

## **A Sourcebook on an American Forward-Based Missile Defense Radar in the Caucasus**



**Version of 2011-07-13**

*Additional material for this sourcebook would be welcome.  
Please send it to [thomsona@flash.net](mailto:thomsona@flash.net)*

# **U.S. Policy on Missile Defense**



**7 APRIL 2005**

**Presentation for the  
National Defense Industrial Forum**

**Phil Jamison  
Office of Missile Defense Policy**



## Proposed Missile Defense Plan III Blocks 2008 And 2010

	2009	2011
	Keep Pace With Threat Begin Addressing Asymmetric and Unconventional Attacks Increase Capability Against All Threats	Keep Pace With Threat Continue Addressing Asymmetric and Unconventional Attacks Increase Capability Against All Threats
Fixed Site Interceptors	<ul style="list-style-type: none"> <li>• Up to 30 Ground-Based Interceptors, Alaska</li> <li>• 2 Ground-Based Interceptors, California</li> </ul>	<ul style="list-style-type: none"> <li>• 30 Ground-Based Interceptors, Alaska</li> <li>• 2 Ground-Based Interceptors, California</li> <li>• 2 Ground-Based Interceptors, Europe</li> </ul>
Fixed Site Sensors	<ul style="list-style-type: none"> <li>• Cobra Dane Radar, Alaska</li> <li>• Beale Radar, California</li> <li>• Fylingdales Radar, United Kingdom</li> <li>• Thule Radar, Greenland</li> <li>• Otis Radar, Massachusetts</li> <li>• Eglin Radar, Florida</li> </ul>	<ul style="list-style-type: none"> <li>• Cobra Dane Radar, Alaska</li> <li>• Beale Radar, California</li> <li>• Fylingdales Radar, United Kingdom</li> <li>• Thule Radar, Greenland</li> <li>• Otis Radar, Massachusetts</li> <li>• Eglin Radar, Florida</li> <li>• Clear Radar, Alaska</li> </ul>
Mobile / Transportable Sensors	<ul style="list-style-type: none"> <li>• 1 Sea-Based X-Band Radar, Alaska</li> <li>• 3 Forward-Based X-Band Radars, East Asia (1) Europe (1), Caucasus (1)</li> <li>• 1 Discrimination X-Band Radar</li> </ul>	<ul style="list-style-type: none"> <li>• 1 Sea-Based X-Band Radar, Alaska</li> <li>• 3 Forward-Based X-Band Radars, East Asia (1) Europe (1), Caucasus (1)</li> <li>• 2 Discrimination X-Band Radar</li> </ul>
Mobile Interceptors	<ul style="list-style-type: none"> <li>• 3 Aegis Engagement Cruisers</li> <li>• Initial Space Tracking &amp; Surveillance Satellites</li> <li>• 15 Aegis Engagement Destroyers</li> <li>• 72 Standard Missile-3s*</li> <li>• 24 Terminal High Altitude Area Defense Missiles</li> <li>• 712 Patriot PAC-3</li> </ul>	<ul style="list-style-type: none"> <li>• 3 Aegis Engagement Cruisers</li> <li>• 15 Aegis Engagement Destroyers</li> <li>• 101 Standard Missile-3s*</li> <li>• 48 Terminal High Altitude Area Defense Missiles</li> <li>• 900 Patriot PAC-3</li> </ul>

\* Planned deliveries



## Block 2008 Development

Block 2008 represents the period of development for calendar years 2008 and 2009. Block 2008 will continue developing existing capabilities and provide new capabilities that will be added to those fielded in Blocks 2004 and 2006. The following are critical program areas additions that are expected to be developed for the Ballistic Missile Defense System in Block 2008:

### Boost Phase Development

- Airborne Laser: Continue development and completing ground and flight test with the installed High Energy Laser; conducting a lethal system demonstration (shooting down a ballistic missile in flight).
- Kinetic Energy Interceptor: Continue development, including international cooperation done through the international industry development program.

### Midcourse Phase Development

- Ground-based Midcourse Defense:
  - Increase Ground-Based Interceptor inventory with up to 38 at Ft. Greely, Alaska.
- Aegis Ballistic Missile Defense:
  - Increase Engagement Destroyer inventory to 15.
  - Increase Standard Missile-3 interceptor inventory to 55.

### Terminal Phase Development

- Increase Terminal High Altitude Air Defense missile inventory to 24.
- Increase PATRIOT Advanced Capability-3 missile inventory to 712.

### Sensors

- Fixed site sensors inventory will be increased with the addition of modified Early Warning Radars at Thule, Greenland and Otis, Massachusetts.
- The mobile/transportable sensors inventory will be increased with the addition of three forward-based X-band Radars (one in Europe, one in East Asia, and one in Caucasus) and the initial Space Tracking & Surveillance Satellites.

### Command, Control, Battle Management, and Communications

- Upgraded consequence management and mitigation tools.
- Enhanced Ballistic Missile Defense System protection capability.
- Command, Control, Battle Management, and Communications suites for the Combatant Commanders at European Command and Central Command, upgrades to Command, Control, Battle Management, and Communications suites at Northern Command, Strategic Command, Pacific Command, the Joint National Integration Center, and the Pacific Command Area of Responsibility.
- Full Global Integrated Fire Control with improved sensor management. This initial capability is located at European Command.



## Forward Deployable Radars

The Ballistic Missile Defense System will deploy forward based radars to enhance the system's capability by adding robustness against a wide range of threats and providing support for increased protection. The radars will be capable of detecting ballistic missiles early in their flight and will provide precise tracking information for use by the missile defense system. This approach provides overlapping sensor coverage, the potential to extend the Ballistic Missile Defense System battle space, and the ability to complicate an enemy's ability to penetrate the defense system.



### Overview

- High-resolution, X-band class, phased array radar
- Radars will acquire, track, discriminate, classify, identify, and estimate the trajectory parameters of threat missiles and missile components, and pass this information to other Ballistic Missile Defense System tracking, discrimination, and fire control radars downstream.
- Transportable by air, ship, and rail
- Also deployed with command and control interface, a radar support trailer, generators, and supply containers.

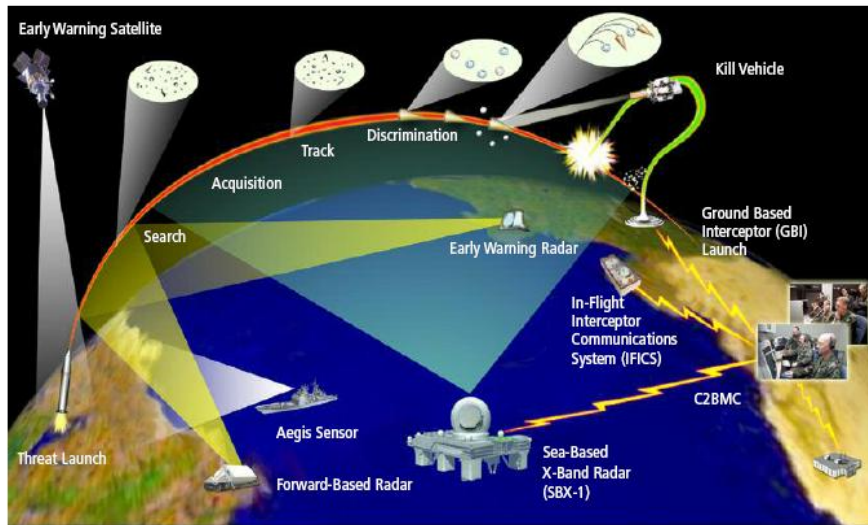
### Details

- Forward based radars, coupled with layered sensors, give the Ballistic Missile Defense System a continuous tracking and discrimination capability with more shot opportunities to engage the target, resulting in a greater probability for a successful hit.
- The radars will pass target data to the command and control system for use by the midcourse and terminal sensors.
- Performs autonomously or as cued by other sensors

### Development

- Four forward deployed radars may be developed and deployed to protect the United States from Intercontinental Ballistic Missiles and medium range threats.
- The forward deployed radars will provide an initial search and track capability in 2006.
- Discrimination enhancements will be added in 2007.

## Forward-Based X-Band Radar-Transportable (FBX-T)



The FBX-T radar is designed to acquire and track targets early in the trajectory.



## Immediate Threat Acquisition

The FBX-T radar is designed to first detect a ballistic missile as close to the country of origin as possible. This maximizes the capability of the BMD system to identify, assess and engage ballistic missile threats to the U.S, deployed forces and allies. As soon as the FBX-T detects a threat, it begins generating sophisticated tracking data about that object and its flight. That information is then reported to the Command and Control Battle Management Communications (C2BMC) element. Once the tracking data provided by the FBX-T and other sensors is received by the engaging fire control system — and the object is deemed hostile — the target will be intercepted and destroyed by a Ground-Based Interceptor (GBI) or Standard Missile-3.

*[Sourcebook note: In the European missile defense system under discussion before 2010, the GBR-P radar located in the Czech Republic would have taken the place of the Sea-Based X Band Radar shown above.]*

PC.DEL/644/07/Add.1

25 June 2007

ENGLISH only

OSCE

Annual Security Review Conference

19 – 20 June 2007

Vienna, Austria

Address to Working Session II:

Challenges in the Politico-Military Aspects of Security Dimension

Presented by

Mr. Dennis Mays

Neuer Sal

20 June 2007

Good morning. Thank you Mr. Fata. Thank you Mr. Chairman.

It is an honor to address this venue. I am the Director for Systems Engineering at the Missile Defense Agency. I started back in 1994. I was Chief Engineer for the National Missile Defense Program. When we realized the more global nature that was required, that program was changed to be the ground base, mid-course missile defense program. And then in 2000 I was assigned to be the Chief Engineer for the entire Ballistic Missile Defense Program.

*[deletia]*

*[With regard to the proposed European missile defense installation,]* The forward radar is transportable. It is a radar that is built to support the THAAD, the Terminal High Altitude Area Defense system. That radar is proposed to be put within a thousand kilometers of what we believe the threat area could be. This radar is also an X-band radar; it would also be used for tracking and early detection of the threat.

The key to the way our system works is to have constant radar coverage of the threat as it flies through space. So there is a need to have a radar both in a forward location and mid-course location to ensure that you are constantly looking at that threat all the way up to the time of intercept.

*[deletia]*

The capability provided by the European System with an interceptor field in Poland, a mid-course radar in the Czech Republic, and the forward based radar located about a 1,000 kilometers from the ballistic missile threat provides significant protection for a large area that includes most of North America and half of Europe. It provides total coverage for all of Europe that is threatened by intermediate or long range missiles. Those areas threatened by shorter range missiles which are located in Southeast Europe can be dealt with by NATO deployed capabilities-- the NATO ALTBMD system, or by U.S. systems such as Patriot PAC-3, the Aegis Sea-based BMD, or the future Terminal High Altitude Area Defense system or THAAD.

<http://www.mda.mil/mdalink/pdf/budgetfy08.pdf>

## **Missile Defense Agency**

**Fiscal Year 2008 (FY08)**

**Budget Estimates**

**Overview**

Approved for Public Release

07-MDA-2175 (31 JAN 07)

*[EXCERPTS]*

We successfully deployed the first AN/TPY-2 (formerly known as the forward-based X band radar, or FBX-T) and supporting C2BMC equipment to Shariki Air Base in Japan, achieving partial mission capability on October 30, 2006... The current location of the AN/TPY-2 at Shariki is an interim site until construction can be completed for the permanent site. Three additional AN/TPY-2 radars will also be delivered to the warfighter to provide forward-based sensor coverage against possible launches from critical threat locations.

The forward placement of the AN/TPY-2 radar provides information early in the flight of a potential ballistic missile launch and helps discriminate threat RVs from associated countermeasures.

Block 2008.

Fielding:

- Two additional Forward-Based X-Band Radars (AN/TPY-2);

Block 2010.

Development:

- GMD efforts will include an enhanced flight and testing program for additional Engagement Sequence Groups, including the capability to launch or engage a Ground-Based Interceptor on sensor data provided by a AN/TPY-2;

Block 2012.

Fielding:

- Adjunct radar to use in conjunction with the AN/TPY-2 forward-based X-band radars.



<http://www.letectvi.cz/src/letectvi/img/news/pvo/2007/01/fbxt.jpg>

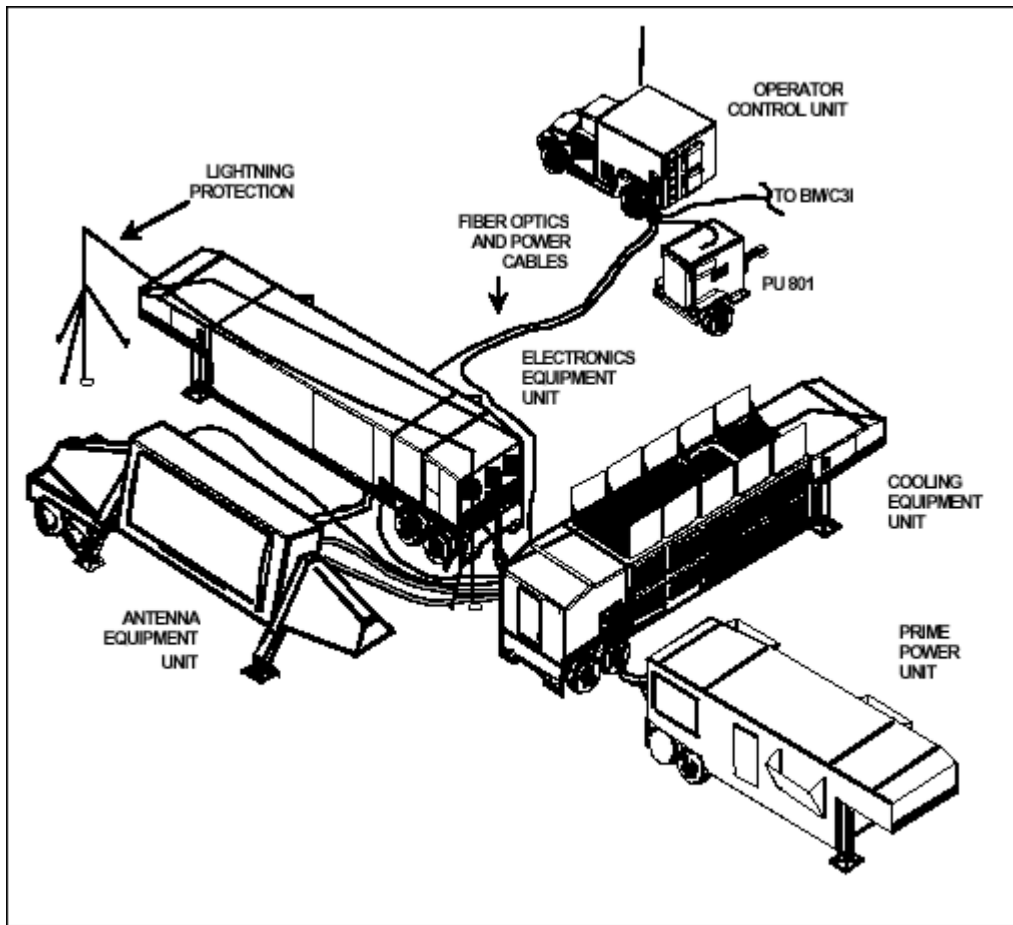


[http://www.defenseindustrydaily.com/images/ABM\\_THAAD\\_GBR\\_lg.jpg](http://www.defenseindustrydaily.com/images/ABM_THAAD_GBR_lg.jpg)



**AN/TPY-2**

<http://www004.upp.so-net.ne.jp/weapon/images/thaadradar.gif>



THAADレーダー・セット U.S Army Image

# Sensors Directorate Overview For The Small Business Day Conference

DISTRIBUTION STATEMENT A.  
Approved for public release;  
Distribution is unlimited.



**28 SEP 06**

**Ms. Connie Hines  
MDA / SN  
Missile Defense Agency**



# FBX-T Radar



BMDs SENSORS DIRECTORATE

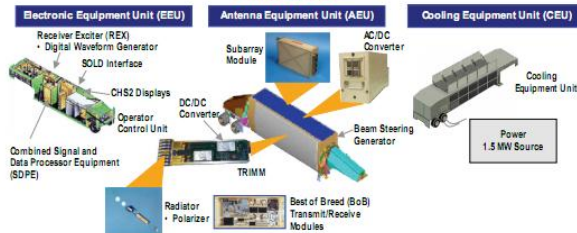
## Description

- X-Band, phased array system
- Electronic scan
- Mission
  - Medium-to-Long Range search and target acquisition
  - Provide accurate data for
    - Threat early warning, type classification
    - Interceptor fire control
    - External sensor cueing
    - Launch and impact point estimates
  - Discriminate RV from balloons, decoys, counter-measures, boosters, and debris

## Contracts

- Production contract awarded to Raytheon 4 APR 03
  - Integrated product team structure used for program execution to manage schedule, tasks, and costs
  - Options exercised for 3 additional radars; Total of 4 radars now on contract
- Contractor logistics support contract awarded to Raytheon
  - Site surveys / site preparation
  - Site operation and maintenance
  - Mission preparation and support
  - Depot support
  - Administrative and physical security

## Hardware



Approved for Public Release  
06-MDA 1901 (13 SEP 06)

## Software

- C2BMC interface
- Initial acquisition and track of boosting ballistic missiles
- Advanced algorithms

ms-108719 / 091406



## Recent Contracting Activities



BMDS SENSORS DIRECTORATE

### • Adjunct Sensor

- MDA / SN has a requirement for an Adjunct Sensor for discrimination and tracking of intercontinental / medium range / intermediate range ballistic missile threats
- The radar will be collocated with a land-based, X-band phased array radar which will acquire and handover tracks to the adjunct sensor, which will continue to track threats
- The adjunct sensor must be trainable, transportable, and observe threat objects up to 2,500 km
- A Request For Information (RFI) was posted on 19 APR 05. Concept papers were submitted by potential offerors and are currently being reviewed by MDA / SN
- A request for dialog was issued 23 AUG 06 based on the responses to the RFI

<http://www.fbodaily.com/archive/2005/04-April/21-Apr-2005/FBO-00791435.htm>

FBO DAILY ISSUE OF APRIL 21, 2005 FBO #1242  
SPECIAL NOTICE

A -- MDASN Industry Day

Notice Date 4/19/2005

Notice Type Special Notice

NAICS 541330 — Engineering Services

Contracting Office Other Defense Agencies, Missile Defense Agency, MDA Deputy for Contracting (MDA/CT), 7100 Defense Pentagon, Washington, DC, 20301-7100

ZIP Code 20301-7100

Solicitation Number HQ0006-05MDASN

Response Due 5/2/2005

Archive Date 5/17/2005

Description

The Missile Defense Agency's Sensors Directorate plans to hold an Industry Day on May 24, 2005 to discuss its requirements for an Adjunct Sensor. The primary mission of the Adjunct Sensor is discrimination and tracking of Inter-Continental Ballistic Missile/Medium Range Ballistic Missile/Intermediate Range Ballistic Missile threats. Accordingly, the radar will be co-located with a land-based, X-Band phased array radar which will acquire and handover tracks to the adjunct sensor, which will continue to track threats. Adjunct sensors will be required to be trainable and to observe threat objects up to 2500km. Additionally, the adjunct sensor must be transportable. Participation in the Industry Day will be by invitation only. If you would like to be considered for an invitation, please submit the following information by May 2, 2005: Company Name Point-of-Contact Address Telephone Number Fax Number E-Mail Address Capability Statement ? Consisting of not more than 3 pages addressing the company's past performance on similar scale projects and ability to manage to cost and schedule. The contractor must demonstrate its ability to execute development and operations in a classified environment and support system integration with other sensors of the Ballistic Missile Defense System, as well as show that it has used mature technologies and a low risk approach due to schedule and cost constraints in the past. Note that this announcement is a request for information. It is not a solicitation notice, nor does it commit the Government to award a contract. The Government is conducting this Industry Day to receive information only.

Place of Performance Address: TBD

Record SN00791435-W 20050421/050419212722 (fbodaily.com)

<http://www.dtic.mil/descriptivesum/Y2008/MDA/0603883C.pdf>

Note: During FY06 the FBX-T and THAAD radars were officially assigned the military designation of AN/TPY-2. The new nomenclature is as follows:

AN/TPY-2 #1 (THAAD Engineering Manufacturing Development (EMD) #1);

AN/TPY-2 #2 (FBX-T #1);

AN/TPY-2 #3 (FBX-T #2);

AN/TPY-2 #4 (THAAD EMD #2);

AN/TPY-2 #5 (FBX-T #3) to THAAD for THAAD use; and

AN/TPY-2 #6 (FBX-T #4).



<http://www.armscontrolwonk.com/1126/another-caucasian-gary>



## Another Caucasian, Gary

posted Tuesday July 18, 2006 under [missile defense](#) by [jeffrey](#)

*Okay folks, we are back. If I could trouble you, oh friends of wonk, please pass the word around. Send e-mails, bring it up over white russians, what-have-you.*

Friend of Wonk Allen Thomson wins a prize for big catch—the Missile Defense Agency is [planning to install](#) a forward-based X-band Radar in the Caucasus:



“The mobile/transportable sensors inventory will be increased with the addition of three forward-based X-band Radars (one in Europe, one in East Asia, and one in Caucasus).”



AT also noted that a reference to a Caucasian radar in a [presentation](#) by Phil Jamison, from the Office of Missile Defense Policy.

So, *which country* will host the FBX? Chatter seems to center on Azerbaijan and Georgia.

*Late Update: MDA Spokesman Rick Lehner says MDA failed to update the fact sheet. They've pulled it to be updated; you can view the [original here](#) .*

*[Sourcebook: Selected comments follow.]*

I've been trying to figure this out these past few days, and the current best guess is that Azerbaijan, with its in-place Caspian Guard military agreement with the US, is the most likely. Caspian Guard includes a couple of air/marine radar surveillance sites, so it would not seem to be too much of a stretch to plunk an FBX-T on one of of them.

But who knows?

— Allen Thomson · Jul 18, 07:30 PM ·

Please note that the briefing is from April 2005. Lots of old info in it, including possible locations for forward-based X-band radars. Remember that these radars are designed not to be permanent, but can be air-lifted to wherever they are needed to support missile defense. As such, there are no plans for possible locations. The only radar that is built so far is currently in Japan. Also, briefing notes use of early warning radars at Clear, AK and Otis AFB, MA. These are no longer planned in the missile defense architecture.

