



DEPARTMENT OF DEFENSE
MISSILE DEFENSE AGENCY
7100 DEFENSE PENTAGON
WASHINGTON, DC 20301-7100

**GROUND-BASED MIDCOURSE DEFENSE (GMD)
INITIAL DEFENSIVE OPERATIONS CAPABILITY (IDOC) AT
VANDENBERG AIR FORCE BASE ENVIRONMENTAL ASSESSMENT**

AGENCY: Missile Defense Agency (MDA)

ACTION: Finding of No Significant Impact

BACKGROUND: Within the Department of Defense, the MDA is responsible for developing, testing, and deploying the Ballistic Missile Defense System. The Ballistic Missile Defense System is designed to intercept threat missiles during all phases of their flight: boost, midcourse, and terminal. The Ground-Based Midcourse Defense (GMD) is a component of the midcourse defense, during which the Ground-Based Interceptors (GBIs) intercept and destroy long-range missiles during the ballistic (midcourse) phase of their flight before their reentry into the Earth's atmosphere.

The U.S. Army Space and Missile Defense Command, on behalf of MDA, has conducted an Environmental Assessment (EA) of the potential environmental consequences of establishing the capability to launch defensive GBIs from Vandenberg Air Force Base (AFB), California, in support of the President's direction to the Department of Defense to field a set of initial missile defense capabilities.

This EA has been prepared in accordance with the National Environmental Policy Act of 1969, as amended, and its implementing regulations, 42 United States Code 4321 *et seq.* and 40 Code of Federal Regulations (CFR) 1500-1508, respectively; 32 CFR Part 651 (Army Regulation 200-2), *Environmental Analysis of Army Actions*; 32 CFR 989 (Air Force Instruction 32-7061), *Environmental Impact Analysis Process*; and Department of Defense Instruction 4715.9, *Environmental Planning and Analysis*. The purpose of the Proposed Action is to provide an initial defensive operational capability (IDOC) at Vandenberg AFB to defend the United States against a limited attack by long-range ballistic missiles. The GMD IDOC activities are operational, not test in nature. Operational launches would only occur in an emergency as an initial defense against a limited long-range ballistic missile attack. Consequently, this EA does not address the environmental impacts of defensive GBI launches, which would occur only in response to an actual ballistic missile threat.

DESCRIPTION OF THE PROPOSED ACTION: The Proposed Action would use and/or modify four existing missile silos and other supporting facilities at Vandenberg AFB as part of the GMD IDOC. The candidate launch facility alternatives for IDOC activities examined in this EA were Launch Facility (LF)-02, LF-03, LF-10, LF-21, LF-23, and LF-24. LF-21 has been used by GMD for GBI flight tests, and LF-23 was

previously reconfigured for booster verification tests. LF-02, LF-03, LF-10, and LF-24 were included as launch facility alternatives for IDOC activities following a selection screening process that included criteria such as location (i.e., distance from other proposed IDOC facilities), availability of infrastructure, physical condition of each facility, and the amount of possible environmental concerns at each site.

The four missile silos would be in an operational state at Vandenberg AFB with GBIs installed, ready to defend the United States against a limited strategic ballistic missile attack. One silo could function as both an operational silo and a test launch silo. This dual-use capability would enable the GMD program to use the silo for occasional test launches as analyzed in the GMD Extended Test Range Environmental Impact Statement (July 2003). At all other times, the dual-use silo would be in an operational state.

The GBI acts in a defensive mode to intercept incoming ballistic missile warheads outside the Earth's atmosphere and destroy them by force of impact. No nuclear warheads would be used by the GBI defensive interceptor. During flight, the GBI receives information from the In-Flight Interceptor Communication System Data Terminal (IDT), enabling the GBI onboard sensor system to continually discriminate and track the target. The GBI missile consists of a three-stage solid propellant booster and an Exoatmospheric Kill Vehicle (EKV). Each GBI would contain approximately 20,500 kilograms (45,000 pounds) of hydroxyl-terminated polybutadiene solid propellant. Each EKV would contain approximately 7.5 liters (2 gallons) each of liquid fuel (monomethyl hydrazine) and liquid oxidizer (nitrogen tetroxide). The liquid fuel and liquid oxidizer tanks would arrive at the site fully fueled.

Additional components associated with an operational IDOC include a Component Site Communication Node or potentially a GMD Fire Control/Communication Node, a Readiness Station (for operational, defensive readiness activities), sensors (existing range radars and fixed or mobile telemetry and optics equipment), and an IDT (fixed or relocatable).

