-type: none"> No increased hazard to public 	<ul style="list-style-type: none"> No increased hazard to public
Socio-economics	<ul style="list-style-type: none"> Current employment and income trends continue 	<ul style="list-style-type: none"> Temporary impacts on commercial fishing, shipping, and recreation in LHA Temporary increase in housing demand 	<ul style="list-style-type: none"> Temporary impacts on commercial fishing, shipping, and recreation in LHA Temporary increase in housing demand Small beneficial income increases 	<ul style="list-style-type: none"> No impact 	<ul style="list-style-type: none"> Temporary impacts on commercial fishing and recreation in LHA Temporary increase in housing demand 	<ul style="list-style-type: none"> Temporary impacts on commercial fishing and recreation in LHA Temporary increase in housing demand Small beneficial income increases 	<ul style="list-style-type: none"> No impact 	<ul style="list-style-type: none"> Temporary impact on commercial fishing less than 1% 	<ul style="list-style-type: none"> Temporary impacts on commercial fishing and recreation in LHA Temporary increase in housing demand 	<ul style="list-style-type: none"> No impact 	<ul style="list-style-type: none"> Temporary effects on commercial fishing and recreation in LHA Temporary increase in housing demand 	<ul style="list-style-type: none"> Temporary effects on commercial fishing and recreation in LHA Temporary increase in housing demand
Transportation	<ul style="list-style-type: none"> Traffic growth in Fort Walton Beach and Florida Keys will exceed current capacity 	<ul style="list-style-type: none"> Increase in traffic less than 1 percent 	<ul style="list-style-type: none"> Increase in traffic less than 40 percent Temporary closure of CR 30E 	<ul style="list-style-type: none"> Temporary clearance of existing warning areas 	<ul style="list-style-type: none"> Increase in traffic less than 1 percent 	<ul style="list-style-type: none"> Increase in traffic less than 40 percent Temporary closure of CR 30E 	<ul style="list-style-type: none"> Temporary clearance of existing warning areas Temporary rerouting of shipping 	<ul style="list-style-type: none"> Temporary clearance of existing warning areas Temporary rerouting of shipping clearance Temporary closing of Intracoastal waterway in LHA 	<ul style="list-style-type: none"> Temporary clearance of existing warning areas 	<ul style="list-style-type: none"> Temporary clearance of existing warning areas 	<ul style="list-style-type: none"> Increase in traffic less than 0.5% Temporary closure of Blimp Road at Asturias 	<ul style="list-style-type: none"> Increase in traffic less than 1.5%
Utilities	<ul style="list-style-type: none"> No impacts 	<ul style="list-style-type: none"> Within current capacity 	<ul style="list-style-type: none"> Within current capacity 	<ul style="list-style-type: none"> No impact 	<ul style="list-style-type: none"> Within current capacity 	<ul style="list-style-type: none"> Within current capacity 	<ul style="list-style-type: none"> No impact 	<ul style="list-style-type: none"> No impact 	<ul style="list-style-type: none"> No impact 	<ul style="list-style-type: none"> No impact 	<ul style="list-style-type: none"> Within current capacities 	<ul style="list-style-type: none"> Within current capacities
Visual Aesthetics	<ul style="list-style-type: none"> Visual aesthetics within current military context 	<ul style="list-style-type: none"> Exhaust trail visible for short period after launch Within current military visual context 	<ul style="list-style-type: none"> Visual aesthetics within current military context 	<ul style="list-style-type: none"> Exhaust trail visible for short period after launch 	<ul style="list-style-type: none"> Target missile visible prior to launch Exhaust trail visible for short period after launch Within current military visual context 	<ul style="list-style-type: none"> Target missile visible prior to launch Exhaust trail visible for short period after launch Within current military visual context 	<ul style="list-style-type: none"> Exhaust trail visible for short period after launch 	<ul style="list-style-type: none"> Exhaust trail visible for short period after launch 	<ul style="list-style-type: none"> Exhaust trail visible for short period after launch Platform visible off-shore 	<ul style="list-style-type: none"> Exhaust trail visible for short period after launch 	<ul style="list-style-type: none"> Exhaust trail visible for short period after launch Target missile visible prior to launch Consistent with current military context and blimp effects 	<ul style="list-style-type: none"> Exhaust trail visible for short period after launch Target missile visible prior to launch Consistent with current military context and antennas effects
Water Resources	<ul style="list-style-type: none"> No impact 	<ul style="list-style-type: none"> Temporary short term increase in water acidity 	<ul style="list-style-type: none"> Temporary short term increase in water acidity 	<ul style="list-style-type: none"> No impact 	<ul style="list-style-type: none"> Temporary short term increase in water acidity 	<ul style="list-style-type: none"> Temporary short term increase in water acidity 	<ul style="list-style-type: none"> No impact 	<ul style="list-style-type: none"> Small amounts of propellant, emissions and debris deposited over large debris areas 	<ul style="list-style-type: none"> Temporary short term increase in turbidity during construction 	<ul style="list-style-type: none"> No impact 	<ul style="list-style-type: none"> Temporary short term increase in water acidity 	<ul style="list-style-type: none"> Temporary short term increase in water acidity