— Rick Lehner, Missile Defense Agency · Jul 19, 08:01 AM ·

Please note that the Block 2008 fact sheet on the MDA page <http://www.mda.mil/mdalink/pdf/blk08.pdf> is dated 05/2006, which would be two months ago.

— Allen Thomson · Jul 19, 01:18 PM ·

I know, my fault, fact sheet was written based on FY06 funding request back in spring of 2005 and when all the fact sheets were updated this past spring I didn't make the changes. Is being updated now.

— Rick Lehner, Missile Defense Agency · Jul 19, 02:12 PM ·

It's perhaps worth noting that, should Iran someday acquire ICBMs capable of reaching the US and base them in the central portions of the country, the firing arc that reaches both coasts of the US quite neatly encompasses Baku.

— Allen Thomson · Jul 19, 08:59 PM ·

> the firing arc that reaches both coasts of the US quite neatly encompasses Baku.

I probably should have made this a little more explicit:

If MDA is thinking about using a GMD-like system to defend the continental US against ICBMs fired from Iran, the Caucasus is where they **should** place an FBX. And the vicinity of Baku seems to be a particularly sweet spot in the Caucasus area.

— Allen Thomson · Jul 20, 12:24 PM ·



*Google Earth depiction of approximate trajectories from a notional ICBM launch site in central Iran toward Washington, D.C. and Seattle.*

[http://www.janes.com/regional\\_news/americas/news/jdw/jdw060727\\_1\\_n.shtml](http://www.janes.com/regional_news/americas/news/jdw/jdw060727_1_n.shtml)

Jane's Defense Weekly

27 July 2006

## **Caucasus considered as base for US missile sensor**

By Nathan Hodge JDW Staff Reporter

Washington, DC

The US Missile Defence Agency (MDA) has identified the Caucasus region as one possible location for placing mobile sensors for its ballistic missile defence system.

Rick Lehner, an MDA spokesman, told Jane's the region would be a "good location for a small X-band radar to provide tracking and discrimination of missiles launched from Iran.

"Our job is to put forth optimum locations for radars so that we can make missile defence as effective as possible," Lehner said. "That does not mean radars or other equipment will be placed in those locations; it's just that, in our opinion, it's the best location. MDA doesn't make the decision on locations, especially those outside the US."

## US Missile Shield Would Include Caucasus-Based Radar

by Staff Writers

Brussels (AFP) Mar 01, 2007



The volatile Caucasus Region

US plans to extend a missile defence system into Europe, which have been met with hostility by Russia, include a radar system based in the Caucasus, the head of the US missile agency said Thursday. The "forward deployable radar" would provide an "early acquisition track" on any hostile missile for a bigger radar system based in the Czech Republic, US Air Force Lieutenant General Henry Obering said.

"It's a transportable radar, it's something that you can set up in a matter of days, very, very fast. We have time to work out where that location could be," he told reporters at NATO headquarters in Brussels.

When asked which country in the volatile Caucasus region might be willing to host the site, he said: "I am not at liberty to talk about that in any length ... suffice to say that we would like to place a radar in that region."

Obering, who met with Russian officials here during two days of talks, played down any potential risk this mobile radar could pose to Russia.

"That radar would be oriented into Iran. We can't turn it around to look into Russia, and even if we can, it can't see far enough to be able to establish a track on a Russian missile," he said.

*[deletia]*



## **Caucasus: Officials Muted On U.S. Radar Proposal**

March 2, 2007 (RFE/RL) -- Officials in Georgia, Armenia, and Azerbaijan say they have not received a request from the United States to host a radar system that would be part of Washington's proposed missile-defense shield in Europe.

*[deletia]*

U.S. Air Force Lieutenant General Henry Obering, who heads the U.S. Missile Defense Agency, said March 1 that the United States is looking to base an antimissile radar in one of the South Caucasus countries.

*[deletia]*

Obering says a radar system in the Caucasus would be "useful, but not essential." He did not specify which country he sought to base the radar in. But observers suggest that it would likely go to either Azerbaijan or Georgia.

Of the three South Caucasus countries, Armenia maintains the warmest ties with Russia.

(RFE/RL's Armenian, Azerbaijani, Georgian, and Russian services contributed to this report.)

[http://www.interfax.ru/e/B/politics/28.html?id\\_issue=11687234](http://www.interfax.ru/e/B/politics/28.html?id_issue=11687234)

## **U.S. has no plans to station radar in Georgia - ambassador**

**Mar 2 2007 12:26PM**

TBILISI. March 2 (Interfax) - The United States has no plans to station any element of its future missile defense system in Georgia, U.S. Ambassador to Georgia John Tefft told reporters on Friday, while Georgian Foreign Minister Gela Bezhushvili denied that Washington had made any such request to Georgia.

Tefft and Bezhushvili were commenting on a statement made on Thursday by U.S. Missile Defense Agency Director Lt. Gen. Henry Obering that one of the system's 10 components would be radar to be stationed in the Caucasus.

[http://www.ceskenoviny.cz/news/index\\_view.php?id=239819](http://www.ceskenoviny.cz/news/index_view.php?id=239819)

## **Radar in Caucasus only theoretical idea-U.S. ambassador to Prague**

**March 4, 2007**

Prague-ČTK U.S. considerations about the stationing of a radar missile defence equipment in the Caucasus are only theoretical, U.S. Ambassador to the Czech Republic Richard Graber said in a discussion programme on public Czech Television (CT).

He added that the USA currently plan to place the radar and defence missiles in Central Europe, in the Czech Republic and Poland.

Graber said that that U.S. Missile Defense Agency (MDA) director Henry Obering had talked about the possibility to build a radar in the Caucasus only theoretically.



<http://news.trendaz.com/cgi-bin/readnews2.pl?newsId=903331&lang=EN>

## **US Not Installing PRO Radars in Caucasus - Adviser to US Assistant Secretary of State**

Georgia, Tbilisi

/ corr Trend N.Kirtzkhalia /

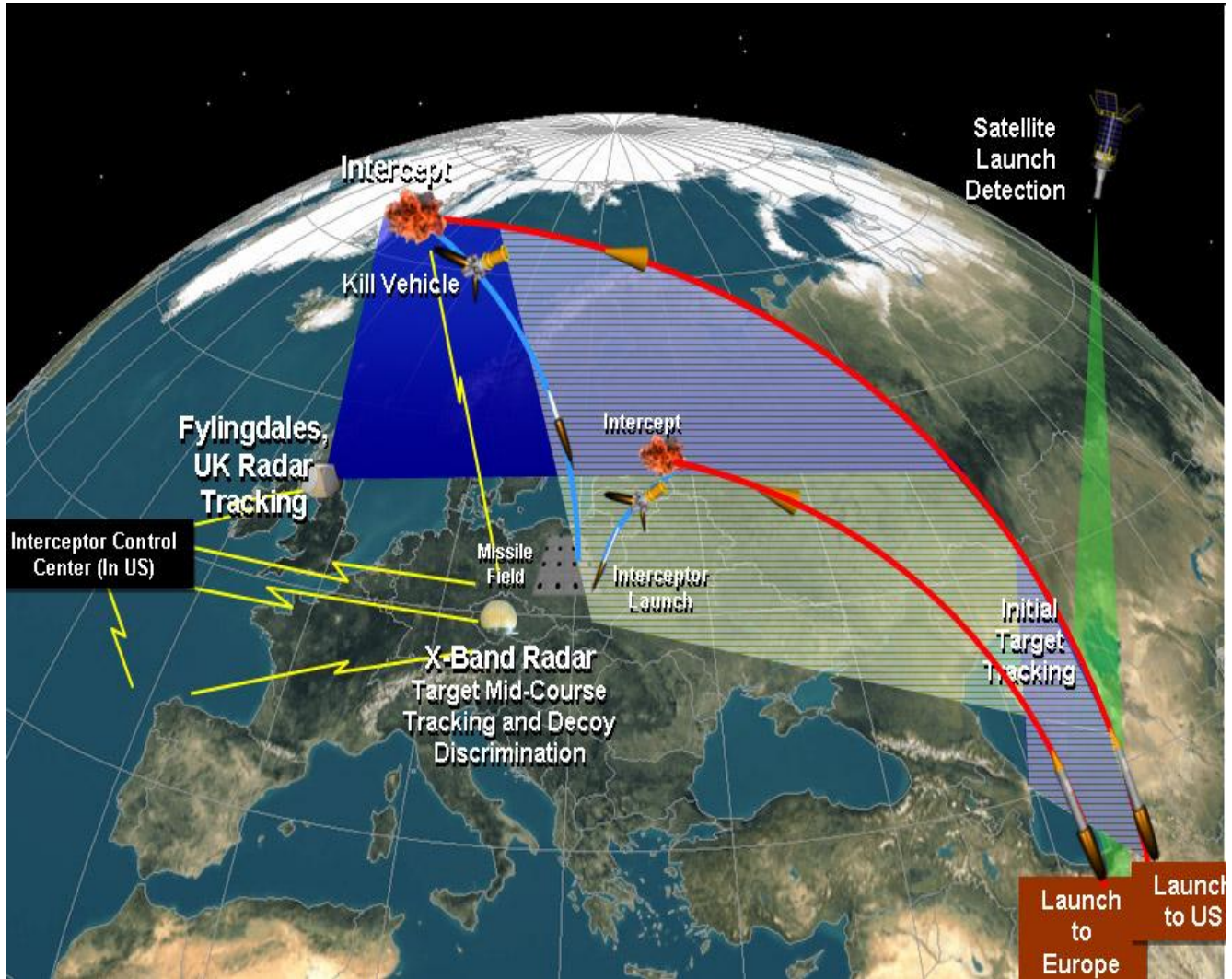
30.03.2007 12:30:16

The United States do not plan to install Anti-Missile Defense radars in the Caucasus. Matthew Bryza, adviser to the US Assistant Secretary of State, made this statement after a meeting with the Georgian Defense Minister, Trend Correspondent in Tbilisi reports.

Bryza stated that General Henry Obering, Director of Missile Defense Agency, did not stipulate either Georgia or other Caucasus countries while stating on the possible placement of Anti-Missile Defense radars.

"General Obering elaborated that the Caucasus is not involved", Bryza stated. At this stage, talks on the placement of Anti-Missile Defense Radars are being discussed with Poland and Czech Republic.

[http://poland.usembassy.gov/uploads/lv/Jn/lvJnIrkSPDeNOe\\_6C9kHwQ/full-md-howitworks.jpg](http://poland.usembassy.gov/uploads/lv/Jn/lvJnIrkSPDeNOe_6C9kHwQ/full-md-howitworks.jpg)  
[Accessed 2007-05-23]



[Sourcebook Note: The "Initial Target Tracking" appears to be from a radar located near Baku in Azerbaijan.]



## **US working to boost sea forces in oil-rich Caspian: envoy**

Breaking News published on **22/09/2005**

Baku, September 21 - The United States is pushing for the former Soviet republics of Azerbaijan and Kazakhstan to beef up their naval capacity on the oil-rich Caspian Sea, a senior diplomat in the region said.

The US ambassador in the Azeri capital Baku said that Washington, which has so far invested some 30 million dollars in upgrading Azerbaijan's coastguard with a sophisticated radar system, personnel training and ship repair, is also pushing for the country's navy to undergo similar improvements.

The Caspian region is strategic both because of its huge oil potential and because of its geographical position between Russia and the Middle East.

The United States plans to spend a total of 135 million dollars within the framework of the US-funded Caspian Guard Initiative, which envisions improving the capabilities of the maritime forces of Azerbaijan and Kazakhstan, Ambassador Reno Harnish said.

"Only recently have we started to see that we need both of them" -- the coastguard and navy -- "to cooperate to make this thing work," Harnish told AFP in a recent interview in the US embassy compound.

"We've mentioned this to the government of Azerbaijan and we're working on it -- it's a thing in progress," he added.

US officials have pointed to Kazakhstan's accession in August to Washington's Cooperative Threat Reduction agreement as a sign that it may be prepared to join the Caspian Guard program under that agreement as well.

"This is an unpredictable region," Harnish said in answer to a question on why Washington was keen on upgrading the two ex-Soviet republics' sea forces.

The Caspian Sea is home to some of the world's largest oil deposits with an estimated 37 billion barrels of oil in the Azerbaijani and Kazakhstani sectors alone.

Deposits that straddle yet-undelineated maritime borders between Azerbaijan, Kazakhstan, Russia, Iran and Turkmenistan are often a source of friction for the states' navies.

Meanwhile the United States has backed the construction of the four-billion-dollar Baku-Tbilisi-Ceyhan oil pipeline that is scheduled to start pumping oil to the Mediterranean coast of NATO ally Turkey in the final quarter of 2005.

High placed US energy department officials have indicated that the United States would be interested in seeing Kazakhstan commit its Caspian reserves to transport to the West through the pipeline, along one of the few routes that avoids Russian territory.

In a separate security program, the International Narcotics and Law-enforcement program, the United States has provided Azerbaijan with training on how to protect the pipeline.

"We also do training with the navy on how they may protect assets at sea," Harnish said.

US defense contractor Washington Group International and handful of military consultants have so far helped construct two radar stations and a computerized operational headquarters in Azerbaijan.

If the program is expanded according to plan, that temporary facility will be replaced by a larger Joint Control and Command Center that will analyze data collected by both the navy and the coast guard.

One of the largest US overseas defense contractors, the Washington Group stressed that the assistance it was providing to the Azerbaijani military was non-lethal.

"Although we are supporting the Azeri navy, this is not connected with any kind of weaponry," said Zaur Aliyev, support service manager for the Washington Group's Baku office.

The US-built radar stations, as well as a network of Azerbaijan's own Soviet-era radars, have already begun to sweep Azerbaijan's territorial waters.

They are looking in particular for boats carrying illicit cargoes such as weapons of mass destruction, illegal narcotics, conventional weaponry and suspected militants, Harnish said.

Kazakhstan can expect similar assistance if it joins up, the diplomat said.

With Iran and Russia straddling its borders, Azerbaijan itself has remained tight lipped on the military assistance it receives from the United States.

A defense ministry spokesman, Ramiz Melikov, told AFP "no such program exists," in reference to the Caspian Guard initiative.

Meanwhile, rumors that the US plans to open a full fledged military base here have been denied both by the Azerbaijani authorities and US officials.

The Caspian guard program does not target any particular country in the region, Harnish said.

However one of the US built radars is positioned just a few kilometers (miles) from the Iranian border in Astara while another sits atop a mountain north of the capital Baku, and south of Russia's volatile North Caucasus.

News selected by Luc MATHIAS, source BakuToday.net

## **Two Radar Stations Become Operational in Azerbaijan under the U.S.-Funded Caspian Guard Initiative**

In an interview given to Agence France Presse on September 21, 2005, the U.S. ambassador to Azerbaijan, Reno Harnish, provided details about the current status of U.S.-Azerbaijani border defense and maritime security assistance programs.[1]

Ambassador Harnish stated that the U.S. government provided funds for the construction of two radar stations in the northern and southern parts of Azerbaijan in the framework of the Caspian Guard Initiative (CGI). One radar station is located near the town of Khizi (also spelled Khyzy, Xizi or Chyzy) in the mountainous northern part of Azerbaijan, approximately 50 km from the border with Russia. The other radar station is located near the town of Astara, located on Azerbaijan's Caspian Sea coastline in close proximity to the border with Iran. The Astara radar station is about 20 km from the town with the same name on the Iranian side of the border.[1,2,3]

According to Ambassador Harnish, the new radar stations are operational and have been integrated into the radar network that Azerbaijan inherited from the Soviet era.[1]

Developed by the European Command (EUCOM) of the U.S. armed forces (headquartered in Stuttgart, Germany) and financed by the Office of the Secretary of Defense (OSD), the CGI (also referred to as the Caspian Guard) is aimed at strengthening air, ground, and maritime border defense of Azerbaijan and Kazakhstan by addressing proliferation, terrorism, and trafficking threats around the Caspian Sea. Since its launch in the fall of 2003, the CGI has evolved from the concept development phase to full implementation with the establishment of an integrated airspace, maritime, and border control regime for Azerbaijan and Kazakhstan. With a primary focus on maritime security and border defense, the CGI represents a unique effort in which the U.S. Military, civilian agencies, and commercial entities are engaged in partnership arrangements with host countries to protect key offshore oil industry infrastructure and to counter regional security threats emanating from weapons proliferation, contraband commodities.[4,5,6,7,8]

The Khizi and Astara radar stations are capable of spotting objects within a 400-450-km area at a maximum altitude of 300 km. The Astara radar station is designed to monitor the entire southern coastline of the Caspian Sea and the northern and northeastern parts of Iran, whereas the Khizi radar station covers the southern part of the Russian Federation, including Chechnya and Dagestan, as well as the entire northern coastline of the Caspian Sea. While the stated purpose for the construction and operation of the Astara and Khizi radar stations is to monitor the borders of Azerbaijan, these stations are also capable of detecting ballistic missile launches and intercepting radio communications and cellular phone conversations, not only on the territory of Azerbaijan, but also in the aforementioned parts of Russia and Iran.[1,3,9,10]

In his discussion of U.S. assistance to Azerbaijan, Ambassador Harnish also noted that the U.S. government has already spent US\$30 million on upgrading Azerbaijan's coast guards' equipment with

a sophisticated radar system, personnel training, and ship repair, and that the United States intends to spend the same amount on strengthening the Azerbaijani navy.[1,9,11,12] Over the next six years, the U.S. Government plans to invest US\$135 million to strengthen the naval forces of Azerbaijan and Kazakhstan within the framework of the CGI.[1,4,9,11,12] Other complementary U.S. maritime border defense assistance programs include the US\$20-million program launched in July 2004 and implemented by the U.S. Defense Threat Reduction Agency (DTRA) to train the Azerbaijani maritime border guards, as well as exercises organized by the U.S. Navy SEALs to train Azerbaijan's elite 41st Special Naval Warfare Unit in June 2004.[4,10] The focus of these programs is to train the Azerbaijani maritime border guards and naval forces to intercept terrorists, weapons, and narcotics on the Caspian Sea.[5] Ambassador Harnish emphasized that the CGI is not directed against any country in the region.[1,11,12]

In Iran, the news about the construction of the two radar stations in Azerbaijan initially elicited a negative reaction. On September 25, 2005, the Iranian English-language newspaper Iran News featured an editorial stating that by allowing the United States to increase its military presence in the region under the guise of border defense cooperation, the Azerbaijani leadership was jeopardizing the country's long-term national security interests. The author of the editorial argued that the growing U.S. military presence will ultimately curtail the influence of such regional powers as Russia, Iran, and China, which would inevitably lead to increased competition over the oil and gas resources of the Caspian Sea.[13]

The official reaction of the Iranian government, however, was milder. On October 7, 2005, at the 18th meeting of government officials from the Caspian Sea littoral states held in Baku, Azerbaijan, Mohsen Baharvend, head of the Iranian Foreign Ministry's legal department, told the press that "Iran has no problem with countries that are cooperating to fight terrorism and drug trafficking. These are issues which all five Caspian nations are interested in resolving." [14,15,16]

Considering that Russia operates an early-warning radar installation in Azerbaijan, Moscow has shown some concern about the construction of two U.S.-funded radar stations in Azerbaijan. On September 26, 2005, an unnamed top Russian military official told the Interfax news agency that, while the construction of any radar station in close proximity to Russian borders is undesirable, the radar station built in Azerbaijan "will not affect the combat readiness of the Russian Defense Ministry's units and subunits deployed in the North Caucasus." [17] The Russian official added that the main concern for the Russian side would be possible electromagnetic interference between the frequencies of Russian radar stations and the Khizi radar station in Azerbaijan.[17]

In a strategic move, the Russian delegation at the aforementioned meeting in Baku of the working group on the status of the Caspian Sea, which was held on October 6-7, 2005, called for the establishment of a new joint naval operations group—CasFor—that would include the naval forces of all five Caspian Sea littoral states. Closely mirroring the objectives of the CGI, the purpose of CasFor would be to protect the Caspian Sea from terrorism and to fight against trafficking in WMD, arms, and narcotics. The important condition embedded in the CasFor proposal is that it rules out the participation of non-regional powers, such as the United States. Clearly intended to serve as a potential counterweight to the CGI, CasFor would allow Russia to dominate this arrangement, since its naval forces would dwarf the combined naval forces of the remaining Caspian Sea littoral states.[18]

According to the Russian Minister of Defense, Sergey Ivanov, the first meeting of government

representatives of all Caspian Sea littoral states for the creation of the CasFor will take place in Moscow on November 14, 2005.[19]

[1] "Caspian: Envoy," Agence France Presse, September 21, 2005; in Lexis-Nexis Academic Universe, <<http://www.lexis-nexis.com>>.

[2] Sevindzh Abdullaeva and Viktor Shuman, "U.S. Embassy Confirms Radar Station Building in Azerbaijan," ITAR-TASS, September 23, 2005; in Lexis-Nexis Academic Universe, <<http://www.lexis-nexis.com>>.

[3] Iason Athanasiadis, "Stirrings Near Iran's Oil Fields in Khuzestan," Daily Star (Lebanon) (online edition), October 17, 2005, <<http://www.dailystar.com.lb/>>.

[4] Russ Rizzo, "Pentagon Aims to Bolster Security in Caspian Sea Region," Stars and Stripes [European Edition], August 10, 2005, <<http://www.estripes.com/>>.

[5] Beth Jones, "Expanding the Borders of Europe to the Black Sea Region" [Remarks by Assistant Secretary of State for European and Eurasian Affairs Beth Jones for the Harvard University's Black Sea Security Program (BSSP)], April 23, 2004, BSSP website, <<http://harvard-bssp.org/publications/?id=108>>.

[6] "Caspian Guard," GlobalSecurity.org, <<http://www.globalsecurity.org/military/ops/caspian-guard.htm>>.

[7] John J. Fialka, "Search for Crude Comes With New Dangers; U.S. Strategic and Diplomatic Thinking Adjusts to Handle Hot Spots With Oil Potential," Wall Street Journal, April 11, 2005, p. A4; in ProQuest Database, <<http://proquest.umi.com>>.