Existing facilities would be required for the following functions: Missile Assembly/EKV/Interceptor Integration, Security Response Force Outpost, Readiness Station, GMD Fire Control/Communication components (IDT, GMD Communication Node, and GMD Fire Control), interceptor storage, administrative/office space, Peculiar Support Equipment (IDOC-associated equipment such as the "strongback" trailer used for transport) storage, EKV fuel tank storage, EKV oxidizer tank storage, and warehouse/maintenance/storage facilities. Several of these facilities may require interior modifications and the installation of additional infrastructure (i.e., security fencing, lighting, communications lines, water line upgrades, re-grading for proper storm drainage, septic tank and leach field, etc.). Buildings 975, 976, 1032, 1768, 1777, 1801, 1819, 1900, 1959, 1970, 1978, 2001, 6510, 6819, and 8500 are being considered for use by the GMD IDOC program as described in the table below.

Existing security force personnel at Vandenberg AFB would be used for IDOC activities. However, additional personnel could be required for a dedicated security force at Vandenberg AFB in support of the GMD program. Approximately 361 personnel would be present on Vandenberg AFB during peak construction periods.

Table 1: Potential Locations or Existing Facilities Proposed for Use at Vandenberg AFB, California

Facility Function	Potential Locations
Ground-Based Interceptor Launch Silos	LF-02, LF-03, LF-10, LF-21, LF-23, and LF-24
Readiness Station	Building 1768 or Building 1801
Ground-Based Midcourse Defense Fire Control Node	Building 1768 or Building 1801
Missile Assembly/Exoatmospheric Kill Vehicle /Interceptor Integration	Building 1032, Building 1819, or Building 1900
Program Personnel Support	Building 1978
Administrative Space (office space)	Building 1801, Building 1900 (short-term), Building 1959, Building 6510, and Building 8500
Exoatmospheric Kill Vehicle Fuel Tank Storage	Building 976 (This would be requested as a service)
Exoatmospheric Kill Vehicle Oxidizer Tank Storage	Building 975 (This would be requested as a service)
Interceptor Storage	Building 6819 (This would be requested as a service)
Peculiar Support Equipment Storage	Building 1970
Warehouse	Building 1801, Building 2001, and new construction within Cantonment Area or lease space off base
Maintenance/Storage	Building 1777, Building 1959, Building 2001, and new construction within Cantonment Area or lease space off base
In-Flight Interceptor Communication System Data Terminal Site	Titan Pasture Site

NOTES:
 LF = Launch Facility

Communication cables would be installed between facilities as required. Cables would be installed in existing conduits, where available. If existing conduits are not available, the cable(s) would be installed in new conduits that would be placed in routes designed to avoid sensitive areas and approved by the Vandenberg AFB Environmental Management Office. New communications cable/conduit would be buried in the shoulders of existing roads, or along existing buried communication lines where cross country routes are

required. Trenching, approximately 20 kilometers (12.4 miles), for the new communications cable/conduit would have a maximum depth of 0.9 meter (3 feet). Other methods of installation, such as slant/directional drilling, are also being proposed where appropriate as a means of minimizing impacts to sensitive areas.

ALTERNATIVES TO THE PROPOSED ACTION:

No-action

Under the No-action Alternative, GBI launch facilities at Vandenberg AFB for initial defensive operations would not be established. Vandenberg AFB would continue with normal activities, including launching missiles as analyzed in prior environmental documents. GMD Extended Test Range tests would continue. By implementing the No-action Alternative, GMD would not expand the capability at Vandenberg AFB to provide an initial defensive capability for the United States against the threat of a limited strategic ballistic missile attack.

Alternatives Not Carried Forward for Analysis

Several alternative Vandenberg AFB facilities and locations were considered for use as part of the IDOC Proposed Action. These alternative locations did not meet all necessary criteria determined in accordance with MDA Directive 4165.02, *Comprehensive Siting Analysis Process*, and thus were not carried forward for analysis.

ENVIRONMENTAL EFFECTS:

Proposed Action

To provide a context for understanding the potential effects of the Proposed Action and a basis for assessing the significance of potential impacts, several environmental resource areas were evaluated. The resource areas determined to have a potential for impacts were air quality, biological resources, cultural resources, geology and soils, hazardous materials and waste, health and safety, infrastructure, land use, noise, socioeconomics, and water resources. Each environmental resource was evaluated according to a list of activities that were determined to be necessary to accomplish the Proposed Action.

Implementation of the Proposed Action on Vandenberg AFB would not result in significant impacts to any of the resource areas listed above. All activities would be in compliance with applicable federal, state, and local regulations and requirements.

Air Quality. No exceedance of air quality standards or health-based standards of non-criteria pollutants are anticipated from facility modifications and site preparation activities necessary for the GMD IDOC program. Emissions from site preparation and cable installation activities and test and use of generators for backup power (less than 200 hours per year) would be regulated in accordance with the agreement between Vandenberg AFB and the Santa Barbara County Air Pollution Control District for

Vandenberg AFB and are not anticipated to cause exceedances of air quality standards. Review of the Proposed Action as required by the General Conformity Rule resulted in a finding of presumed conformity with the State Implementation Plan.