[8] Statement of General James L. Jones, USMC, Commander, United States European Command Before the Senate Armed Services Committee, March 1, 2005, Part III, U.S. European Command Strategy: Theater Security Cooperation, European Regional Initiatives and Programs, Senate Arms Services Committee website, <<http://armed-services.senate.gov/statemnt/2005/March/Jones%2003-01-05.pdf>>.

[9] "Iran Is Not Concerned over Caspian Radar Stations," AzerNEWS.net [Azerbaijan's English online newspaper], October 13, 2005, <<http://www.azernews.net/>>.

[10] Taleh Ziyadov, "Will Increasing U.S. Presence in Azerbaijan Mean More Trouble for Russia and Iran?" Eurasia Daily Monitor, Vol. 2, No. 190, October 13, 2005, Jamestown Foundation website, <<http://www.jamestown.org/edm/index>>.

[11] "U.S. to Assist Baku in Fleet Building," AssA-Irada news agency (Azerbaijan), September 22, 2005; UNDP Azerbaijan Development Bulletin, <<http://www.unaz.org/undp/bulnews30/fleet.php>>.

[12] "U.S. to Assist Baku in Fleet Building," AZERNews.net, September 29, 2005, <<http://www.azernews.net/>>.

[13] “Daily Warns Baku Against Blind Support for U.S.,” Islamic Republic News Agency (IRNA), September 25, 2005, <<http://www.irna.ir/en/>>.

[14] “Azerbaijan: Military Cooperation Does Not Target Neighbors,” Agence France Presse, October 7, 2005; in DefenseNews.com, <<http://www.defensenews.com/>>.

[15] “Iran Unconcerned By U.S.-Funded Azerbaijani Radars,” Radio Free Europe/Radio Liberty, October 7, 2005, <<http://www.rferl.org/>>.

[16] “Iran does not object to U.S. radar station in Azerbaijan,” Interfax, October 7, 2005, <<http://www.interfax.ru/>>.

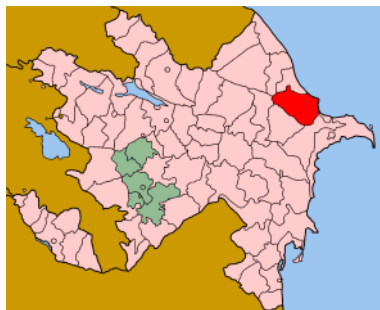
[17] “New Azeri Radar Station Will Not Affect Russian Units – Defense Official,” MosNews.com, September 27, 2005; in BakuToday.net [Azerbaijani online newspaper], <<http://www.mosnews.com/>>.

[18] Vladimir Socor, “Russia Pressing for Exclusionary Naval Grouping in Caspian Sea,” Eurasia Daily Monitor, Vol. 2, No. 198, October 25, 2005, Jamestown Foundation website, <<http://www.jamestown.org/edm/index>>.

[19] “V noyabre proydet soveshchaniye predstaviteley prikaspiyskikh gosudarstv” [Meeting of representatives of the Caspian littoral states will take place in November], RIA Novosti, October 31, 2005, <<http://www.rian.ru/>>.

[20] Sergei Vinogradov, “The Legal Status of the Caspian Sea: A Card in the New ‘Great Game’?” Alexander’s Gas & Oil Connections [web portal of analytical information on global energy industry issues], <<http://www.gasandoil.com/goc/speeches/vinogradov.htm>>.

[21] Barbara Janusz, The Caspian Sea: Legal Status and Regime Problems. The Royal Institute of International Affairs, Chatham House, Russia and Eurasia Programme, Briefing Paper REP BP 05/02, August 2005, <<http://www.riia.org/pdf/research/rep/BP0805caspiian.pdf>>.



*[Location of Khizi shown in red]*

<http://upload.wikimedia.org/wikipedia/commons/f/f7/Azerbaijan-Khizi.png>



<http://www.noravank.am/?l=2&d=19&f=764>

## **Присутствие системы противоракетной обороны США на Южном Кавказе: выводы и перспективы**

|Саргис Арутюнян

2007-03-26

[EXCERPT]

Элементы системы ПРО США на Южном Кавказе. Еще в конце 2005г. стало известно, что в Азербайджане (в Астаре – близ иранской границы, и Хизе – северо-западнее Баку) уже установлены две РЛС тактического назначения. Согласно некоторым сведениям, это станции типа «AN/FPS-117» производства американской компании «Lockheed Martin» способные обнаруживать летающие объекты в среднем радиусе в 340км. Согласно другим сведениям, установлены станции типа «TRML-3D» (производства европейской компании «EADS») с радиусом обнаружения летающих объектов 200км.

<http://www.lockheedmartin.com/data/assets/7152.pdf>



The transportable version of Lockheed Martin's FPS-117 – the TPS-77 Tactical Transportable Radar – combines the best of the FPS-117's performance, reliability and low cost of ownership. The antenna array and electronics shelter are both standard ISO packages for simplified transport loading. The radar can be configured for C-130, C-17, truck, rail or helicopter transport.

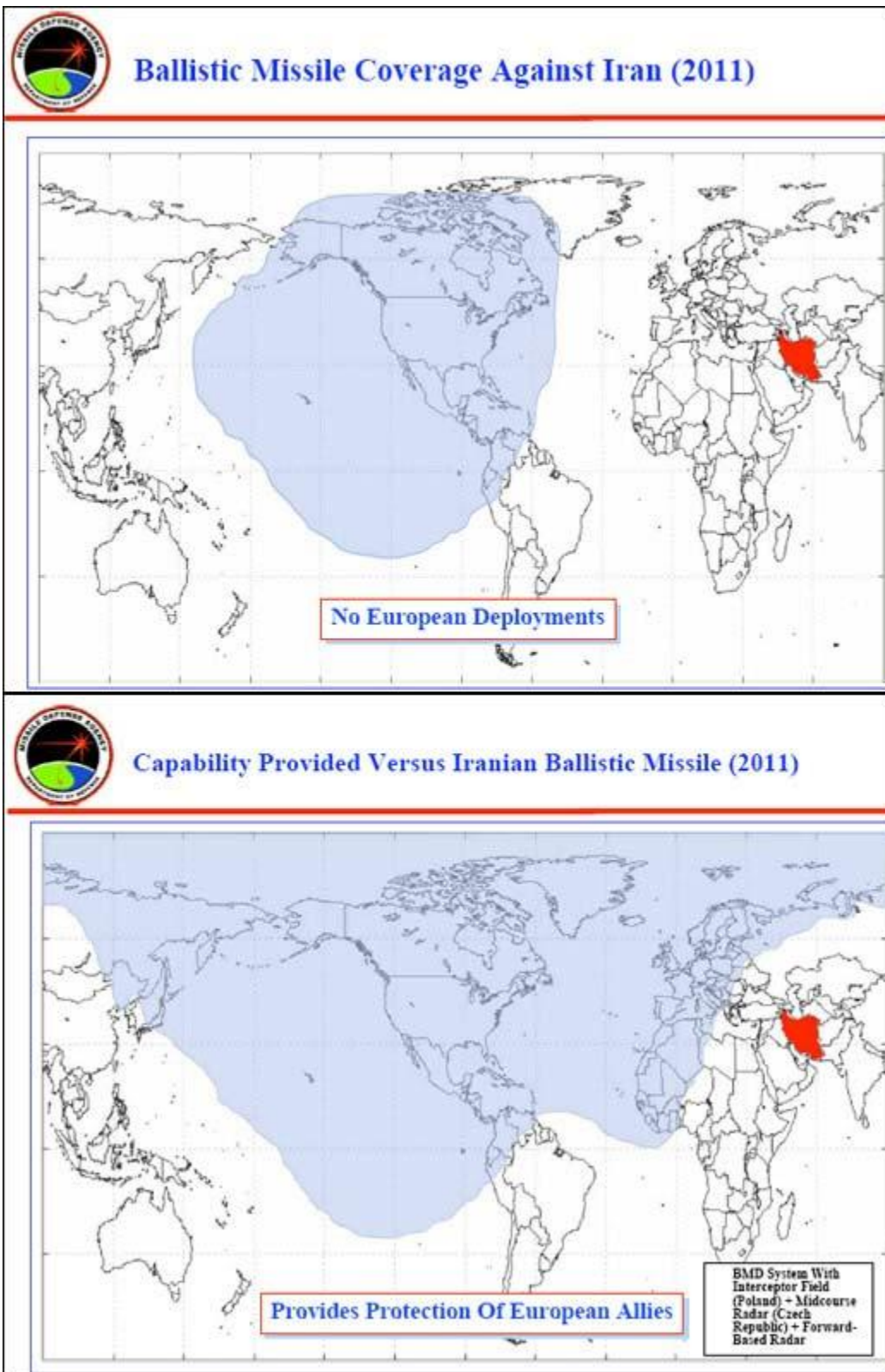
[http://www.defenseindustrydaily.com/images/ELEC\\_Radar\\_EADS\\_TRML\\_3D\\_lg.jpg](http://www.defenseindustrydaily.com/images/ELEC_Radar_EADS_TRML_3D_lg.jpg)



*[TRML-3D]*

<http://www.aic.cz/cms/md-eur-coverage.jpg>

[ Accessed at <http://prague.usembassy.gov/> on 2007-04-17]



# Missile Defense Program Overview



**19 APR 07**

**BG Patrick O'Reilly, USA  
Deputy Director  
Missile Defense Agency**



## Capabilities Through 2013

- **Increased capability against long-range threats**
  - Up to 54 Ground-Based Interceptors (44 in U.S., 10 in Europe)
  - Persistent surveillance and tracking capabilities across western hemisphere and Europe – Alaska, California, Greenland, United Kingdom, Central Europe
- **Increased capability against regional and asymmetric threats**
  - 18 Aegis engagement ships
  - 132 Standard Missile-3 interceptors
  - 4 Terminal High Altitude Area Defense fire units with 96 interceptors
  - Up to 100 sea-based Standard Missile-2 terminal interceptors
- **Greater mobility to address current and surprise threats**
  - Sea-based X-band radar (Pacific Ocean)
  - 4 forward-based X-band radars, plus adjunct radar

**U.S. Is Investing In Long- And Short-Range  
Missile Defense**





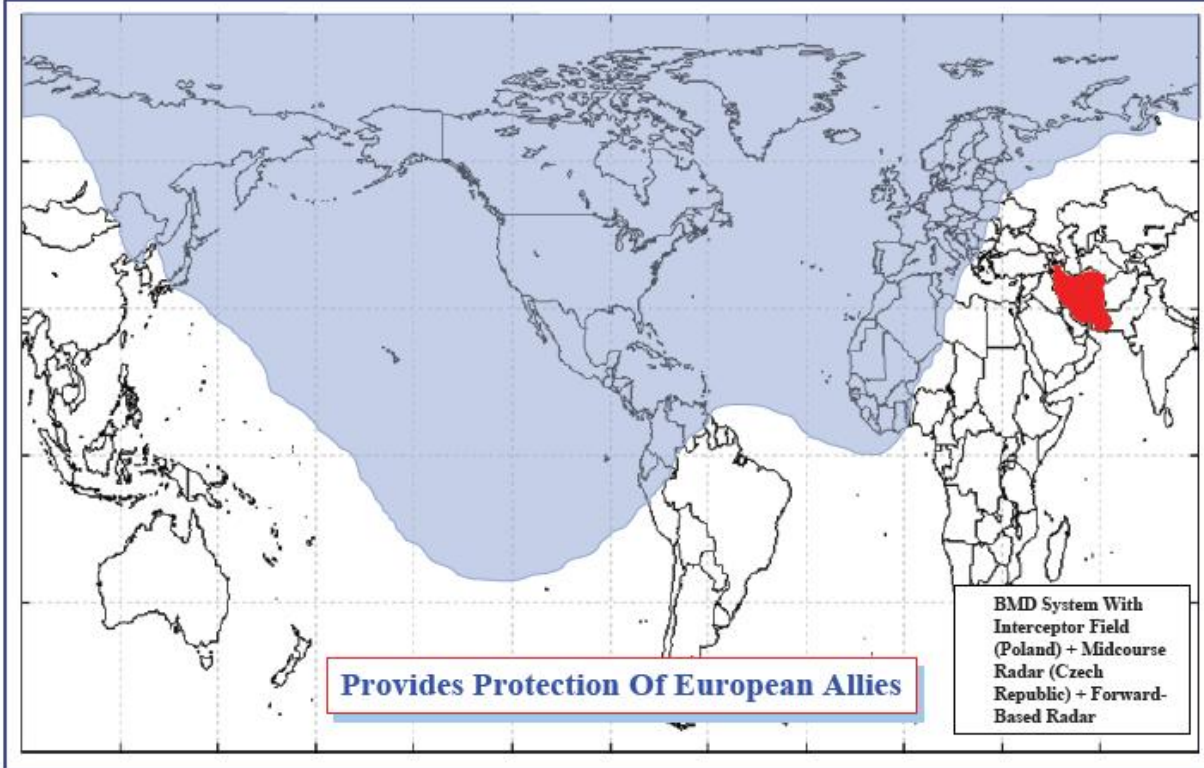
## Proposed Elements Of A European Missile Defense

- **Up to 10 silo-based long-range interceptors located in Eastern Europe (2011-2013)**
- **Re-location of a narrow-beam, midcourse tracking radar currently used in our Pacific test range to central Europe (2011)**
- **Field an acquisition radar focused on the Iranian threat from a forward position to provide detection, cueing, and tracking information (2010-2011)**





## Capability Provided Versus Long-Range Iranian Ballistic Missiles (2011)



<http://en.rian.ru/world/20070419/64001613.html>

## **U.S. mulls radar placement in Caucasus, other parts of Europe**

22:27 | 19/ 04/ 2007

BRUSSELS, April 19 [2007] (RIA Novosti) - U.S. missile defense radars could be placed not only in Caucasus, but in other parts of Europe, the director of the U.S. missile defense program said Thursday.

Air Force Lt. Gen. Henry Obering III said at a news conference in Brussels that the United States could place a mobile radar station in the Caucasus region and several stationary radars in other regions in Europe in the next few years.

He said the entire U.S. radar network should ultimately cover Central Europe, Italy, Greece and Turkey.

Speaking at the same news conference, U.S. Under Secretary of Defense for Policy Eric Edelman said Washington could finalize talks with potential partners over the placement of elements of the U.S. missile defense system on their territory by the fall of 2007.

He also stressed that the U.S. would be willing to cooperate with Russia on a whole range of missile defense issues because the missile threat posed a common concern.



<http://www.defenselink.mil/transcripts/transcript.aspx?transcriptid=3943>

Presenter: Secretary of Defense Robert M. Gates

April 23, 2007

Press Availability with Secretary Gates in Moscow

SECRETARY GATES: I had excellent meetings today with President Putin, First Deputy Prime Minister Sergey Ivanov, and Minister of Defense Serdyukov. We discussed a wide range of topics today. The focus obviously was on missile defense. We spent virtually all of the time in my meeting with Minister Serdyukov on this subject. We agreed that a bilateral working group of experts will address technical details and questions of the proposed sites, and also Russian concerns that current proposed sites and designs might someday take on different and larger form. I think we are beginning to get down to specific issues of concern to Russia. I believe the experts can both clear up any misunderstandings as well as address the Russians' concerns. President Bush has said all along that he wants to approach this issue transparently and cooperatively both with the Russians and with the Europeans. That's the reason that I am here in Moscow. I will be going on to Poland and Germany from here.

*[deletia]*

QUESTION: Did you discuss the possibility of placing a radar in the Caucasus?

SECRETARY GATES: No, we didn't get into any specifics along those lines

<http://www.msnbc.msn.com/id/18425307/>

## **Georgia open to talks on missile shield**

Fidelius Schmid in Brussels and Peter Ehrlich and Demetri Sevastopulo in Washington

Updated: 12:42 a.m. CT May 2, 2007

FT.com

**Georgia has said it will consider hosting parts of a US missile defence shield on its territory.**

Gela Bezhuashvili, the foreign minister, said: "If [the US] came and told us that they want to, we would certainly be willing to talk about it."

Lieutenant General Trey Obering, head of the US Missile Defense Agency, has said the US would like to place a forward radar in the Caucasus. The Pentagon says the radar facilitate more comprehensive tracking ability of missiles originating from Iran. The US has also suggested that it would be willing to jointly locate a radar in Russia.

But the comments could fuel tensions between Russia and the west over the system the US wants to build in Poland and the Czech Republic to defend against missile threats from Iran.

Robert Gates, US defence secretary, visited Moscow last week in an attempt to ease concerns. But after talks with senior officials, Vladimir Putin, the president, threatened to stop implementing a 1990 treaty limiting non-nuclear arms staged in Europe, partly because of the US plans.

Sergei Lavrov, the Russian foreign minister, said it was unacceptable for Nato infrastructure to be "creeping up to the Russian border".

Mr Bezhuashvili said the US had not requested talks with Georgia formally. "There is no formal application, not even informal talks," he said. "But if they ask for help, we will talk with them."

Unlike Poland or the Czech Republic, Georgia was not expecting domestic hostility to the plans, said Mr Bezhuashvili. "We have public support for Nato membership at 84 per cent, have recently doubled our troops in Iraq – I do not think it would be a problem."

The pro-western stance in Tbilisi has angered Russia in the past. Last year, Georgia arrested Russian military personnel, accusing them of spying, and setting off a diplomatic row. Russia is said to be angered by Georgia's ambitions to join Nato.

<http://www.panarmenian.net/news/eng/?nid=22141>

## **Georgian FM on placing U.S. air defense system: We have more significant tasks**

**04.05.2007 14:30 GMT+04:00**

/PanARMENIAN.Net/ Georgia does not participate in any discussions over placing on its territory elements of U.S. air defense system, Georgian Foreign Minister Gela Bezhushvili clarified his country's stance on issues concerning American air defense system.

On May 2 Georgian FM at the interview to The Financial Times stated that Tbilisi is ready to discuss the possibility of placing on its territory elements of American air defense system. "If Americans turn to us with such a request (over placing air defense elements in Georgia) we will willingly negotiate with them," cites the newspaper minister's words. Earlier official representative of Pentagon lieutenant-general Henry Obering stated about US's wish to place air defense system radar stations in Caucasus.

In his official written statement, which was spread on Friday, Bezhushvili underlined, "I want to dispel misunderstandings or various interpretations around my statements in The Financial Times, which were not understood properly. In my interview I underlined that no talks over placing elements of American air defense system in Georgia are on the way and no such negotiations are planned. Consequently we do not participate in any discussions over this issue." The Georgian FM thinks, "any speculations around this question are counterproductive."

"We have more significant tasks. As a responsible ally and member of the international community our task is to deepen and widen democratic reforms now and in future," Bezhushvili underscores in his written statement, RIA "Novosti" reports.

<http://www.gertzfile.com/gertzfile/InsidetheRing.html>

Inside the Ring

by Bill Gertz

May 18, 2007

*[EXCERPT]*

The Iranian missile threat prompted two states within range of Iran's missiles to contact the United States this week about acquiring missile defenses, including a key Persian Gulf state and a nation in the southern Caucasus.

<http://www.scoop.co.nz/stories/WO0705/S00413.htm>

## **Rice Interview With Andrey Cherkasov of NTV**

Thursday, 24 May 2007, 2:00 pm

Press Release: US State Department

Interview With Andrey Cherkasov of NTV

Secretary Condoleezza Rice

Moscow, Russia

May 15, 2007

*[EXCERPT]*

**QUESTION:** General Henry Obering a few months ago mentioned one of the countries in the caucuses that might participate in your program of anti-missile system by putting another radar there. He didn't name the country, but everyone assumed it was Georgia. Is it so, and how close are Ukraine and Georgia in joining NATO?

**SECRETARY RICE:** Well, first of all, for the joining of NATO, NATO is an organization that welcomes all democratic members. Thus, there are certain performance standards that have to be met for NATO and there are a lot of obligations, a lot of commitments, a lot of reforms that have to be taken and it is ultimately up to the people of those countries, if they choose to, to seek NATO membership. But NATO also has a long list of commitments that have to be met.

As to other sites for missile defense, the United States is pursuing the sites that everyone knows about, Poland and the Czech Republic. We're having those discussions. If anything further develops, we will do what we did on these, which is to consult with our NATO allies, but also to consult with Russia. We began consultations with Russia on missile defense in June of 2006. Those consultations continue to this day. We just determined that there should be a new forum for consultation. The two -- the foreign and defense minister of Russia and myself and Secretary Gates will meet together so that we can plan ahead and look ahead so that there are no surprises in our strategic relationship.

## **Experts sceptical on chances for missile deal**

demetri.sevastopulo@ft.com

June 21, 2007 12:12 AM ET

Vladimir Putin, the Russian president, recently surprised George W. Bush, his US counterpart, by proposing co-operation on missile defence. While Washington welcomed the move, however, experts question whether both sides can find common ground.

Experts say Gabala can track a wide area stretching from Turkey to Pakistan, but not Russia, which is why Mr Putin has much to gain, and little to lose, by offering its use. Some have speculated whether Mr Putin would be willing to allow the US to place an X-band radar - which is used for precision tracking to help missile interceptors hone in on their targets - at the same site.

Richard Lehner, spokesman for the US Missile Defence Agency, says the US and Russia may discuss the possibility of placing a mobile X-band radar at Gabala when their experts meet later this summer. But he cautions that it would not be a substitute for the larger, fixed X-band that the Pentagon plans on placing in the Czech Republic.

<http://www.geotimes.ge/index.php?m=home&newsid=5575>



July 10.07.2007 16:17:08

“It is everybody’s responsibility to keep Georgia on the agenda” - Ambassador David J. Smith

“The 2008 election is important, because in that moment all the cameras will be here for 48 hours. You have that moment to shine”



The real trick to a democratic revolution is the second election, Ambassador David J. Smith told GT, while evaluating Georgia’s recent history and future. Hopeful about Georgia’s NATO membership in spring 2008 and confident in Georgia’s role in international security, he hailed the Georgian government for doing an excellent job in the reform process as well as for diplomatic maneuvering regarding conflict resolution. He also said that Georgia should continue its current course, keep firm on its interests with anybody, including Russia, and most importantly, ‘to stay on the agenda.’