Biological Resources. Site preparation and cable installation activities should not have significant adverse impacts to vegetation, wildlife, threatened/endangered species, or wetlands. Facility modifications requiring parking lot construction and fencing would occur in previously disturbed locations resulting in minor impacts to vegetation. Fiber-optic cable installation is anticipated to require minor excavation along the shoulders of existing roads or existing buried communication lines, which should also pose minimal impact to adjacent vegetation and minimize the potential for impacts to listed species of vegetation. Surveys along communications routes have been performed by qualified biologists for the Gaviota tarplant and Lompoc yerba santa, and for areas of potential wetlands, which should allow for designs to avoid impacts. Reconnaissance-level pre-construction surveys and construction monitoring would be conducted to minimize the risk of mortality to federal and state species of concern (burrowing owl, loggerhead shrike, California horned lizard, and silvery legless lizard) during site clearing for those areas requiring grading or vegetation removal. Biological monitors would be available on-site during communication cable installation and other site preparation activities that would require ground disturbance.

All transportation and operation of equipment and materials would be conducted in accordance with applicable spill prevention, containment, control measures, and transportation regulations, which should preclude impacts to biological resources.

No direct physical auditory changes to wildlife are anticipated from the site preparation or operational noise. GMD IDOC site preparation activities would not impact threatened and endangered species along the coast, such as the southern sea otter and nesting western snowy plover and California least tern, due to the distance from their coastal habitat. The increased presence of personnel and site preparation noise may cause birds and other mobile wildlife species to temporarily avoid areas subject to the most activity. However, additional similar habitat is nearby for displaced wildlife. No impacts to environmentally sensitive habitat are expected.

Cultural Resources. Since all new construction would take place on existing concrete pads, within previously graded or graveled areas, or within already developed areas of the base, the proposed new construction activities should have no effect on historic properties. Consultation with State Historic Preservation Officer on the potential effects of the Proposed Action to cultural resources has been initiated through Vandenberg AFB Environmental Management.

Modifications to facilities eligible for listing on the National Register of Historic Properties would be directed by Vandenberg AFB personnel consistent with requirements resulting from consultation with the California State Historic Preservation Office. A

Historic American Engineering Record would be completed for proposed activities at former Peacekeeper facilities, LF-02, Building 1819, and Building 1900, prior to any refurbishment or alterations. The trenching required for fiber-optic cable installation would be excavated along the shoulder of existing roadways or along existing buried communication lines if cross country routes are required. Any known cultural resources would be avoided or impacts mitigated by drilling beneath them. Although complete avoidance of prehistoric and historic sites is planned, all construction activities would be monitored by an archaeologist and a Native American.

Geology and Soils. GMD IDOC site preparation activities (new small asphalt parking areas, some re-grade for proper storm drainage in the area outside of the existing fence at Building 1768, and fence installation) may result in minor, short-term impacts to adjacent soils. The staging areas for any construction materials and equipment associated with modification of the facilities would be on existing paved, aggregate, or previously disturbed surfaces. The trenching required for fiber-optic cable installation would be excavated along existing roads or along existing buried communication lines if cross country routes are required. No substantial impacts to geology and soils are anticipated.

Hazardous Materials and Hazardous Waste. The Proposed Action is not expected to substantially increase the volume of hazardous materials used, or hazardous waste generated, at Vandenberg AFB. Hazardous materials and hazardous waste would be handled and disposed of in accordance with appropriate spill prevention, containment, and control measures and hazardous materials handling regulations. GMD program personnel would look for opportunities to reduce/recycle the hazardous materials used during all stages of site preparation and operation, such as including environmentally preferred products and bio-based products.

Health and Safety. Overall there would be a minimal increase in health and safety risk in comparison to current activities at Vandenberg AFB from site preparation and operation and transportation of hazardous materials. All activities would be conducted in accordance with the Occupational Safety and Health Administration regulations and U.S. Army and 30th Space Wing Safety procedures to control exposure of workers to safety and health hazards, which should preclude impacts to worker or public health as a result of the Proposed Action.

Infrastructure. Minor disruptions to traffic from cable installation along roadways and a slight increase in traffic on roadways used by contractor personnel during silo modification, other site preparation, and operation activities would be expected. All disruptions to traffic due to cable installations along the roadways would be communicated to 30 Civil Engineering Squadron Dispatch, so that in the event of an emergency, responders would be forewarned about changed conditions in the area.