Ambassador David J. Smith is Director of the Georgian Security Analysis Center in Tbilisi, and Senior Fellow at Potomac Institute for Policy Studies, Washington.

*[deletia]*

Q: Recently Russia offered the United States the joint use of Azerbaijan’s missile defence station. What was behind this offer?

A: Absolute obscuration is what is behind that proposal. When the United States proposed to put the system in Poland and Czech Republic – whether I like that proposal or not – it makes sense. The world is round and if you draw what is called the great circle route from Iran towards the United States or towers northern Europe the reality is that it crosses Poland. That location has nothing to do with Russia, OK? So that is exactly where you would put it. If you put it any further up, it is too close and it can not make any multiple shots and therefore it is inefficient and ineffective. If you put it further back, it wastes a lot of time because we do not get one chance to lay back from the United States. That [Poland and Zech Republic] is the good place to put. So Vladimir Putin coming and saying ‘I have a proposal: Why do not use the radar in Gabala?’ it frankly is a non-suggestion. It is a suggestion thrown

out for people who do not know any better. That [radar in Gabala] is an old aging early warning radar – it has no ability to track a missile. It simply sees a launch. It detects a launch and says that is a launch, OK? That is the useful thing if it is tied to the radar back there – it can track. So if there is something about, may be first of all you have to upgrade Gabala radar but it still has to be linked to that track radar in much further back in Europe. Same thing with the interceptors. His [Putin's] proposal for interceptors in Turkey assuming Turkey would host them, by the way nobody asked Turkey to host them – if they would do that thing, it is too close because if you look at the geometry of it, it is almost instantaneous – that a missile might be launched in Iran then interceptor missile has to be launched in Turkey. And if you do not get it right there it is gone. It is too far. That is why we want the missiles further back. And as for putting them on ships, that was the idea the United States had years ago, unfortunately and, in my view, erroneously, the United States did not follow through on that program as quickly as it should. The reality is that today that technology is not available. We can not put interceptor missiles on ships for short and medium-range missiles. Not for longer-range. So I think the answer is what Putin suggested was simply disingenuous. It was an attempt to derail the American proposal. There are constructive things Russia could do in cooperation with the United States if it wanted to but that is not the one.

Q: What about a Georgian location? There has been talk that the system could be stationed in Georgia...

A: If I recall correctly, Maia, there was one statement, six months ago, by the General [Henry Obering] who runs the Missile Defence Agency which is the technical organization that is basically designing the system, that it might be useful to have a radar in the Caucasus.

Q: Some commentators assumed that Georgia was the most likely site...

A: This is what I am saying – I do not think the General said Georgia, I think the press jumped on and said 'well the Caucasus – it is not probably Russia, it is probably not Armenia,' and then jumped on Georgia and we got into 'yeas, no, yes, no game'. In theory, what I've just told you about Gabala radar or a new radar, it would be useful to have an early warning radar much closer. Not instead of - in addition to. The tracking radar. Because the early warning radar gives you that much more time. Look, missile defence is game of time. The more time you have, the more times you can fire and intercept a missile. So you can increase the time, then you can may be add opportunities to intercept that missile so you become much more effective and the engineers can figure out statistically exactly what percentage, how much more you will be affected. So what I think was intended was that the system could use a radar that was off there. And I think people interpreted Georgia. That would be true but not instead of which is what Putin came – he said use the Gabala radar instead of that and either you really do not understand, which I doubt, or this was an indigenous solution. To my knowledge, I am not speaking for the government of the Unites States but to my knowledge, the United States did not approach Georgian government or any other government in the Caucasus about putting such a radar. I am simply speaking to you technically as somebody who used to work on missile defence. I do not need to know much to tell you that obviously if you put an early warning radar much further forward, it would be very useful.



# The New York Times

Op-Ed Contributor

## A Ring Around Iran

By THEODORE POSTOL

Published: July 11, 2007

PRESIDENT VLADIMIR PUTIN of Russia has made an offer that President Bush cannot refuse — not if Mr. Bush truly wants substantive international cooperation on missile defense. Last month, Mr. Putin offered to give America access to data from a Russian early-warning radar unit in Azerbaijan that can observe the launching and flight of any long-range ballistic missiles from Iran. The offer was part of Mr. Putin's effort to keep the United States from setting up its own missile-defense system in Poland and the Czech Republic.

The Azerbaijan proposal makes sense in two ways: it could end the diplomatic tussle over the Eastern Europe plan, and it could also be a more effective check on Iran. This is because the technical features of the Russian radar complement those of American missile-defense radar systems, like the one now being set up in Alaska. (Let's leave aside, for the moment, the question of whether missile defense will ever be very effective, something I'm quite skeptical about.)

If we are going to pursue missile defense, we should not only accept the data-sharing offer but also place American defense radars and other technology in Azerbaijan, or possibly in nearby Turkey: working together could substantially increase the chances of making a missile defense against Iran more effective.

Here's the technical explanation. The Russian radar uses low-frequency radio signals to search for distant ballistic missile warheads. The wavelengths of these radio signals are close to the dimensions of the warheads, so you get very strong oscillations of the electromagnetic field and a huge reflection of the signal back to the radar where it can be detected.

By contrast, the favored American missile-defense radar operates at frequencies 70 times higher. The advantage of this is that you get 70 times better radar resolution, and thus a far clearer picture of the object. Clarity is important when it comes to figuring out exactly what sort of a missile you are dealing with and distinguishing an actual warhead from debris. However, at such high frequencies the amount of radio energy that is reflected back to the radar is very small, typically one one-hundredth or less of that received when using the lower frequencies of the Russian radar.

What all this means is that the Russian radar can quickly and effectively search the sky for missiles, but has little ability to determine exactly what it has found. The American radar may take longer to find the object, but can carefully observe its structural details. It should be obvious that when you use two

systems with such different strengths and weaknesses in tandem, you will have a much easier time spotting and tracking missiles.

Working together at Azerbaijan, which borders northwestern Iran, has another advantage. At such short range, the curvature of the Earth has only a small effect on the radar's line of sight, so we'd get a clearer view and much earlier warning. American radar there could observe the launching of a missile out of Iran and headed toward Washington at least three to four minutes earlier than could the proposed Eastern Europe system. During these precious extra minutes, tracking data can be accumulated, intercept points calculated, and interceptor missiles launched.

There can be few, if any, technical objections to such cooperation. Politics, however, is another story. Those who do not believe that the cold war is over will complain that we cannot trust the Russians to work with us even when it is in our common interests. Another objection — that President Putin's government is hardly a paragon of democracy and human rights — ignores the fact that technical cooperation between the countries is a good way to encourage Russia to be closer with the West.

President Bush told Mr. Putin last month that “the cold war is over.” Cooperating with Russia on missile defense is the perfect way to put those words into action.

Theodore Postol is a professor of science, technology and national security policy at the Massachusetts Institute of Technology.

<http://www.forbes.com/feeds/ap/2007/07/25/ap3953102.html>

## **Boeing Receives \$80M Defense Deal**

By DONNA BORAK 07.25.07, 7:08 PM ET  
Associated Press

WASHINGTON - The Pentagon on Thursday awarded an \$80 million contract to Boeing Co. to begin planning and construction for two European-based missile defense complexes.

The deal follows an announcement by the Bush administration earlier this year to build two missile defense sites in Poland and the Czech Republic to protect U.S. and European interests.

Under the contract, Boeing (nyse: BA - news - people ) will build and deliver 10 interceptors to a site in Poland, and move one larger fixed-radar from the U.S. Marshall Islands to the Czech Republic. Additionally, there will be one smaller transportable radar that will be moved to various locations as needed, said Rick Lehner, a spokesman for the Missile Defense Agency.

The deal is worth up to \$3.5 billion through 2013.

Boeing will be able to move forward with its planning and construction at both European sites once Congress approves a \$310 million budget request for the European missile defense program under the president's 2008 proposed budget, said Lehner. For now, the contract provides Boeing with the authority to begin planning and construction.

A spokesman for Boeing could not immediately comment.

[http://www.juneauempire.com/stories/082207/loc\\_20070822009.shtml](http://www.juneauempire.com/stories/082207/loc_20070822009.shtml)

Juneau's role in '08 missile test small  
Powerful radar to be located in city temporarily  
PAT FORGEY  
JUNEAU EMPIRE  
Web posted August 22, 2007

Juneau's role in next year's missile intercept test by the Missile Defense Agency will be small, Alaska Region Director Col. Thom Besch said to a crowd of about 40 residents of the Lena Point area Tuesday evening.

In fact, the powerful radar the agency is planning to locate at the Ted Stevens Marine Research Institute will be here only temporarily, and only will be turned on briefly while it is here.

The radar itself is a standard X-band radar, just extra powerful.

"This isn't something out of the ordinary," Besch said.

Juneau's role in the test will be to track a missile fired from the Kodiak Launch Complex as an interceptor missile is fired from Vandenberg Air Force Base in California in an attempt to bring it down over the Pacific.

The equipment is expected to be shipped to the National Oceanic and Atmospheric Administration's institute in Juneau in late October or early November, with the test to be conducted sometime between January and March. After the test, the tracking equipment from Juneau will be disassembled and shipped to a front line location, most likely in Japan or Europe, he said.

Even while the equipment is here, it is likely to be on only briefly and in the early morning hours. That might be as little as 15 minutes, he said.

It will have to be turned on for testing as well, he said.

"They'll power up and track satellites just to make sure they're calibrated," Besch said.

In response to questioning from audience members, Besch said it was unlikely that Juneau would ever be used for anything other than testing as Juneau is not well located between potential attacker North Korea and the U.S. mainland.

"Southeast does not provide us with an operational capability," he said.

The danger from the powerful radar itself is limited by time of day, short duration and location, Besch said. He provided few specifics as to just what those dangers were, however.

Located on a bluff overlooking the ocean, the nearest land in front of the site is Shelter Island. That island is both below where the radar will be aimed and outside the radar's 1,800 meter danger zone, he said.

Besch and other Missile Defense Agency representatives declined to specify exactly how powerful the radar was, but some audience members speculated 25,000 watts from information he did provide.

"It's safe for the operator to walk right behind it," he said.

The agency also is working with aviation authorities to determine the best ways to keep planes out of the beam. Besch said aviators will be notified when it will be used.

State Rep. Andrea Doll, D-Juneau, has been monitoring the issue on behalf of constituents in the area, and said she's been reassured by what she's heard so far.

"I think I support it," she said.

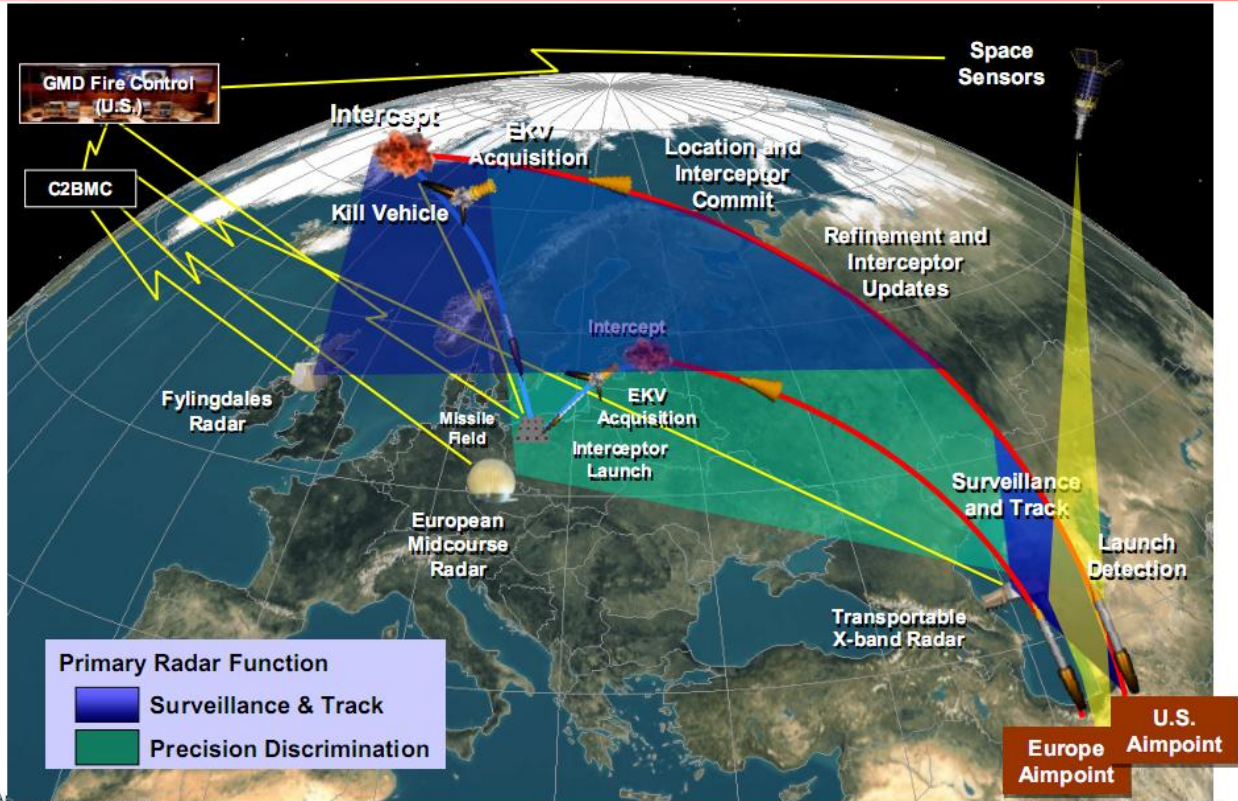
Nearby resident Bill Leighty said he didn't expect many objections to the actual mechanics of the operation, but said there might be other concerns.

"The nuisance to Juneau is going to be very modest," he said. "The biggest question is the false sense of security."

Tuesday's session at the new institute was billed as an informational session for nearby residents. A formal town hall style meeting is scheduled for Sept. 13 to hear from the broader community, Besch said.



## European Components “How It Works”



<http://www.mda.mil/mdaLink/pdf/thirdsite.pdf>

# Missile Defense Program Overview For The Transatlantic Roundtable On Defense And Security



Distribution Statement A:  
Approved for public release;  
distribution is unlimited

**18 SEP 07**

**Lt Gen Trey Obering, USAF  
Director  
Missile Defense Agency**

Approved for Public Release  
07-MDA-2674 (17 SEP 07)

ms-109895 / 091307



## Capabilities Through 2013

- **Increased capability against long-range threats**
  - Up to 54 Ground-Based Interceptors (44 in U.S., 10 in Poland)
  - Land-based surveillance and / or tracking radars in Alaska, California, Greenland, United Kingdom, Czech Republic
- **Increased capability against regional and asymmetric threats**
  - 18 Aegis engagement ships
  - 132 Standard Missile-3 interceptors
  - 4 Terminal High Altitude Area Defense fire units with 96 interceptors
  - Up to 100 sea-based Standard Missile-2 terminal interceptors
- **Greater mobility to address current and surprise threats**
  - Sea-based X-band radar (Pacific Ocean)
  - 2 forward deployed radars in Japan and Caspian / Caucasus region
  - 2 additional forward-based X-band radars, plus adjunct radar







# European Site Initiative

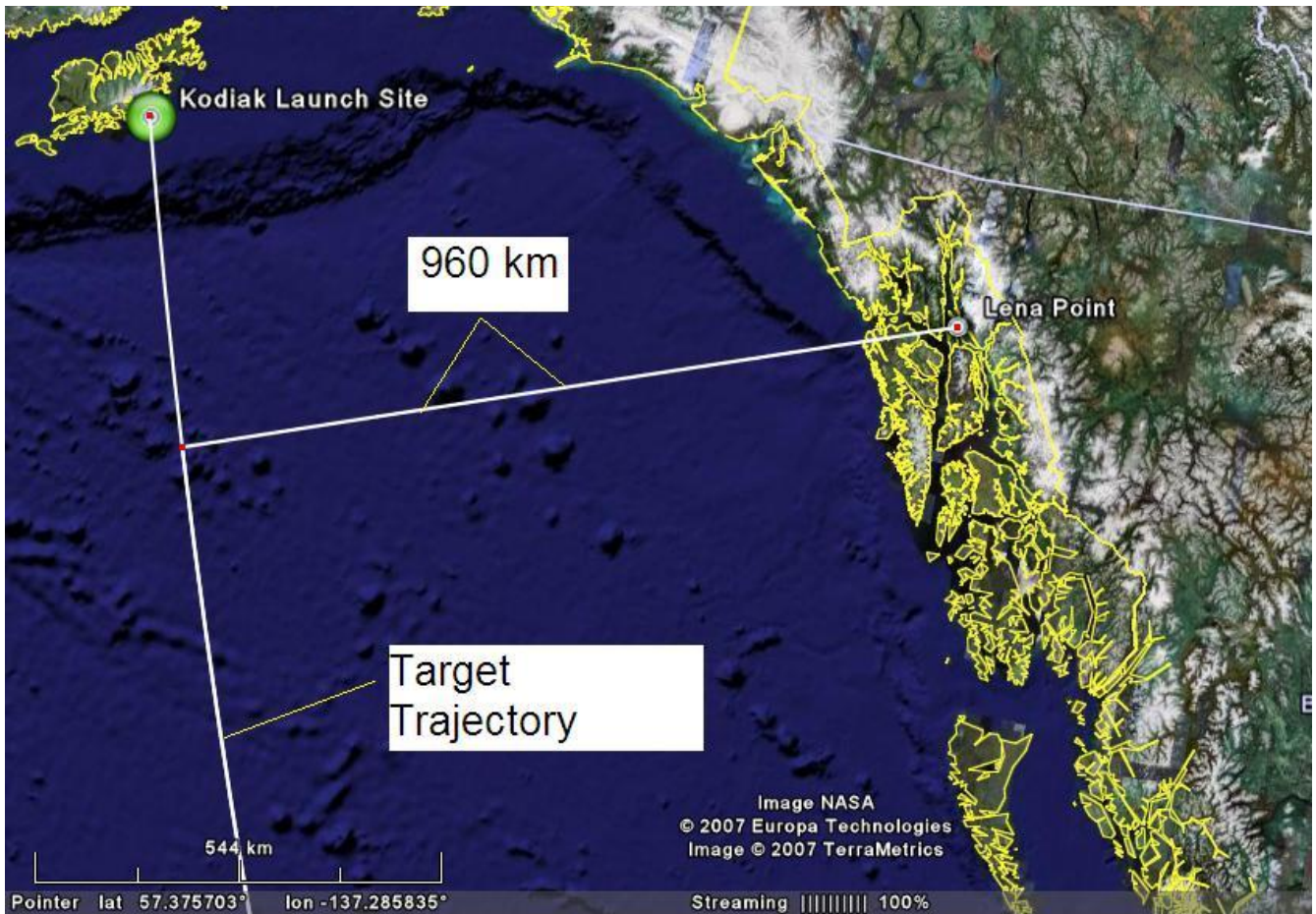
## Proposed Long-Range Missile Defense Elements In Europe

- **European interceptor site**
  - Up to 10 silo-based long-range interceptors located in Eastern Europe (2011-2013)
- **European midcourse radar**
  - Re-location of a narrow-beam, midcourse tracking radar currently used in our Pacific test range to central Europe (2011)
- **Forward-based radar**
  - Field an acquisition radar focused on the Iranian threat from a forward position to provide detection, cueing, and tracking information



- **Why Poland and Czech Republic**
  - Geometry
  - Range from Iran





*[Assuming the target in the 2008 test follows the trajectories of previous missile defense tests launched from Kodiak Island, the viewing geometry and distances from an AN/TPY-2 radar on Lena Point will be quite similar to those of the AN/TPY-2 radar at Shariki AS in Japan viewing a North Korean ICBM launch toward CONUS.]*

<http://www.reuters.com/article/politicsNews/idUSN1225015020080212>

## **U.S. says will seek 3rd missile-defense site in Europe**

Tue Feb 12, 2008 2:32pm EST

By Jim Wolf

*[EXCERPTS]*

WASHINGTON (Reuters) - The United States hopes to put a third major antimissile component in Europe along with those under negotiation with Poland and the Czech Republic to counter Iran, the general building a multibillion-dollar shield said Tuesday.

The previously unannounced third leg in Europe involves a highly mobile X-band radar station, built by Raytheon Co. It would be placed closer to Iran, which is speeding efforts to build ballistic missiles capable of delivering deadly weapons beyond the Middle East, said Air Force Lt. Gen. Henry Obering, head of the Pentagon's Missile Defense Agency.

The powerful, "forward based" radar system would go in southeastern Europe, possibly in Turkey, the Caucasus or the Caspian Sea region, Obering told a defense-technology conference sponsored by Aviation Week magazine.

He said it was identical to a U.S. radar placed opposite North Korea in northern Japan at an air base near the village of Shariki.

"This is very mobile, transportable, so it's not something we have to deal with immediately," Obering said, "It's something we can deal with downstream."

*[deletia]*

The X-band radar uses a finely focused beam that is capable of tracking and viewing small objects in space, like a missile warhead, with great clarity. Experts describe it as very capable for distinguishing decoys from warheads.

The Missile Defense Agency already has acquired a second such radar and plans to build two more for a total of four, Richard Lehner, an agency spokesman, said.

The second forward-based radar, now at Vandenberg Air Force Base in California, will be moved later this month to a site near Juneau, Alaska, Lehner said. There it will be located temporarily to take part in the next test of the core U.S. missile defense system in late spring or early summer, he said.

Closer proximity of a powerful radar system, such as the X-band, to a launch site allows for earlier detection, which provides greater accuracy for targeting.

(Editing by Maureen Bavdek)

<http://www.earthtimes.org/articles/show/187400,us-official-missile-deal-with-czech-republic-poland-closer--summary.html>

## **US official: Missile deal with Czech Republic, Poland closer - Summary**

Posted : **Thu, 21 Feb 2008** 18:49:04 GMT

Author : DPA

Budapest - The United States is getting closer to reaching a deal with the Czech Republic and Poland over controversial plans to site elements of a missile defence system in the former Soviet satellites, a key US official said Thursday. "We have made significant progress over the last few weeks in negotiations with the countries," Acting Undersecretary for Arms Control and International Security John Rood told journalists in Budapest.

"There are no major issues outstanding that are not surmountable," he said.

Polish Prime Minister Donald Tusk and Czech Prime Minister Mirek Topolanek are due in Washington for talks over the next few weeks, and Rood said the missile defence system would be on the agenda.

Rood was heading up a US delegation in the seventh of a series of sometimes-stormy talks with Russia on the plans, which Moscow claims could eventually threaten its own security.

The US claims that the mooted missile-defence system, which is expected to see a radar site in the Czech Republic and a launch site in Poland, is aimed at a possible threat from states such as Iran and North Korea.

Rood emphasized that recent attempts by Iran to develop medium- range ballistic missiles only further highlighted the importance of a missile shield in Europe.

"One of the factors we look at is why the Iranians are pursuing longer-range missiles," he said. "The reason for developing missiles is that there is a target within the range of those missiles."

"The fact they are developing these systems tells us they want to hit targets further out," he continued. "This affects more and more NATO allies."

Rood, however, denied that any plans were afoot to put in place a third radar site, possibly in Turkey, the Caucasus or the Caspian Sea region.

Media reports claimed that Air Force Lieutenant General Henry Obering, director of the Pentagon's Missile Defence Agency, had said that a mobile radar system similar to one currently in Japan opposite North Korea was mooted for a later date.

"We don't have a fixed final architecture and the missile system will evolve as the threat evolves," Rood said. "However, talks are currently only ongoing with the Czech and Polish governments."

While no significant progress was made in the talks with the Russian delegation headed by Deputy Foreign Minister Sergei Kislyak, Rood said the meeting was part of a long process to help the two nations understand each other's point of view.

<http://www.state.gov/r/pa/prs/dpb/2008/feb/101415.htm>



Daily Press Briefing  
Tom Casey, Deputy Spokesman  
Washington, DC  
February 27, 2008

*[EXCERPT]*

QUESTION: A couple of weeks ago, we saw Defense Commander and Lieutenant General Henry Obering say that in addition to the plant capabilities in the Czech Republic and Poland, there was a plan to – plan for additional components for an X-radar in Turkey in the Caucasus or the Caspian. Now, are you holding talks with the Turks on this? And if yes –

MR. CASEY: I'm not aware of any conversations with the Turkish Government about that. But you might want to check with the Pentagon. I'm not sure what the general is referring to.

## **Pentagon: Gates discussed missile defense in Ankara**

Servet Yanatma Ankara

12.03.2008

Ankara has not received any US proposal for the deployment of a missile defense shield on Turkish soil, diplomatic sources said yesterday, following Pentagon's statement that US efforts to secure an agreement to base components of a global missile defense shield in Eastern Europe was on the agenda of US Defense Secretary Robert Gates' talks with Turkish officials during an official visit to Ankara late last month.

In response to a question during a news briefing on Monday, Pentagon Press Secretary Geoff Morrell said on Monday that the missile defense issue came up during Gates' talks with both President Abdullah Gül and Prime Minister Recep Tayyip Erdoğan as well as with the Turkish military. In addition to Gül and Erdoğan, Gates had talks with Defense Minister Vecdi Gönül and Chief of Turkish General Staff Gen. Yaşar Büyükanıt during his visit.

US officials have so far briefed their Turkish counterparts concerning their plans on the issue, Turkish diplomatic sources told Today's Zaman, noting that no proposal for Turkey's participation has been conveyed to date. In case of receiving such a proposal, the issue will be evaluated by the military officials, the same sources added.

The US hopes to put a third major antimissile component in Europe along with those under negotiation with Poland and the Czech Republic to counter Iran, a US general building a multibillion-dollar shield said last month. The powerful, "forward based" radar system would be placed in southeastern Europe, possibly in Turkey, the Caucasus or the Caspian Sea region, Air Force Lt. Gen. Henry Obering, head of the Pentagon's Missile Defense Agency, said then in remarks delivered at a defense-technology conference sponsored by Aviation Week magazine.

Presenter: Pentagon Press Secretary Geoff Morrell **March 10, 2008**  
DoD News Briefing with Press Secretary Morrell from the Pentagon

*[deletia]*

Q Related to the defense -- missile defense system --

MR. MORRELL: Yeah.

Q -- there have been some reports in the Turkish press and some U.S. officials that Turkey might be getting into the system as well. I know you've been to Turkey with Secretary Gates. Can you answer if there is any talks, there will be any talks?

MR. MORRELL: Well, we did -- I mean, and the secretary talked about this, I think, on that trip. Correct me, those who were with us, if that didn't -- you were with us, right, Ben? Yeah, I think we did talk about this, that part of our talks with the Turkish government last week or the week before last was indeed missile defense. I must tell you the focus of the talks at the time primarily dealt with the cross-border operation into northern Iraq, but missile defense did come up during the course of our talks, not only with the Turkish military, but with President Gul and Prime Minister Erdogan, not that it was so much an issue here.

*[deletia]*

Q Can you give more details about the missile defense talks?

MR. MORRELL: I can't. I can't. I know it was -- I was in the meetings. It was a subject of discussion, but I don't think we want to get into specifics at this point.

Congressional Record: September 23, 2008 (House)  
[Page H8871-H8921]  
From the Congressional Record Online via GPO Access [wais.access.gpo.gov]  
[DOCID:cr23se08-135]

[[pp. H8871-H8921]] JOINT EXPLANATORY STATEMENT SUBMITTED BY MR. SKELTON,  
CHAIRMAN OF THE COMMITTEE ON ARMED SERVICES, REGARDING THE AMENDMENT  
OF THE HOUSE OF REPRESENTATIVES TO S. 3001

Activation and deployment of AN/TPY-2 forward-based X-band  
radar (sec. 236)

The Senate bill contained a provision (sec. 237) that would authorize the use of up to \$89.0 million in funds for defense-wide research, development, test, and evaluation for the activation and deployment of an AN/TPY-2 X-band radar to a classified location. It would also require the Secretary of Defense to submit a report to Congress on such deployment before the funds would be available for the deployment.

The House bill contained no similar provision.

The agreement includes the Senate provision.



**[EXCERPTS]**

CONGRESS OF THE UNITED STATES  
CONGRESSIONAL BUDGET OFFICE

A

**CBO**  
**STUDY**

FEBRUARY 2009

**Options for  
Deploying  
Missile Defenses in  
Europe**

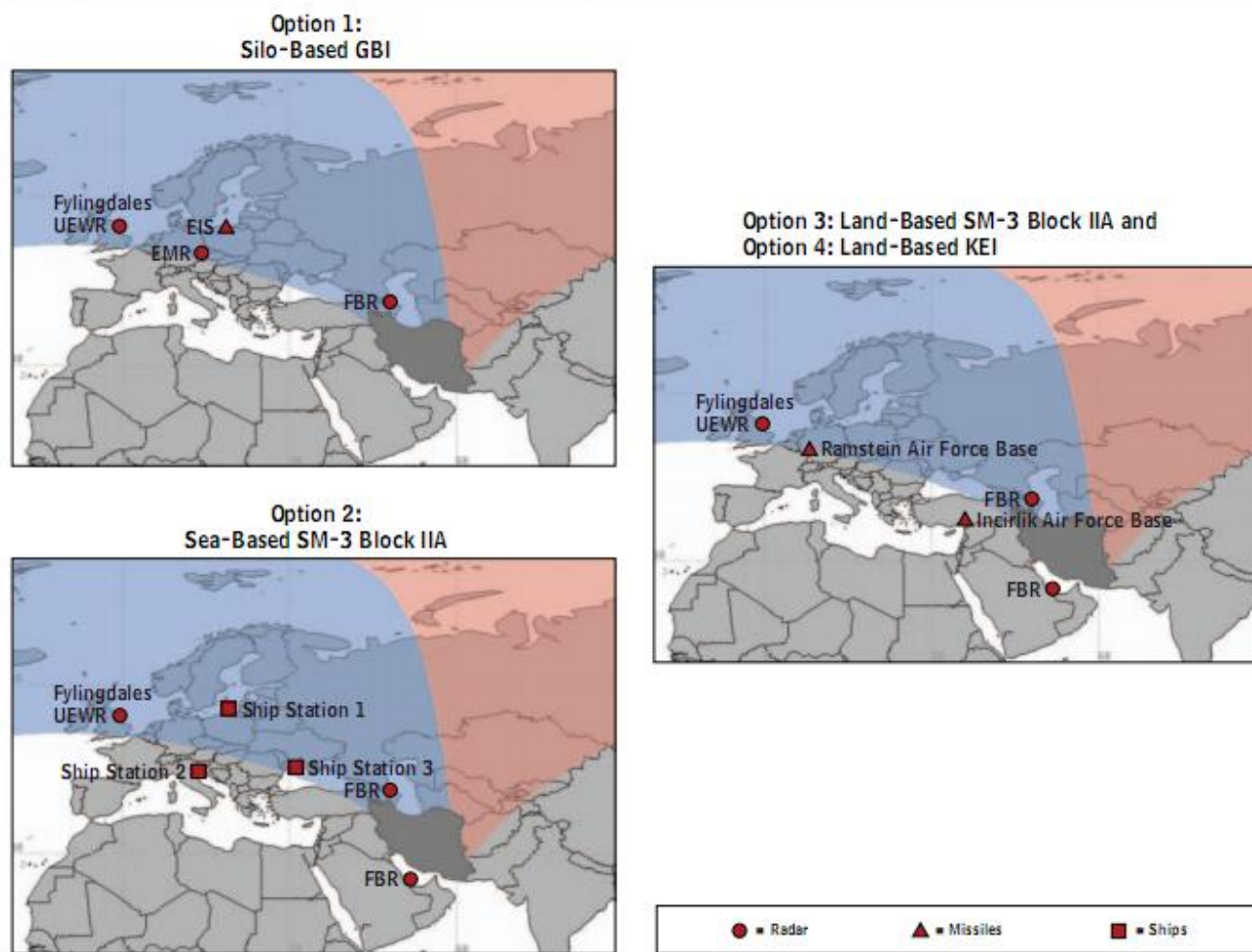


The location of the components of a missile defense system relative to the likely trajectories of enemy missiles is critical to the system's capability. In many cases, U.S.-bound missiles launched from Iran would fly over Russia rather than Europe (see Summary Figure 1)—for example, a trajectory from northwestern Iran to Los Angeles passes almost directly over Moscow. Placing the forward-based radar far enough east to track such trajectories is critical to providing defense of the western United States. CBO considered Azerbaijan a suitable location for an FBR for defense of both Europe and the United States, but using locations farther east (such as Afghanistan) could provide better tracking of ICBMs headed toward the United States.

[deletia]

**Summary Figure 1.**

**Components of the Options for European Missile Defenses and Their Locations**



Source: Congressional Budget Office.

Notes: Blue shading indicates the range of trajectories of intercontinental ballistic missiles from Iran to the continental United States. Red shading indicates the additional range of trajectories for missiles targeting all of the United States, including Alaska and Hawaii. Iran is shown in dark gray.

GBI = Ground-Based Interceptor; UEW = upgraded early-warning radar; EMR = European Midcourse Radar; EIS = European Interceptor Site; FBR = forward-based radar; SM = Standard Missile; KEI = Kinetic Energy Interceptor.

## Option 1: MDA's Planned European System

*[deletia]*

MDA's plans also call for deploying a forward-based radar, although the location and description of the radar have not yet been specified. For this analysis, CBO assumed that the radar would resemble an AN/TPY-2 transportable X-band radar with a range of 1,000 km.

Press reports suggest that MDA has considered a location in the Caucasus region for the FBR; in this study, CBO assumed that the radar would be located in Azerbaijan. (That location was used in all four of the options.) The antenna of the AN/TPY-2 has a field of regard of 120 degrees in azimuth, with electronic steering available to move the radar beam quickly within that field. However, a mechanical steering kit is being developed to allow physical movement of the antenna, so that a single radar antenna can be extended to a full 360-degree field of regard in azimuth. CBO assumed that mechanical steering kits would be used for all of the AN/TPY-2 radars in this study.

The siting of a forward-based radar is critical to successful missile defense in Europe. The earlier the trajectory of a threat missile can be determined, the more time will be available for interceptors to fly to distant intercept points, expanding the area that can be defended. CBO chose Azerbaijan as the notional location for a forward-based radar because it is near Iran and would allow early tracking of the midcourse phase of missiles launched from both northern and southern Iran toward northern Europe and the continental United States. Trajectories of intercontinental ballistic missiles heading for Alaska or Hawaii would be out of range of the radar as modeled, however, as would missiles launched from southern Iran toward southern Europe. (Proposals have been made to use Russian radars in the GMD Block 4.0 system; for more details, see Box 2-2.)

**Box 3-1.****Capabilities Against Countermeasures**

Along with developing missiles, some nations have worked to develop countermeasures that could hinder missile defense systems. Common countermeasures include decoy warheads that are deployed to confuse interceptors; jammers, chaff, or flares that are designed to disrupt sensors trying to track a threat warhead; and maneuverable warheads that can change their trajectory during flight.

Each of the options that the Congressional Budget Office (CBO) modeled for this analysis consists of existing or planned systems that use techniques intended to mitigate the effects of countermeasures. (Those techniques are summarized in the table at right.) CBO's model does not estimate the probability of a successful intercept, and thus it does not quantify the relative value of the various approaches to deal with countermeasures.

One type of countermeasure commonly discussed in the missile defense literature is the deployment of decoys. Potential ways of handling decoys include deploying sensors that can distinguish the actual warhead from surrounding decoys (usually referred to as discrimination) and deploying multiple kill vehicles on a single interceptor with the aim of engaging all of the objects that could be warheads. In an ideal case, those two techniques would be combined to increase the chance of successfully engaging the warhead. As modeled, none of the options in this study would use both techniques; however, all of them could potentially do so.

For these options, the optimum way to use radar to discriminate between warheads and decoys is to have continuous tracking with high-resolution X-band radar from the time that the decoys and warheads are deployed (shortly after the booster burns out) until the intercept. Continuous tracking is also critical to engaging warheads that can maneuver during the midcourse phase of flight. Option 1, with both the European Midcourse Radar (EMR) and a forward-based radar (FBR), would have the most X-band radar coverage over the engagement portion of a threat missile's trajectory. It would also be capable of tracking missiles from burnout to intercept for many (though not all) trajectories. However, constraints on steering both the FBR and the EMR could preclude full tracking for multiple, widely separated missiles launched at about the same time (see Box 3-2 on page 30). Continuous tracking for multiple missiles and for all trajectories would require additional radars beyond those included in Option 1.

Options 2, 3, and 4 are assumed to include two FBRs but not the EMR, so high-resolution tracking would be available only for the early portion of a threat missile's trajectory. Tracking later in the trajectory would come from the lower-resolution Fylingdales or SPY-1 radars. Adding the EMR to those options (at an extra cost of about \$600 million to procure and install the radar and about \$70 million per year to operate it) would improve the discrimination capability to match that of Option 1, with little change to the area that could be defended.

Continued

## Capabilities Against Countermeasures

As modeled, only Option 4 is assumed to incorporate the planned Multiple Kill Vehicle (MKV), which is intended to allow a single interceptor to engage multiple objects. Future plans call for deploying the MKV on Ground-Based Interceptors, so that kill vehicles could be added to Option 1 at some point. However, the extra mass of the MKV would reduce the area that could be defended under Option 1. During development of the Standard Missile-3 (SM-3) Block IIA interceptor, the Missile Defense

Agency considered the possibility of having it carry the MKV (perhaps a variant of the one modeled here), but the agency recently decided to stick with a unitary warhead for that version of the interceptor. However, a possible follow-on version of the interceptor, sometimes referred to as the SM-3 Block IIB, might carry the MKV. How that would affect the area defended would depend on the mass of the MKV and the modifications made to the interceptor.

### Summary of Techniques Used to Mitigate the Effect of Countermeasures

Technique	Desired Effect	Option 1	Option 2	Option 3	Option 4
High-Resolution X-Band Radar	Discriminate between warhead and decoys	Yes (FBR and EMR)	Partial (FBR only, as modeled)	Partial (FBR only, as modeled)	Partial (FBR only, as modeled)
Multiple Kill Vehicle	Engage multiple targets to reduce the effect of decoys	Not as modeled	Not as modeled	Not as modeled	Yes
Radar Wavelength Diversity	Reduce susceptibility to chaff and jammers	Yes (X-band and UHF)	Yes (X-band, UHF, and S-band)	Yes (X-band and UHF)	Yes (X-band and UHF)
Two-Color Infrared Sensor on Kill Vehicle	Reduce susceptibility to infrared stealth, improve kill vehicle's discrimination between warhead and decoys	Yes	Yes	Yes	Yes

Source: Congressional Budget Office.

Note: FBR = forward-based radar; EMR = European Midcourse Radar; UHF = ultrahigh frequency.

<http://www.washingtonpost.com/wp-dyn/content/article/2009/07/05/AR2009070501744.html>

## **Defense For a Real Threat**

By Trey Obering and Eric Edelman

Monday, July 6, 2009

*[EXCERPT]*

So could the European site actually defend against the Iranian threat? Critics of the program's likely effectiveness frequently use flawed analytical techniques. The radar the U.S. government has proposed deploying in the Czech Republic has been operated in flight tests in the South Pacific for more than eight years. Critics significantly underestimate its performance, even before its planned deployment upgrades are performed. Nor do detractors understand the basic capabilities of that radar or of **the planned forward-deployed radar** in acquiring, tracking and discriminating targets. We are taking a multilayer, integrated approach to target discrimination, not just relying on a single element in the chain.

Retired Air Force Lt. Gen. Trey Obering was director of the Missile Defense Agency from July 2004 to November 2008. Eric Edelman, a distinguished fellow at the Center for Strategic and Budgetary Analysis, was undersecretary of defense for policy from August 2005 to January 2009.

Presenter: Secretary of Defense Robert Gates and  
Vice Chairman, Joint Chiefs of Staff Gen. James Cartwright  
September 17, 2009

## **DoD News Briefing with Secretary Gates and Gen. Cartwright from the Pentagon**

*[EXCERPTS]*

GEN. CARTWRIGHT: ...But we've also added mobile and re-locatable radars: the X-band radar that is in Japan, the X-band radar that we currently have deployed to Israel, one that will be probably deployed someplace in Europe, to be part of this European lay down. That system has proved to be very, very effective and very capable.

*[deletia]*

Q Well, because you did mention that there could still be the deployment of an X-Band radar in Europe as part of this. Do you know where that would be? Could it still be in the Czech Republic?

GEN. CARTWRIGHT: It's probably more likely to be in The Caucasus that we would base that, because it's to get the early tracks. So that likely would be more down in The Caucasus.

*[deletia]*

Q Can you explain why X-band radar in the Caucasus might be more -- less of a threat to Russia than the Czech radar? And what is -- by 2011, how many medium-range missiles from Iran could they conceivably launch toward Europe? Is this just one or two? Or are we in the hundreds?

SEC. GATES: On the capabilities of the X-band radar, the history major will defer to the general. (Laughter.)

GEN. CARTWRIGHT: On the X-band radar, what we're trying to get -- the first question really has to do with Russia and their perception of a threat, from the radar that would have been in the Czech Republic.

And that radar is an omni-directional radar. In other words, it sees 360 degrees. And it has a very deep peering capability into Russia.

And the worry would be that we would be able then to see very early the launches if Russia were launching their ICBMs and that could be perceived as destabilizing. The X-band radar is a single directional. In other words, when you put it down, it points in a single direction. And it will be very clear that it is pointing south towards Iran.

What you want to do is get that radar as close as you can to be able to get the initial launches and understand where the missiles are going, whether they are just tests or whether they are threatening. And so the X-band radar gives you that capability very quickly.

[http://www.armytimes.com/news/2009/09/military\\_missiledefense\\_obama\\_091709w/](http://www.armytimes.com/news/2009/09/military_missiledefense_obama_091709w/)

## **Obama sharply alters missile defense plans**

By William H. McMichael - Staff writer

Posted : **Thursday Sep 17, 2009 20:26:32 EDT**

*[EXCERPTS]*

In a major policy reversal, President Barack Obama has scuttled plans to build a massive ground-based missile defense system based in the Czech Republic and Poland that the Bush administration intended to counter the threat posed by Iranian ballistic missiles.

Instead, Obama favors shorter-range ground- and sea-based missiles positioned closer to Iran.

The new system, which Marine Corps Gen. James Cartwright, vice chairman of the Joint Chiefs, said will be “globally deployable, ... globally exportable,” initially will center around ground-based Patriot and Aegis-ship-based SM-3 missiles, networked command-and-control systems and improved sensors. It will mimic the ship-based defense system now used in the joint defense of South Korea and Japan, he said.

Worldwide, the system eventually will integrate the Terminal High-Altitude Area Defense missile, or THAAD, slated this year for operational deployment to Europe, and the Ground-Based Interceptor missile based at Fort Greely, Alaska, and at Vandenberg Air Force Base, Calif., Cartwright said.

**It also would include construction of a directional X-band radar somewhere in Europe, most likely in the Caucasus region, Cartwright said.**

Now off the table are plans to build the politically sensitive system that Defense Secretary Robert Gates proposed to President George W. Bush in 2006 that called for construction of a complex radar station in the Czech Republic and the installation of 10 silo-based Ground-Based Interceptor missiles in Poland.

*[deletia]*

But two elements of the new plan should allay those fears, Gates said. The new sensor plan will not have the capability to look deep into Russia, as the previous omni-directional system could have.

The X-band radar is directional and, Cartwright said, “it’ll be very clear that it is pointing south towards Iran.”

And the SM-3, with its kinetic warhead, is a weapon that Gates said the Russians “simply cannot, at least rationally, argue bears any kind of a threat to Russia.”

*[deletia]*



<http://www.businessweek.com/news/2010-01-14/lockheed-raytheon-gain-in-gates-s-europe-missile-defense-plan.html>

## **Lockheed, Raytheon Gain in Gates's Europe Missile-Defense Plan**

By Tony Capaccio

January 14, 2010, 02:42 PM EST

*[EXCERPTS]*

Jan. 14 (Bloomberg) -- Orders of Lockheed Martin Corp. interceptor missiles would quadruple and those of Raytheon Co. missiles would triple in the Pentagon's revised five-year spending plan for a missile defense for Europe.

The increased spending reflects President Barack Obama's decision in September to scrap plans to base a system in Poland and the Czech Republic that would defend Europe against long-range missiles from Iran.