Existing infrastructure for Buildings 1032, 1777, 1819, 1900 (short term), 1959, 2001, 6510, 8500, and the IDT site is sufficient for support of the Proposed Action, and no

external modifications would be required. Existing infrastructure such as commercial power, water, sewer, communication lines, roadways, and storm drainage are all available and adequate in the area where the storage and warehouse facilities are to be constructed. Diesel generators would be used as a backup power source at each LF and potentially at each support facility. Additional exterior lighting, telephone communications, warning lights, and a public address system would be installed at each facility as required. Additional water lines (upgrades) would be installed at Buildings 1768 and 6819. A septic tank and leach field would be installed at Building 1801. The addition of GMD IDOC site preparation and operation personnel should not substantially increase demand on the capacity of infrastructure systems on base.

The potential increase in solid waste generated from the nominal increase in personnel and site preparation and operation activities would be minimal (nonhazardous materials removed during renovation of facilities, general office type waste) and would not substantially increase demand on the capacity of the Vandenberg AFB landfill or other infrastructure such as the solid waste disposal system.

Land Use. No adverse impacts to current on-base land use are anticipated. No public access to parks, popular visitor destination points, and recreation areas, including water-oriented recreational activities, would be restricted by the program. A Coastal Zone Consistency Determination, stating that the Proposed Action is consistent to the maximum extent practicable with the enforceable policies of the California Coastal Management Program, was approved by the California Coastal Commission. The GMD IDOC activities would comply with federal Coastal Zone Consistency Regulations.

Noise. Noise impacts from site preparation and fiber optic cable installation would be short-term and insignificant. Any impacts associated with operation of the facilities, such as generator testing and other maintenance, would also be short-term and insignificant.

Socioeconomics. GMD IDOC personnel spending money in the local economy should represent a small positive temporary impact to the local community. GMD IDOC security personnel would reside in housing on Vandenberg AFB. Accommodations for other GMD IDOC personnel would be provided by local hotels or similar facilities.

Water Resources. No withdrawal of or discharge to groundwater is anticipated. Communications cables would be in existing conduits attached to the bridge at San Antonio Creek and Shuman Creek. Some re-grade for proper storm drainage would be required in the area outside of the existing fence at Building 1768 and for additional parking area construction. Activities associated with construction would be performed in accordance with the State General Permit for stormwater discharges (National Pollutant Discharge Elimination System regulations). Activities would also follow guidelines in the Vandenberg AFB Spill Prevention Control and Countermeasure Plan to minimize potential water resources impacts.

Alternatives.

Under the No-action Alternative, no environmental consequences associated with the GMD IDOC program would occur. Vandenberg AFB would continue with normal activities, including launching missiles as analyzed in prior environmental documents. GMD Extended Test Range tests, including those actions at Vandenberg AFB analyzed in the July 2003 GMD ETR EIS, would continue.

Public Comment.

During the public comment period, MDA received one telephonic and one set of written comments to the EA. The telephonic comment objected to the proposed action on policy grounds. The written comments generally recommended preparation of an Environmental Impact Statement and requested clarification of various policy, project and environmental issues

CONCLUSION: This analysis concludes that the proposed activities for the IDOC at Vandenberg AFB are expected to have no significant impacts on the environment. Preparation of an Environmental Impact Statement, therefore, is not required. A follow-up action list of mitigations and standard operating procedures to protect the environment will be developed to ensure compliance with the actions described in this EA.

Analysis in the EA discerned few differences among the examined alternatives on the basis of environmental factors. Policy reasons (such as location of assets for security reasons, cost, schedule and availability) prevailed as the determining factor for the facilities selected in this decision. Accordingly, MDA selects alternatives LF-02, LF-03, LF-21, and LF-23 and associated support facilities. As described in the Proposed Action, the silos would be in an operational state with GBIs installed, ready to defend the United States against a limited strategic ballistic missile attack. One of these silos would function as both an operational silo and a test launch silo.

DEADLINE FOR RECEIPT OF WRITTEN COMMENTS:

October 15, 2003.

POINT OF CONTACT: Submit written comments or requests for a copy of the GMD IDOC EA to:

U.S. Army Space and Missile Defense Command
Attention: SMDC-EN-V (David Hasley)
Post Office Box 1500
Huntsville, AL 35807-3801

**GROUND-BASED MIDCOURSE DEFENSE (GMD)
INITIAL DEFENSIVE OPERATIONS CAPABILITY (IDOC) AT
VANDENBERG AIR FORCE BASE ENVIRONMENTAL ASSESSMENT**

AGENCY: Missile Defense Agency

ACTION: Finding of No Significant Impact

PROPONENT:

Mark D Shackelford

DATE: *Oct 22, 2003*

MARK D. SHACKELFORD
Brigadier General, USAF
Deputy for Test and Assessment