The new plan uses existing missile systems based on land and at sea to guard against the threat of short- and medium-range rockets. U.S. intelligence assessments early last year indicated Iran is moving more quickly to develop these weapons and making less progress than believed on long-range missiles.

The proposed spending is included in a directive signed by Defense Secretary Robert Gates on Dec. 23 and widely distributed within the Defense Department. It spells out major adjustments to the fiscal 2011-2015 budget plan to be released Feb. 1.

"These increases seem to support a greater emphasis on deploying current and near-term U.S. ballistic missile defense capabilities as quickly as possible," said Steven Hildreth, a missile defense analyst for the non-partisan Congressional Research Service.

### Staged Deployment

Deployment of the revised missile defense would extend through 2020. The first step is to put existing sea-based weapons systems on Aegis-class destroyers and cruisers.

Subsequently, a mobile radar system would be deployed in a European nation near Iran. More advanced, mobile systems would be put in place later elsewhere in Europe. Their centerpiece would be Bethesda, Maryland-based Lockheed's Terminal High Altitude Defense interceptor missiles and improved Standard Missile-3 IB missiles made by Waltham, Massachusetts-based Raytheon.

"It means taking missile defense and sort of distributing it, starting off on Aegis ships," then "putting systems ashore and lashing all that together," Admiral James Stavridis, NATO's supreme allied commander said in an interview.

"We are not at a stage yet where we would be talking to a nation about putting a radar in. That's in the future," he said. "As a first step we are looking at where our Aegis ships may be distributed to create the initial shield."

Lockheed spokeswoman Cheryl Amerine declined to comment on the budget proposal. Raytheon spokesman John Patterson did not reply to an e-mailed request for comment.

*[deletia]*

## **US plans full European missile shield in 8 years**

By Jim Wolf

Thu Apr 15, 2010 8:39pm EDT

[EXCERPTS]

WASHINGTON, April 15 (Reuters) - U.S. anti-ballistic missile systems will cover all of Europe by 2018, a senior Pentagon official said, laying out an ambitious target for defending against a perceived threat from Iran.

"One hundred percent," Bradley Roberts, deputy assistant secretary of defense for nuclear and missile defense policy, said in reply to a question at a hearing of a House of Representatives Armed Services subcommittee Thursday.

[deletia]

The United States is discussing the potential location of a forward-based Raytheon AN/TPY-2 radar station it wants to deploy in southern Europe by the end of next year, Roberts said. Phase 1 of Obama's plan also involves ships equipped with Lockheed Martin Corp (LMT.N) Aegis combat systems built for missile defense and SM-3 interceptors.

<http://www.defensenews.com/story.php?i=7079314&c=AME&s=AIR>

## 2 U.S. Senators Unhappy With Missile Defense Plan

AGENCE FRANCE-PRESSE

Published: 12 Jul 2011 21:29

WASHINGTON - Two Republican U.S. senators on July 12 expressed concerns about a possible agreement to base a missile-shield radar in Turkey, citing the NATO ally's strained ties with Israel and relations with Iran.

Sens. Jon Kyl, R-Ariz., and Mark Kirk, R-Ill., wrote Defense Secretary Leon Panetta and Secretary of State Hillary Clinton seeking reassurances on the possible deal, which was described in a news report

The lawmakers asked for "written assurances" that data collected by a so-called X-band radar "will be made available, in real time" to staunch U.S. ally Israel to be "fully integrated into its battlement management and control."

They also sought a guarantee that "Turkish entities are not engaged, or suspected of engaging" in activities that fall afoul of various U.S. laws aimed at curbing suspected nuclear weapons programs in Iran and Syria and keeping sensitive know-how from North Korea.

And President Obama's administration must also certify that the powerful radar will only be operated by U.S. personnel, and for 24 hours a day, seven days a week, except for maintenance breaks, the senators said.

Kyl, the No. 2 two Senate Republican, and Kirk also questioned whether the reported decision to locate the radar in Turkey would "ensure the best defense of the United States against the Iranian long-range ballistic missile threat."

They cited a U.S. Missile Defense Agency study that found that the South Caucasus to be "the optimum placement" if the system is designed to defend against an eventual Iranian ballistic missile attack.

"The administration's plans for missile defense will require the cooperation of the Congress; the prospects for such cooperation are jeopardized if the Congress is not provided the information it requests," they warned.

## **Appendix A**

### **AN/TPY-2 Siting and Staffing Juneau, Alaska and Shariki, Japan**

*[Sourcebook note: It appears as if the AN/TPY-2 sites will be somewhat standardized and so the sites at Juneau and Shariki may provide some insight into the proposed Caucasian site.]*

<http://www.tradingmarkets.com/.site/news/Stock%20News/1770338/>

## **Raytheon Radars Play Key Role in Missile Defense Test**

Monday, July 21, 2008; Posted: 08:00 AM

[EXCERPT]

TEWKSBURY, Mass., July 21, 2008, 2008 /PRNewswire via COMTEX/ -- Three missile defense radars built by Raytheon Company performed successfully in the latest flight test conducted by the Missile Defense Agency July 18.

"The FTX-03 mission successfully demonstrated the integration of missile defense sensors required to support an interceptor engagement," said Pete Franklin, vice president, Raytheon Integrated Defense Systems National & Theater Security Programs. "Raytheon's radars operated with other Ground-based Midcourse Defense (GMD) components and collected valuable mission data, significantly reducing risk for future flight tests."

During the mission, which demonstrated a simulated intercept of a live target, the AN/TPY-2 radar at Juneau, Alaska, acquired a boosting target launched from Kodiak, Alaska, using a cue based on data generated from satellite sensors. The AN/TPY-2 tracked the target during its initial boost phase through ballistic flight, cued the Upgraded Early Warning Radar (UEWR) at Beale Air Force Base, Calif., and demonstrated interoperability with multiple Ballistic Missile Defense System elements.

The UEWR successfully acquired, tracked and classified the target system, providing data to the GMD system and achieving all mission objectives.

The Raytheon-built X-Band Radar (XBR), aboard the Boeing-developed Sea-Based X-Band Radar (SBX) vessel, acquired the target complex via a cue formulated from the AN/TPY-2 and UEWR radar data and provided track and discrimination data to the GMD system, which directed the simulated engagement.

The XBR success in this mission was critical preparation for the FTG-05 flight test to be conducted later this year in which XBR will be the primary radar for all engagement decisions.

Raytheon Company is the prime contractor for the AN/TPY-2 radar, which provides a common capability enabling both a forward-based mode and a terminal mode in support of the Ballistic Missile Defense System. The AN/TPY-2 is a phased array, capable of search, threat detection, classification, discrimination and precision tracking at extremely long ranges.

Developed by Raytheon, the UEWRs add missile defense capabilities to the Raytheon-developed PAVE PAWS and Ballistic Missile Early Warning System radars, while continuing their missile warning and space surveillance missions. XBR, built by Raytheon Company, provides missile tracking, discrimination and hit assessment to the GMD portion of the BMDS.

The Boeing Company is the prime contractor for the GMD element of the BMDS and the SBX and UEWR at Beale Air Force Base.

[http://www.juneauempire.com/stories/060108/loc\\_285173550.shtml](http://www.juneauempire.com/stories/060108/loc_285173550.shtml)

## **Radar array placed in Juneau**

By Alan Suderman | JUNEAU EMPIRE

Sunday, June 01, 2008

Story last updated at 6/1/2008 - 9:33 am

The U.S. Missile Defense Agency on Saturday placed a powerful, mobile radar station in Juneau. The radar array is designed to take part in testing how well this country can knock threatening warheads from the sky.

The three tractor-trailer-sized radar units and support equipment were unloaded and placed by construction workers at the Ted Stevens Marine Research Institute at Lena Point, a short distance from the National Oceanic and Atmospheric Administration building.

Sometime in mid-July, a missile is scheduled to launch from Kodiak and race south over the Pacific Ocean, according to Maj. Gen. Patrick O'Reilly, deputy director of the MDA. The two-star Army general was present for part of the radar's installation.

An intercepting missile may be fired from Vandenberg Airforce Base in California to attempt to destroy the missile launched from Kodiak, MDA spokesman Ralph Scott said.

The job of the radar in Juneau will be to track the first part of the Kodiak missile's flight, O'Reilly said.

The radar array will remain in place until mid-August if the missile from Kodiak is launched on time, according to O'Reilly.

He said the more than \$100 million radar array had a range of greater than 1,800 miles and was designed to track short-range missiles.

The radar was originally scheduled to arrive last year and the missile test was supposed to have occurred earlier this year. But delays with the intercepting missile program are responsible for the later test date, O'Reilly said.

He said the MDA and Marine Research Institute would evaluate using the present location to house the radar units before deciding whether to use the site again in the future. The radar units would not be permanently housed in Juneau, O'Reilly said.

"That's part of the test, is the ability to show that we're mobile," O'Reilly said, adding that the MDA is interested in returning for future tests.

Marine Research Institute Director Phil Mundy said he was pleased with the partnership between his agency and MDA so far. The radar array will be powered by the city's electric utility, Alaska Electric Power & Light Co., and the electrical infrastructure upgrades used to power the radar will be available to bolster the institute's power after the tests are completed, Mundy said.

An estimated 30 to 40 people will operate the radar array. Support staff include security guards employed by Chenega Blackwater Solutions, which is a partnership between an Anchorage-based Native Company and the embattled private security firm that's drawn fire for its operations in Iraq.

Last year, a few community members spoke out against Juneau hosting the radar array and participating in missile testing.

But O'Reilly said Juneau should be proud to play a part of the tests.

"Part of our requirement as a government is to protect our citizens, and this is a crucial piece of equipment for our military," he said. "It's part of our obligation to support the military, as the military supports the country."

[http://www.mda.mil/mdalink/images/FBX\\_T.jpg](http://www.mda.mil/mdalink/images/FBX_T.jpg)



*AN/TPY-2/FBX-T apparently installed at Lena Point, Alaska with Shelter Island in the background  
Image retrieved 2007-11-12*



**MISSILE DEFENSE AGENCY  
RECORD OF ENVIRONMENTAL CONSIDERATION**

**Project Title:** AN/TPY-2 Radar Deployment at the Ted Stevens Marine Research Institute (TSMRI) on the National Oceanic and Atmospheric Administration (NOAA) Site in Juneau, Alaska in Support of Flight Test Ground-Based Interceptor (FTG)-04.

**Description of Proposed Action:** The proposed action is to site, transport, set up, calibrate, and operate the AN/TPY-2 radar (previously designated as the Forward Based X-Band Transportable [FBX-T] Radar) at the TSMRI to allow MDA to locate and track target missiles launched from the Kodiak Launch Complex as part of the FTG-04 test event.

The proposed site is located approximately 29 kilometers (18 miles) northwest of Juneau, Alaska. The site is a former rock quarry situated on a bluff overlooking Favorite Channel and currently consists of a research facility (i.e., laboratory and administrative space), graveled grounds, and paved parking areas. The proposed radar equipment layout is shown in Exhibit 1.

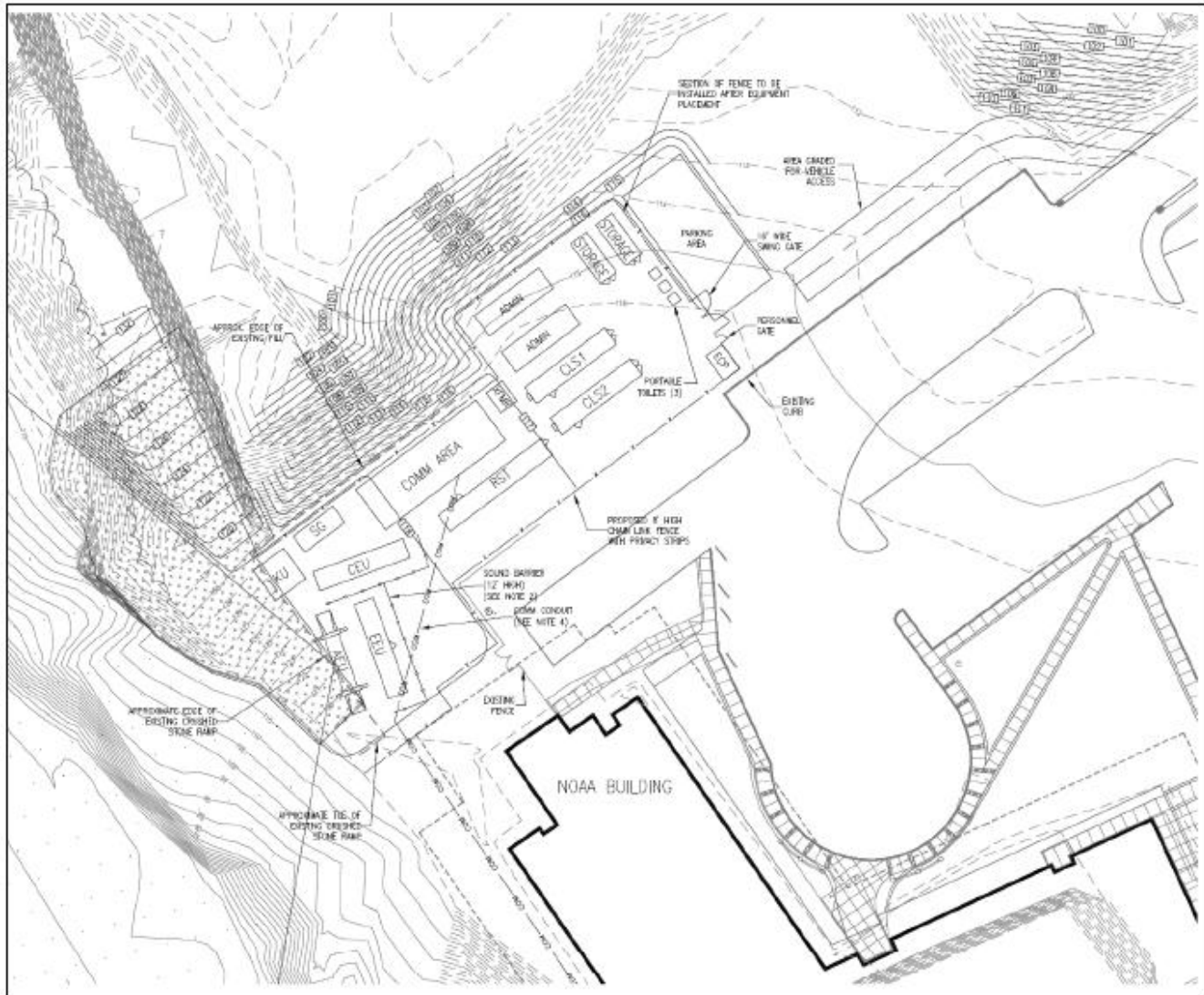
Improvements to the proposed NOAA site would consist of:

- Installation of temporary privacy fencing up to 2.4 meters (8 feet tall)
- Installation of temporary 3.6 meters tall (12 feet) noise attenuation barriers
- Grading, filling, and compaction of 0.4 hectare (1 acre) to 0.8 hectare (2 acres) hardstand area
- Installation of two 1.8-meter (6-foot) satellite dishes for communications
- Installation of temporary lighting
- Installation of grounding and lightning protection poles approximately 8 meters (25 feet) tall
- Trimming and/or topping of trees in approximately 0.4 hectare (1 acre) of coastal fringe forest
- Development of a gravel parking lot for up to 15 vehicles, and
- Development of a gravel access road from the NOAA driveway, approximately 30.5 meters (100 feet) long.

The radar system and equipment would be located and operated to minimize disruption to the on-going activities at the TSMRI facility.

DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.  
Case #: 07-MDA-2794 (10 AUG 07)

## Exhibit 1: Proposed TSMRI Site Layout



The AN/TPY-2 radar system would be transported from Vandenberg Air Force Base by up to five C-17 aircraft to the Juneau Airport, and would then be transported by an M1088 tractor or comparable truck to the proposed site. Non-critical support equipment would be transported by truck from Vandenberg Air Force Base to Seattle, Washington, and then transported by barge from Seattle to Juneau. The transportation route from Juneau to the TSMRI would follow the existing highway system. Special material handling equipment (e.g., cranes and forklifts) would be used to position major equipment items within the proposed AN/TPY-2 radar site.

Under the proposed action, site preparation would occur in June, 2007; the AN/TPY-2 radar and system components would be set up at the site in July, 2007; and system calibration would start soon after. Depending on the actual FTG-04 test date, MDA could operate the radar for up to six months at the site for calibration purposes and for the actual test event. Leading up to the test event, the AN/TPY-2 radar and system components would operate daily (up to 1 hour/day) at full power for calibration purposes.

During the test event, the AN/TPY-2 radar and system components would operate at full power for up to 4 hours.

Approximately 40 individuals would be required to set up and breakdown the AN/TPY-2 radar and system components, operate the radar and system components, and provide security for the system. During test out, calibration and operation a maximum of approximately 30 individuals would be required to operate the radar and system components and provide security for the system. All of these individuals would temporarily reside in Juneau, Alaska and commute to and from the site daily. Upon completion of testing, MDA would return the equipment to VAFB and remove all visible infrastructure and fencing from the site.

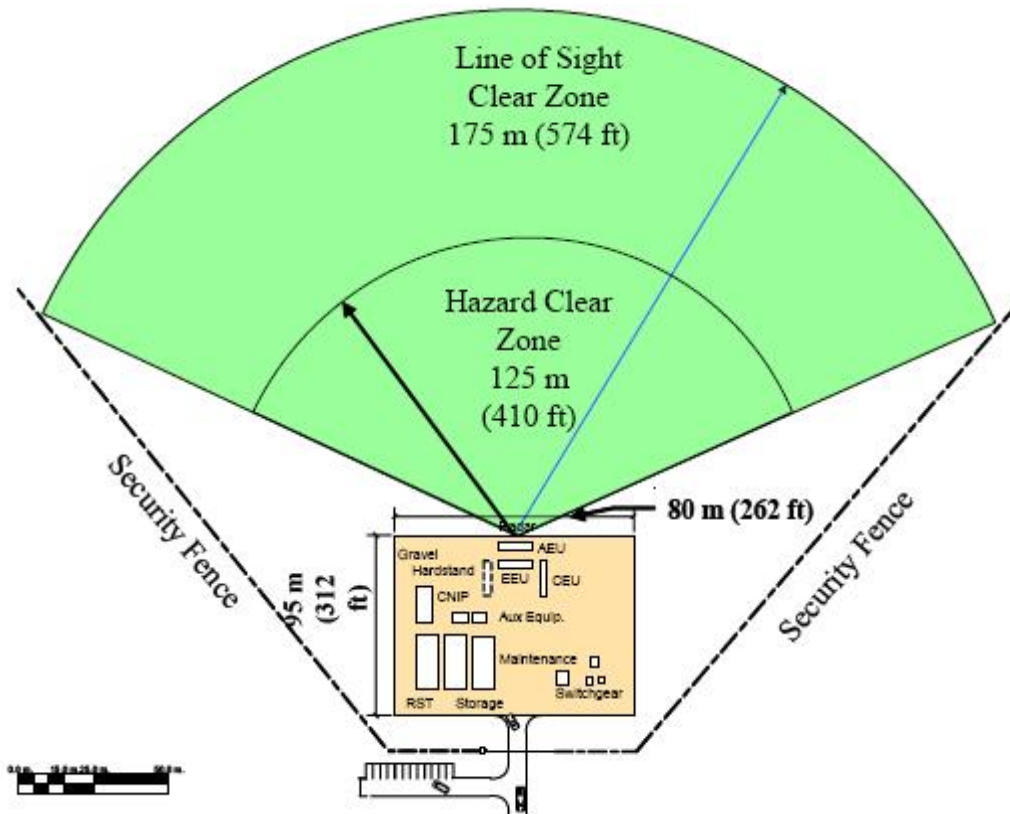
Impacts to wildlife from artificial lighting would not be significant. All lighting will be focused downward, not away from the site.

Electromagnetic radiation (EMR) and radio frequency from radars may cause impacts. However, birds are not likely to remain continuously within the radar beam and the power density is not expected to exceed levels that could impact birds; therefore, the likelihood of harmful exposure is remote.

As described in the Mobile Sensors Environmental Assessment (2005), the AN/TPY-2 radar and system components require a total of 2.1 megawatts of power to operate. Electric power would be provided to the site by Alaska Electric Light and Power (AELP) in accordance with State approved AELP procedures and Federal/State requirements (may require additional line and poles to be installed within existing right of ways and previously disturbed areas, per existing AELP permits). Small backup generators may be at the site for emergency use and would be periodically exercised according to maintenance schedules.

The AN/TPY-2 radar and system components typically require approximately 0.8 hectare (2 acres) of graded compacted hardstand surface (shown as tan area in Exhibit 2) and approximately 5 hectares (12 acres) of “clear zone” (green shaded area) to allow unobstructed, low-elevation radiation. Contained within the clear zone is a “hazard clear zone” of approximately 2.5 hectares (6 acres). At TSMRI, the majority of the clear zone is located in airspace above Favorite Channel and the AN/TPY-2 radar hardstand would be located in an area with controlled access using temporary fencing to prevent unauthorized entry to the hazard clear zone.

## Exhibit 2. AN/TPY-2 Radar Hazard Area (Notional)



**Anticipated Start/End Date of the Proposed Action:** 1 Jun 07 – 31 Dec 07. Weather and other delays could extend the end date.

**Determination:** MDA/DFW has determined that the proposed action:

- Is adequately analyzed in an existing EA/EIS  
Title: MDA Mobile Sensors Environmental Assessment  
Date: September, 2005
- Qualifies for a Categorical Exclusion
- Is exempt from NEPA requirements under the provisions of (cite the superceding law)

**Rationale:** MDA determined that the proposed actions for relocating and operating the radar were programmatically analyzed in the Mobile Sensors Environmental Assessment (MSEA), completed in 2005. This radar (formerly known as the TPS-X) was also analyzed in the Ground-Based Midcourse Defense (GMD) Extended Test Range (ETR) Environmental Impact Statement (EIS). However, site-specific analysis for the NOAA location in Juneau, Alaska was not included in either the MSEA or GMD ETR EIS.

MDA determined that this action qualifies for Army CATEXs (see Appendix A), as outlined below:

- The proposed actions, consisting of (1) grading, filling, and compacting areas for a hardstand, (2) installing grounding and lightning protection poles, and (3) pruning/clearing trees in previously undisturbed areas are categorically excluded under the provision of: **32 CFR Part 651, Appendix B (C1)** - “Construction of an addition to an existing structure or new construction of a previously undisturbed site if the area to be disturbed has no more than 5 cumulative acres of new surface disturbance. This does not include construction of facilities for the transportation, distribution, use, storage, treatment and disposal of solid waste, medical waste, and hazardous waste (REC required).”
- The proposed actions, consisting of developing a gravel access road and vehicle parking lot, are categorically excluded under the provision of: 32 CFR Part 651, Appendix B (C3) – “Road or trail construction and repair on existing rights-of-ways or on previously disturbed areas.”
- The proposed action that includes installing utilities (power) to the site is categorically excluded under the provision of: 32 CFR Part 651, Appendix B (E2)
  - “Acquisition, installation, and operation of utility and communication systems, mobile antennas, data processing cable, and similar electronic equipment that use existing right-of-way, easement, distribution systems, and/or facilities.”

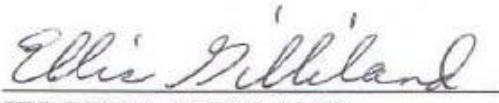
Therefore, the proposed action to deploy the AN/TPY-2 radar in support of FTG-04 at TSMRI does not require the preparation of an EA or EIS. The proposed action may proceed.





Signature:   
FOR COL KEITH KOSAN  
MDA CTF

Date: 24 May 07

Signature:   
for JERRY M. HUBBARD  
MDA DFW

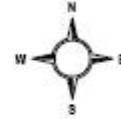
Date: 24 May 2007



[www.juneau.org/plancomm/Lena%20Point%20Master%20Plan\\_color.pdf](http://www.juneau.org/plancomm/Lena%20Point%20Master%20Plan_color.pdf)

# LENA POINT MASTER PLAN

JULY 2002



## LEGEND

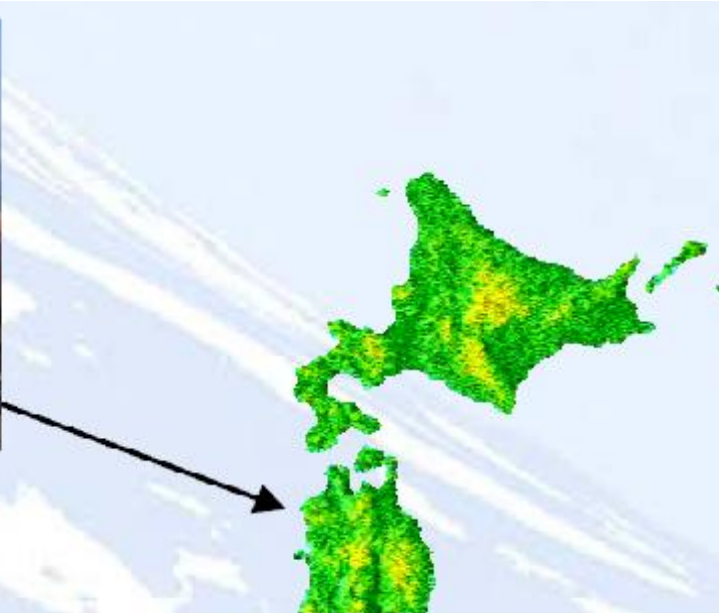
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	CBJ Beach Access Route
	Existing Residential Development
	Proposed CBJ Residential Development
	Other Anticipated Residential Development
	Other CBJ Lands

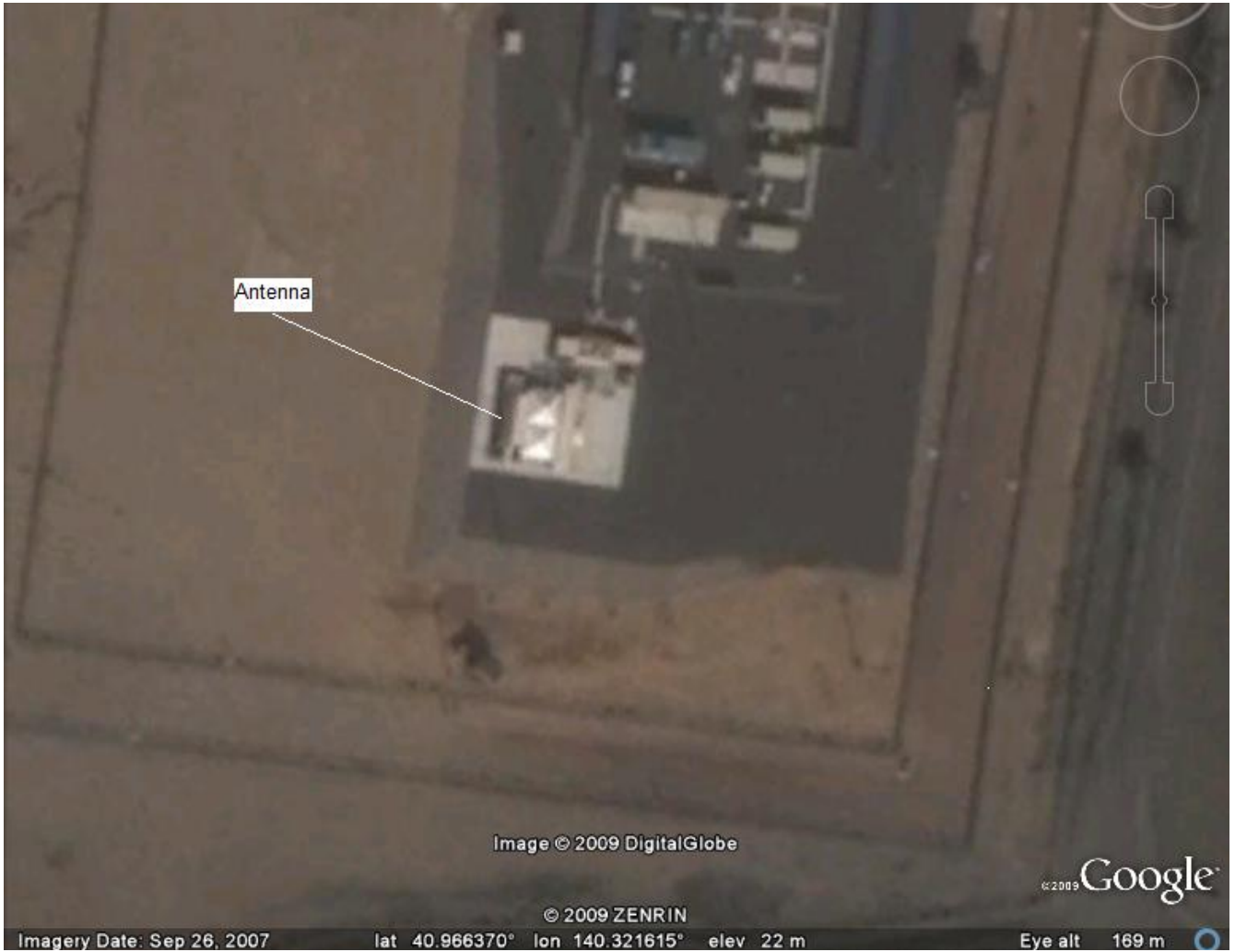
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**FBX-T Radar  
Shariki**





**AN/TPY-2 Site at Shariki**



**Overview of AN/TPY-2 Site at Shariki**

## **Radar systems monitor 'rogue regimes'**

By Teri Weaver, Stars and Stripes

Pacific edition, Sunday, October 7, 2007

[EXCERPTS]

The AN/TPY-2 radar system at the Shariki Communications Site is part of an early-warning detection network around the globe - in Alaska, California, the United Kingdom, the Marshall Islands and aboard U.S. Navy ships.

Shariki's radar sits on the edge of the communications site. It appears almost understated, painted a shade darker than the obligatory beige that covers so many Army bases.

The AN/TPY-2 is a three-part device that looks and sounds like three industrial-sized generators running at full speed. Each part serves respectively as the system's heart, brains and face, said Capt. Will Hunter, the Army commander at Shariki. It's the face, a smooth slab pointing due west through a small gap of trees, that tracks enemy missile launches.

The face's radio frequencies beam out like a fan to track rising missiles. If needed, the system could read the entire horizon. But to strengthen its efficacy, and to conserve power, it searches targeted sections of the sky, Hunter says.

When asked if the radar tracked North Korea's launches last July, Hunter pauses.

"We received some data last summer," he says.

At Shariki, Hunter and others know when something is in the sky. But they aren't necessarily the first to know. As Shariki's radar tracks missiles, data transfers instantly to round-the-clock watchers in Tokyo, Colorado, Hawaii and elsewhere, Hunter says.

"It operates at echelons way above Capt. Hunter," he says. "By the time they've called me and got me out of bed, the people who are actually running the fight at that level would already know what's going on and probably already be planning their responses. I'm more of just a caretaker of a system."

<http://www.estripes.com/article.asp?section=104&article=49304>

Two soldiers sent to 'battle space' in remote Japan

Pair's mission is to track missiles

By Teri Weaver, Stars and Stripes

Pacific edition, Sunday, October 7, 2007

[EXCERPTS]

[Figure caption:] Capt. Will Hunter is commander at the Shariki Communications Site, a two-person unit that oversees security and maintenance of an X-band radar system. The X-band radar tracks the ascending trajectory of rising missiles in the sky. Hunter looks out from the radar's face westward toward the Sea of Japan. "I like it out here," Hunter said. "I like the peace and quiet." Teri Weaver / S&S

[Figure caption:] First Sgt. Ben Williams, left, and Capt. Will Hunter, at work in their office at Shariki Communications Site. The base is on a secluded bluff above the Sea of Japan. The two service members and the 100 or so contractors who work at the site are still in temporary offices after more than a year in operation. Future plans include adding a permanent building to the site and bringing on one more soldier to the unit. Teri Weaver / S&S

[Figure caption:] The village of Shariki sits at the northern edge of the Tsugaru plain, a flat of rice fields that separates the sea and the cities of Goshogawara and Tsugara. Last fall, the U.S. Army stood up the Forward-Based X-Band Radar Transportable unit, which is detached from the 1st Space Brigade in Colorado and attached to the 94th Army Air and Missile Defense Command in Hawaii. The unit in Shariki includes two soldiers and about 100 contractors who secure and maintain a system that tracks rising enemy missiles from the west. Teri Weaver / S&S

Editor's note: A year ago, with little fanfare, the U.S. military set up a missile tracking station in Japan. Today the base is manned by two soldiers and dozens of contracted technical and support personnel. Today, Stars and Stripes reporter Teri Weaver takes a look at the station and the people who run it. Tomorrow, Stripes looks at how the new base has assimilated into the Japanese community.

SHARIKI COMMUNICATIONS SITE, Japan

Shariki Communications Site, which quietly started operations last year, sits on a wooded bluff on the edge of the Sea of Japan. Since then, the farming and fishing village of 5,500 has been home to about 100 government contractors and two Army soldiers who make up the Detachment 3 of Headquarters and Headquarters Company of the 1st Space Brigade in Colorado.

Their mission: To run an AN/TPY-2 radar system capable of tracking ballistic missile launches headed from Asia toward America and its allies.

The roads toward Shariki trail upward from the Tsugaru Plain, a flat of arrow-straight rice paddies golden yet faded in early fall. The nearest and biggest city, Goshogawara, with its two malls and one dance club, is about 45 minutes away. The nearest U.S. base is in Misawa, more than two hours by car in good weather. In the winter, the region averages about 36 feet of snowfall.



Although the ocean is just beyond the next rise, the air gets so thick with smoke from farmers burning rice stalks that Hunter will switch on the car's lights during daytime as he drives through the valley and into hills spread with potato fields, vineyards and clumps of pine.

Life in the little city

Each morning, the two soldiers meet with leaders from the other two entities at the base: Raytheon Co., which runs the radar, and Chenega Blackwater Solutions, which provides the security.

They discuss the past 24 hours, the upcoming day and any problems, orders or exercises under way. The Shariki site is run by the Missile Defense Agency, which oversees the Raytheon contract. The CBS guards answer more directly to Hunter's unit, which is attached to the 94th Army Air and Missile Defense Command in Hawaii.

The Americans work closely with the nearby 21st Air Defense Missile Squadron, part of the Japan Air Self-Defense Force. The JASDF base has occupied the bluff since 1980. Now its 300 airmen staff four Japanese-built Patriot missiles and monitor the international waters that separate Honshu from Hokkaido, Japan's northernmost island.

Some of the contracted guards look at their time in Shariki as a peaceful tour that lets them save money, take college classes, work out and learn a little Japanese. The married workers, for the most part, make weekend commutes to Misawa to see their families.

### **The base**

Americans moved into Shariki under an agreement with the Japanese in 2006. They brought with them concentric rings of wire fences, pre-fabricated trailer offices and enough generator power to light up the entire village.

The radar site itself lies down a dirt road lined with warnings against trespassing and taking pictures. Gravel coats the grass, and no one is allowed on base without prior approval. Those without "secret" government clearance must be kept under watch at all times.

After more than a year at the site, permanent bathrooms are just going up. The soldiers and contractors work in trailers, the kind with wooden planks for floors and no insulation. Last winter, they worked with their coats on.

Soon, the site will have a permanent office building, Hunter says. Soon, the unit will welcome a third military member. Soon, Hunter hopes, the unit will have a car.

Setting up the base involves extreme patience and self-reliance. Just last week, Hunter finally welcomed the first translator to his staff. Previously he had used the handful of contractors who speak Japanese, or a few of the Japanese airmen who speak English, to conduct meetings with local officials and send out correspondence.

The airmen make good neighbors and partners, Hunter and Williams say. The Japanese squadron's commander, Lt. Col. Masaru Ohta, makes sure the Americans get invited to local community events and military ceremonies.

At first, Ohta said, some local people objected to the U.S. radar site. They were afraid the high-powered radio frequencies would interfere with crops and cell phones. Now, he says, most local people are no longer worried about it.

Hunter wonders how long the isolation will last. He laughed to himself on a recent day when a tour bus rolled through the area.

He doubts it will become a tourist site, though. If it did, he says, it would certainly intensify the mission of keeping the site safe and secure, of making sure the radar is searching the skies for missiles carrying nuclear or chemical warheads.

And, in another way, it would tarnish the charm of Shariki.

"I like it out here," he said. "I like the peace and quiet."

<http://www.estripes.com/article.asp?section=104&article=49341>

Tiny base assimilates into Japanese town  
To allay locals' health fears, housing built close to radar  
By Teri Weaver, Stars and Stripes  
Pacific edition, Monday, October 8, 2007

SHARIKI, Japan

In Shariki, selecting the right place for American workers' housing involved more than worrying about a daily commute.

For the 100 or so government contractors and two U.S. Army soldiers now living in and around the tiny Japanese village near the Sea of Japan, setting up a homestead also sent a message about their mission, according to the company commander at Shariki Communications Site.

"There were some people that told us, if you build that housing (elsewhere), it will be a public relations disaster," said Capt. Will Hunter, whose unit in Shariki is attached to the 94th Army Air and Missile Defense Command in Hawaii. "It implies that you don't think it's safe to live around the radar."

The radar is the AN/TPY-2, which points high-powered radio waves westward toward mainland Asia to hunt for enemy missiles headed east toward America or its allies. The system is serious - it could burn a person standing in the wrong place at the wrong time, Hunter says.

That hasn't happened, he says, and occasional testing by the Americans and Japanese has found the radar does not interfere with local cell phones or harm local farming. Still, showing is better than telling, and that means building a housing complex for the Americans only a five-minute drive from the site.

It's an apt example of how community relations can take on special meaning when a seaside village of 5,500 Japanese residents finds itself hosting several dozen Americans.

Hunter, the first commander of the year-old unit, has spent much of the past year making and implementing decisions like housing location. He's also become a local ambassador of sorts at festivals, parades, Japanese military ceremonies and even afternoon cookouts.

"I think that's my bigger job," he said when weighing building relationships with local residents against his other tasks, working with the contractors and ensuring security of the radar site.

For Hunter, much of the community relations means establishing safety procedures and conveniences for the Americans. He has set up phone lists and emergency procedures with local police and other officials so languages won't be barriers to a response to Americans in need.

The local community has responded as well. Lt. Col. Masaru Ohta, the Japan Air Self Defense Force's 21st Air Defense Missile Squadron commander, ensures Americans get invited to festivals and meetings. And the city of Tsugaru, which oversees the smaller community of Shariki, has built a police koban in the village.

"I choose to say this police box was built for us, not because of us," Hunter says.

Vehicle accidents have been the one sore spot for Hunter. There have been quite a few since the Americans came to Shariki, where an average of 12 meters of snow falls each winter.

Most of the accidents involve simple mistakes, not paying attention or slipping on ice, Hunter says. Still, a couple of Japanese people have been injured and gomen money, traditional compensation and condolence money, has been paid.

"In all honesty, I have beat up the contractors a lot about making their people drive correctly," Hunter says while driving on a narrow two-lane road through rice paddies. The highway connects Shariki and Goshogawara, the closest place to big-city life that includes karaoke parlors, a dance club and two malls.

It's hard to have absolute control, however, over a workforce that reports to a private company rather than a company commander, he says.

The Americans work for Raytheon and Chenega Blackwater Solutions, who, respectively, run the missile radar and provide security at the base.

In the past year, a couple of workers were sent home as punishment. But Hunter has no direct control over their privilege to hold a license, as he does over soldiers.

At the Shariki police station, inspector Yoshifumi Nakagawa warmly welcomes Hunter and gives business cards printed in English and Japanese to the two members of his staff - Williams and translator Yuko Akita.

Nakagawa was happy to learn Hunter has an interpreter, his first even though the Army unit officially stood up on Sept. 26, 2006. Previously, the captain relied on a handful of the contractors who speak Japanese, or a few of Ohta's command staff who speak English.

The police official and the translator exchange cell phone numbers, then Nakagawa praises Hunter for participating in a recent community walk. It's a formal thank-you for two men who see each other regularly. Both take the same language exchange course on Fridays, and the group has dinner together once a month.

Ohta credits the Americans' involvement in the community with appeasing some of the fears first raised when the radar was built. "Because they participate in local events," he says through a translator, "now there are no objections."

The objections haven't quite gone away. A Japanese Ministry of Defense office, at Shariki city hall, is where the Defense Facilities Administration Bureau works as liaison between the community and the U.S. Army base, Hunter says. It's also where locals can go with concerns about the radar site.

In the past year, complaints have fallen off so much that the office has reduced its hours twice.

A couple of months ago, Hunter met with the bureau to hear about any recent complaints. One resident

said his pacemaker had acted oddly when he drove on Shariki's main street. Another man said his radio transmitted only static at 5 a.m. on a recent day. Both men suspected the radar.

"Things like that still come up," Hunter said. "I think for the most part, people understand the radar is not going to hurt them."

<http://www.stripes.com/article.asp?section=104&article=65902>

## **American security contractor killed in alcohol-related crash in Japan**

By Hana Kusumoto and Teri Weaver, Stars and Stripes

Pacific edition, Saturday, November 7, 2009

*[EXCERPT]*

TOKYO — A U.S. military security contractor was killed last week in a drunken-driving crash in northern Japan, local Japanese officials confirmed Wednesday.

The crash — the area's second fatal alcohol-related incident in recent weeks — prompted the local mayor on Thursday to write to the **U.S. Army commander of the Shariki Communications Site in Tsugaru**, urging him to emphasize traffic safety among the staff at the rural base.

Greg A. Williams, 48, who worked for Chenega Security & Protection Services, died shortly after 11:30 p.m. Oct. 30 after his car smashed into a bridge pillar, flipped and burst into flames, officials said.

*[deletia]*

On Monday, **the communications site commander, Capt. Kirby Atwell**, visited Tsugaru mayor Hiroyoshi Fukushima to apologize, according to the city spokesman.

Atwell commands Detachment 3, 1st Space Brigade at the site, which opened in 2006.

It's home to a handful of soldiers and a few dozen contractors who oversee an AN/TPY-2 radar system, which can track incoming ballistic missiles.

The Japan Air Self-Defense Force's 21st Air Defense Missile Squadron is stationed nearby.



<http://hotjobs.marineea.org/mea/hotjobs.nsf/abb60e76e3e13e7f86256cc000562a23/02b3215436121b3b8825714d00135d7b?OpenDocument>

Just wanted to forward an opportunity in Japan for anyone who might be interested in hanging out over there for awhile...I know there's not a lot of 1st group guys on the net, but if you know of any, please pass this on. CSPS, our sister company has formed a Joint Venture with Blackwater, providing security for radar sites over there...little change of pace from the sand box...

*[deletia]*

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Chenega-Blackwater Solutions, LLC

#### Job Description

Job Title: Security Force Area Supervisor  
Department: Operations  
Work Location: N. Honshu, Japan  
Reports To: Project Manager  
FLSA Status: Regular Full-time Exempt  
Prepared By: VP of Security  
Prepared Date: March 30, 2006  
Approved By: Corporate Human Relations Manager

Approved Date: March 31, 2006

## Summary

The Area Supervisor is primarily responsible to ensure that contractual obligations are met during his or her respective shifts. The Area Supervisor is responsible for exercising leadership, maintaining high morale, directing and inspecting the performance of security personnel assigned to the shift. This includes scheduling the shift work distribution and training, answering of Security Force Officer questions related to work, and solving shift problems with minimum supervision. The Area Supervisor is the direct liaison between the Security Force Officers and the Project Manager (PM). The Area Supervisor is directly accountable to the PM. The Area Supervisor will be armed with a sidearm and an automatic weapon, or other weapons as required.

## Supervisory Responsibilities

The Area Supervisor directly supervises all Security Force personnel assigned to the work location.

## Essential Duties and Responsibilities

Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions of this position

- \* Must have complete knowledge of the site, all buildings and facilities, post orders, emergency contact list, emergency procedures, special instructions and all post duties at the site as they relate to their respective shifts.
- \* Reports all adverse situations affecting morale to the PM for action or direction. All items, whether job related or personal, which could affect performance, image or impression, must be reported.
- \* Administers instructions to all security force personnel assigned to their shift and assures that all officers assigned to their shift are familiar with the facility and their duties. Will also be certain that all officers assigned to their shift receive and understand new, changed, or special instructions.
- \* Accountable for the proper use and maintenance of all equipment used at the site by the officers assigned to the shift.
- \* The Area Supervisor will accurately maintain all field file personnel records of employees assigned to the shift. These records include, but are not limited to, time and attendance, disciplinary actions, recommendations for promotions, demotions, status/payroll change reports, etc.
- \* Manages the staffing of posts during the shift in order to ensure complete coverage. This includes, but is not limited to, coverage for vacations, illness, and call-offs.
- \* When replacement or relief officers are required from sources other than the site, the Area Supervisor assists in the scheduling by contacting the PM for the purpose of locating and contacting additional qualified personnel.
- \* The Area Supervisor, to ensure clarity, completeness, accuracy and legibility, will review all written reports generated during the shift before distribution is made.



- \* Will promptly notify the PM of all unusual or emergency situations according to post orders and company policy.
- \* Will ensure that officers assigned to their shift make timely and thorough logbook entries. The Area Supervisor audits all logbook entries for completeness, accuracy and legibility.
- \* Is responsible for ensuring any major incident is placed on a separate incident report and reviewing it before distribution.
- \* The Area Supervisor immediately, for the purpose of obtaining authorization to implement changes, reports all changes in post orders made by government officials that impact upon the contract to the PM.
- \* Notifies the PM of any outdated material contained in the post orders. The Area Supervisor will also advise the PM of any relevant information that he/she feels should be included in the post orders. The Area Supervisor will be responsible for dissemination of changes to the officers assigned to the shift.
- \* Makes recommendations to the PM for promotions or commendations.
- \* Provides information obtained on a daily basis to the PM for additions and/or deletions to the operations manual. Ensures that any and all information obtained is submitted in printed format to the PM in order to establish a continuous record of changes affecting the operations manual.
- \* Takes charge and directs their respective shift security force personnel in any unusual or emergency situations requiring immediate and necessary action. If the particular situation requires response by the PM, the PM will take over total direction of the shift security force personnel via direct communications with the Area Supervisor.
- \* Informs the PM of all significant factors concerning security force personnel at the site.
- \* Maintains discipline with respect to familiarization of security force officers with contractor/government and visiting personnel that may be encountered during the shift and with respect to attitude and personal problems of any officer that interferes with the proper and professional discharge of his or her duties.
- \* Prepares written reports for submission to the PM for all injuries involving security force personnel assigned to the site. All reports concerning incidents compromising security such as thefts and break-ins, as well as all significant incidents involving security force personnel will be submitted to the PM.
- \* Investigates all reports (verbal and written) of apparent work deficiencies during his or her respective shifts. This includes, but is not limited to, the failure to perform certain duties or activities. A written report of the findings will be submitted to the PM.
- \* Prior to requesting termination or transferring an employee, will consult with the PM and submit a detailed written report with copies of all supporting documentation. Employee initiated requests for transfer at the shift level must be approved by the Area Supervisor first, and then submitted to the PM for final approval or disapproval.

- \* Keeps the PM informed of his/her availability during other than normal business hours. This includes, but is not limited to, weekends, holidays, and vacations.
- \* Upon becoming aware of any alleged or potential complaints of discrimination, sexual harassment or unfair labor practices, immediately notifies the PM.
- \* Maintains daily liaison with the PM and any contractor/government officials encountered during their respective shift to ensure the terms of the contract are being met to the client's satisfaction and expectation.
- \* Conducts unannounced inspections on their shift in order to assess assigned officer performance.
- \* Develops a site-specific shift test with input from the PM. Testing will provide quality assurance to determine a security force officer's ability to retain information. Testing will be on going.
- \* The off-going Area Supervisor will be available after hours by phone, pager, or cell phone to provide guidance to the working shift on site and to answer any issues posed by the PM.

Qualifications To perform this job successfully, an individual must be able to perform each essential duty satisfactorily. The requirements listed below are representative of the knowledge, skill, and/or ability required. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

#### Education and/or Experience

Must be at least 21 years of age but not have reached age 65.

Minimum of an AA degree preferably in a law enforcement discipline.

Extensive supervisory experience preferably with a civilian police force, military police force, or civilian security guard organization.

Completed a bona fide law enforcement course of instruction

Successfully completed all training and have obtained all required permits, licenses, certifications and security clearances for the site.

Possess significant background, either through experience and/or education, in basic security guard site-specific procedures including supervision policies and procedures.

Possess significant experience in making decisions affecting security at the assigned site in accordance with policies and directives of the PM.

#### Certificates, Licenses, Registrations

- \* U.S. Citizenship
- \* A valid state drivers license.

\* Must possess a minimum secret security clearance.

\* U. S. Passport

### Language Skills

Ability to read, analyze and interpret general business periodicals, professional journals, technical procedures, or government regulations.

Ability to write reports, business correspondence, and procedure manuals.

Ability to effectively present information and respond to questions from groups of managers, clients, customers, and the general public.

The Area Supervisor must have the ability to communicate effectively, in the English language, both in writing and verbally.

### Mathematical Skills

Ability to work with mathematical concepts such as probability and statistical inference, and fundamentals of plane and solid geometry and trigonometry.

Ability to apply concepts such as fractions, percentages, ratios, and proportions to practical situations.

### Reasoning Ability

Ability to define problems, collect data, establish facts and draw valid conclusions. Ability to interpret basic supervision policies and procedures, and be capable of making decisions affecting security at the assigned site.

Also, the Area Supervisor must have the ability to influence people in a positive way.

### Physical Demands

The physical demands described here are representatives of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

While performing the duties of this job, the employee is frequently required to stand; walk; use hand to finger, handle, or feel objects, tools, or controls; reach with hands and arms; and talk and hear. The employee may occasionally sit for prolonged periods of time at a desk, table, or computer terminal; move in a confined office space.

Must be able to occasionally travel by designated transportation i.e. aircraft, vehicle, mass transit system.

### Work Environment

The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

The employee may occasionally work in a temperature-controlled office environment, with frequent exposure to electronic office equipment. The employee will regularly rove the areas of operations on foot or driving a vehicle, and may be exposed to extreme cold or hot weather conditions, and unpredictable crisis situations. Is occasionally exposed to fumes or airborne particles, toxic or caustic chemicals, and loud noise.

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Chenega-Blackwater Solutions, LLC

#### Job Description

Job Title: Security Force Officer/Translator

Department: Operations

Work Location: N. Honshu, Japan

Reports To: Area Supervisor

FLSA Status: Regular Full-time Non-Exempt

Prepared By: VP of Security

Prepared Date: March 30, 2006

Approved By: Corporate Human Relations Manager

Approved Date: March 31, 2006

#### Summary

The Security Force Officer/Translator is primarily responsible to perform protective service work such as guarding Government owned or leased buildings and property, protecting Government equipment and material, and controlling access to Government owned or leased buildings and property by employees and visitors. The Security Force Officer/Translator will protect and prevent loss of materials or processes, which are important for national defense, public health or safety, or their value as national treasures. The Security Force Officer/Translator does not act in the capacity of a law enforcement officer, and has no arrest or apprehension powers. The Security Force Officer/Translator is armed with a side arm and automatic weapons as designated in the government Statement of Work. The Security Force Officer/Translator will provide Japanese translation services as required/when directed. These services will encompass the verbal and written formats.

#### Supervisory Responsibilities

None

#### Essential Duties and Responsibilities

Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions of this position.

\* The Security Force Officer/Translator provides accurate interpretation to and from the Japanese language, including critically important special terminology and nuances.

\* Required to follow all company personnel and safety policies, and perform all assigned duties in a safe work manner.

\* May be required to work other than normal duty hours, which may include evenings, weekends, and/or holidays.

- \* Other duties may be assigned.

\* Will arrive at work 30 minutes prior to guard mount, in proper uniform and carrying needed, issued equipment.

\* Will be armed with a pistol and an automatic weapon and will be required to exercise force up to and including deadly force.

- \* Will draw assigned weapon.

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\* Will participate in Guard Mount, receive assigned post, and copy any extra instructions.

\* Will carry out general and special orders for post assigned.

\* Will communicate via radio, telephone and orally according to general and special orders.

\* Required to interact with public, contractor, and military personnel.

\* Required to operate effectively in a foreign nation environment, sensitive to cultural differences.

\* Will provide access control, and conduct walking and motorized security guard functions.

\* Will be responsible for cleanliness of uniform and equipment assigned.

\* Will follow applicable standard operating procedures and Army regulations pertaining to security of weapons, buildings, personnel, government property and equipment.

\* Will not remove firearms from installation, required to turn in after shift.

\* Successfully complete all training and have obtained all required permits, licenses, certifications and security clearances for the site.

- Pass written test on trained subjects with an 80% or better.

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## Qualifications

To perform this job successfully, an individual must be able to perform each essential duty satisfactorily. The requirements listed below are representative of the knowledge, skill, and/or ability required. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

## Education and/or Experience

- \* Must be at least 21 years of age.
- \* Minimum of a high school diploma or GED. Completion of a bona fide law enforcement course of instruction.
- \* Experience with a civilian police force, military police force, or civilian security guard organization.

## Certificates, Licenses, Registrations

- \* U. S. citizenship
- \* A valid state drivers license
- \* Must speak, read, write, and understand English.
- \* Must possess a secret security clearance as a minimum.
- \* Honorably discharged/retired from the military preferably as a MP.
- \* Be able to meet any Federal requirements to work as an Armed Security Guard.
- \* U. S. Passport

## Language Skills

Ability to read, analyze and interpret general business periodicals, professional journals, technical procedures, or government regulations.

Ability to write reports, business correspondence, and procedure manuals.

Ability to effectively present information and respond to questions from groups of managers, clients, customers, and the general public.

\* The Security Force Officer/Translator requires knowledge of the English language and the Japanese language. Important skills include active listening, writing, speaking, reading comprehension, and translation and interpretation.

\* Must possess the capability to prepare idiomatically correct English-language translations of texts from Japanese or to Japanese on a variety of technical and non-technical subjects. Documents may be of a complicated nature but more often are generally written for laymen or technicians. Translation must enable the understanding of the various nuances of the original language text.

## Mathematical Skills

Ability to apply concepts such as fractions, percentages, ratios, and proportions to practical situations.

## Reasoning Ability

Ability to define problems, collect data, establish facts and draw valid conclusions.

Ability to interpret basic supervision policies and procedures, and be capable of making decisions affecting security at the assigned site.

## Physical Demands

The physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

While performing the duties of this job, the employee is frequently required to stand; walk, use hand to finger, handle, or feel objects, tools, or controls; reach with hands and arms; and talk and hear. The employee may occasionally sit for prolonged periods of time at a desk, or table. The employee may stand for prolonged periods of time.

Must be able to occasionally travel by designated transportation i.e. aircraft, vehicle, mass transit system.

Must pass physical agility test as prescribed by the government.

## Work Environment

The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

The employee may occasionally work in a temperature-controlled office environment.

The employee will regularly stand duty at a gate control guard station. The employee will regularly be exposed to extreme heat or cold weather conditions, and unpredictable crisis situations. Will be occasionally exposed to fumes or airborne particles, toxic or caustic chemicals, and loud noise.

Chenega-Blackwater Solutions, LLC

## Job Description

Job Title: Security Force Officer/EMT-B  
Department: Operations  
Work Location: N. Honshu, Japan  
Reports To: Area Supervisor  
FLSA Status: Regular Full-time Non-Exempt  
Prepared By: VP of Security  
Prepared Date: March 30, 2006  
Approved By: Corporate Human Relations Manager  
Approved Date: March 31, 2006

## Summary

The Security Force Officer/EMT-B is primarily responsible to perform protective service work such as guarding Government owned or leased buildings and property, protecting Government equipment and material, and controlling access to Government owned or leased buildings and property by employees and visitors. The Security Force Officer/EMT-B will protect and prevent loss of materials or processes, which are important for national defense, public health or safety, or their value as national treasures. The Security Force Officer/EMT-B does not act in the capacity of a law enforcement officer, and has no arrest or apprehension powers. The Security Force Officer/EMT-B is armed with a side arm and automatic weapons as designated in the government Statement of Work. In addition this officer will possess certification as an EMT-B. The Security Force Officer/EMT will provide EMT-B services such as patient assessment, airway management, general pharmacology, medical emergencies, trauma related emergencies, ambulance operations, and other EMT-B related services.

## Supervisory Responsibilities

None

## Essential Duties and Responsibilities

Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions of this position.

Perform duties as an EMT-B as required or when directed.

Required to follow all company personnel and safety policies, and perform all assigned duties in a safe work manner.

May be required to work other than normal duty hours, which may include evenings, weekends, and/or holidays.



Other duties may be assigned.

Will arrive at work 30 minutes prior to guard mount, in proper uniform and carrying needed, issued equipment.

Will be armed with a pistol and an automatic weapon and will be required to exercise force up to and including deadly force.

Will draw assigned weapon.

Will participate in Guard Mount, receive assigned post, and copy any extra instructions.

Will carry out general and special orders for post assigned.

Will communicate via radio, telephone and orally according to general and special orders.

Required to interact with public, contractor, and military personnel.

Required to operate effectively in a foreign nation environment, sensitive to cultural differences.

Will provide access control, and conduct walking and motorized security guard functions.

Will be responsible for cleanliness of uniform and equipment assigned.

Will follow applicable standard operating procedures and Army regulations pertaining to security of weapons, buildings, personnel, government property and equipment.

Will not remove firearms from installation, required to turn in after shift.

Successfully complete all training and have obtained all required permits, licenses, certifications and security clearances for the site.

Pass written test on trained subjects with an 80% or better.

## Qualifications

To perform this job successfully, an individual must be able to perform each essential duty satisfactorily. The requirements listed below are representative of the knowledge, skill, and/or ability required. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

### Education and/or Experience

- Must be at least 21 years of age.
- Minimum of a high school diploma or GED. Completion of a bona fide law enforcement course of instruction.

- Experience with a civilian police force, military police force, or civilian security guard organization.

#### Certificates, Licenses, Registrations

- U. S. citizenship
- A valid state drivers license
- Must speak, read, write, and understand English.
- Must possess a secret security clearance as a minimum.
- Honorably discharged/retired from the military preferably as a MP.
- Be able to meet any Federal requirements to work as an Armed Security Guard.
- Certified as an EMT-B.
- U. S. Passport

#### Language Skills

Ability to read, analyze and interpret general business periodicals, professional journals, technical procedures, or government regulations. Ability to write reports, business correspondence, and procedure manuals. Ability to effectively present information and respond to questions from groups of managers, clients, customers, and the general public.

#### Mathematical Skills

Ability to apply concepts such as fractions, percentages, ratios, and proportions to practical situations.

#### Reasoning Ability

Ability to define problems, collect data, establish facts and draw valid conclusions. Ability to interpret basic supervision policies and procedures, and be capable of making decisions affecting security at the assigned site.

#### Physical Demands

The physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

While performing the duties of this job, the employee is frequently required to stand; walk, use hand to finger, handle, or feel objects, tools, or controls; reach with hands and arms; and talk and hear. The

employee may occasionally sit for prolonged periods of time at a desk, or table. The employee may stand for prolonged periods of time.

Must be able to occasionally travel by designated transportation i.e. aircraft, vehicle, mass transit system.

Must pass physical agility test as prescribed by the government.

#### Work Environment

The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

The employee may occasionally work in a temperature-controlled office environment.

The employee will regularly stand duty at a gate control guard station. The employee will regularly be exposed to extreme heat or cold weather conditions, and unpredictable crisis situations. Will be occasionally exposed to fumes or airborne particles, toxic or caustic chemicals, and loud noise.

POCs for reply are:

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<http://www.jobster.com/at/person/show/4061197>

[Resume]

## Work history

Chenega-Blackwater

November 2006 to April 2007

### Security Specialist / Translator

How would you describe what you did at Chenega-Blackwater?

- “
- \* Performed security related tasks at the Shariki Radar Installation in Aomori Prefecture.
  - \* Provided Japanese translation services to personal working at Shariki Radar Installation.
  - \* Acted as a liaison for the Japanese contractors and the Shariki Radar Installation.
- ”

<http://www.fbodaily.com/archive/2006/11-November/03-Nov-2006/FBO-01174687.htm>

FBO DAILY ISSUE OF NOVEMBER 03, 2006 FBO #1803  
SOLICITATION NOTICE

J -- Consolidated X-Band Radars Operations and Sustainment  
Notice Date  
11/1/2006

Notice Type  
Solicitation Notice

NAICS  
811219 — Other Electronic and Precision Equipment Repair and Maintenance

Contracting Office  
Other Defense Agencies, Missile Defense Agency, MDA Deputy for Contracting (MDA/CT), 7100  
Defense Pentagon, Washington, DC, 20301-7100, UNITED STATES

ZIP Code  
00000

Solicitation Number  
HQ0006-07-R-8000

Response Due  
11/16/2006

Archive Date  
12/1/2006

Description

The Missile Defense Agency has a requirement for Contractor Logistics Support (CLS), Radar Operations, Engineering Services and procurement of ancillary equipment in support of the Ballistic Missile Defense System (BMDS) family of X-band radars ? the AN/TPY-2 X-band radars, the Sea Based X-band radar (XBR), and GBR-P Radar. Under this effort, the contractor shall provide all engineering, operations, engineering services and logistics/sustainment support that includes but is not limited to: radar operation, site survey and engineering services, preventative and corrective maintenance, administrative security, spare parts, depot services, training, facilities design, procurement of ancillary equipment and personnel. The period of performance of this contract consists of a five-year base period and 5 one-year options. The first AN/TPY-2 is operating at Shariki, Japan. The operational locations for the other radars have not yet been determined. They may be within or outside of the continental United States. MDA intends to negotiate a contract with the Raytheon Corporation for these services, under the authority of 10 U.S.C. 2304(c) (1) and FAR 6.302-1-(a) (i): only one responsible source. As the developer of the aforementioned x-band radar family Raytheon is

the only company that can provide all of the CLS functions discussed above as they are currently needed for the support of BMDS deployment and operational requirements. Utilization of any other source would result in unacceptable delays in deploying the radar to operational sites, jeopardize mission performance with new personnel inexperienced with the radar's design, operation, and maintenance, require a substantial non-recurring investment to acquire a Technical Data Package and qualify a new production source, and would require substantial non-recurring training costs to enable personnel not familiar with the technology to understand its operation and maintenance. Personnel working this program are required to be US Citizens and field personnel must have at least a Secret clearance. Contractor employees may be required to accompany Government/Military personnel when one or more of these radars are deployed. Raytheon will be required to negotiate Associate Contractor Agreements (ACAs) with the lead system integrators of the Sea Based X-Band (XBR) program and the Terminal High Altitude Area Defense (THAAD) program. The ACAs will ensure a smooth integration, operation, and maintenance of the XBR and THAAD Radars. Entities that plan to assert that they are qualified to perform this effort must submit a statement of corporate capabilities relevant to this effort. Said statement shall not exceed 5 pages in length and must be submitted to the POC not later than the closing date of this announcement. Note 22 Applies\*\*\*\*. Original Point of Contact Robert Berkey, Contract Specialist, Phone 703-882-6312, Fax 703-882-6349, Email bob.berkey.ctr@mda.mil Robert Frey, Contracting Officer, Phone 703-882-6206, Fax 703-882-6349, Email Robert.frey@mda.mil FAX (703) 882-6349 Place of Performance Address: Woburn, MA and multiple OCONUS locations Postal Code: Country: Various

Place of Performance

Address: Woburn, MA and Multiple OCONUS locations.

Zip Code: 01801

Country: UNITED STATES

Record

SN01174687-W 20061103/061101221159 (fbodaily.com)

[http://www.worldbid.com/tradeleads/details.htm?](http://www.worldbid.com/tradeleads/details.htm?session=&searchwords=&latest=&country=&stars=&all=&bodies=&subcat=1044&bidID=1835215&type=Buy&m=0)

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## J -- Consolidated X-Band Radars Operations and Sustainment (OB1835215) (2006-11-02)

The Missile Defense Agency has a requirement for Contractor Logistics Support (CLS), Radar Operations, Engineering Services and procurement of ancillary equipment in support of the Ballistic Missile Defense System (BMDS) family of X-band radars ? the AN/TPY-2 X-band radars, the Sea Based X-band radar (XBR), and GBR-P Radar. Under this effort, the contractor shall provide all engineering, operations, engineering services and logistics/sustainment support that includes but is not limited to: radar operation, site survey and engineering services, preventative and corrective maintenance, administrative security, spare parts, depot services, training, facilities design, procurement of ancillary equipment and personnel. The period of performance of this contract consists of a five-year base period and 5 one-year options. The first AN/TPY-2 is operating at Shariki, Japan. The operational locations for the other radars have not yet been determined. They may be within or outside of the continental United States. MDA intends to negotiate a contract with the Raytheon Corporation for these services, under the authority of 10 U.S.C. 2304(c) (1) and FAR 6.302-1-(a) (i): only one responsible source. As the developer of the aforementioned x-band radar family Raytheon is the only company that can provide all of the CLS functions discussed above as they are currently needed for the support of BMDS deployment and operational requirements. Utilization of any other source would result in unacceptable delays in deploying the radar to operational sites, jeopardize mission performance with new personnel inexperienced with the radar's design, operation, and maintenance, require a substantial non-recurring investment to acquire a Technical Data Package and qualify a new production source, and would require substantial non-recurring training costs to enable personnel not familiar with the technology to understand its operation and maintenance. Personnel working this program are required to be US Citizens and field personnel must have at least a Secret clearance. Contractor employees may be required to accompany Government/Military personnel when one or more of these radars are deployed. Raytheon will be required to negotiate Associate Contractor Agreements (ACAs) with the lead system integrators of the Sea Based X-Band (XBR) program and the Terminal High Altitude Area Defense (THAAD) program. The ACAs will ensure a smooth integration, operation, and maintenance of the XBR and THAAD Radars. Entities that plan to assert that they are qualified to perform this effort must submit a statement of corporate capabilities relevant to this effort. Said statement shall not exceed 5 pages in length and must be submitted to the POC not later than the closing date of this announcement. Note 22 Applies\*\*\*\*.

### Original Point of Contact

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### Place of Performance

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