

UNITED STATES COAST GUARD

RECORD OF DECISION

The United States Coast Guard (USCG) has published a (Final) Programmatic Environmental Impact Statement (PEIS) dated October 6, 2006 on the following project:

Nationwide Automatic Identification System (NAIS) Project

Project Location: Nationwide

Purpose and Need

The purpose of the Proposed Action is to establish a nationwide network of receivers and transmitters to capture, display, exchange, and analyze Automatic Identification System (AIS)-generated information. The Proposed Action would satisfy the USCG's need to enhance homeland security while carrying out its mission to ensure marine safety and security, preserve maritime mobility, protect the marine environment, enforce U.S. laws and international treaties, and perform search and rescue operations.

The need for the Proposed Action arises from several sources, including the following:

International Treaty. The United States is a member of the International Maritime Organization (IMO). IMO administers the Safety of Life at Sea Convention, also known as SOLAS, an international treaty. In December 2000, Chapter V of the SOLAS Convention was amended to require AIS, capable of providing information about the ship to other ships and to coastal authorities automatically, to be fitted aboard all ships of 300 gross tonnage and upwards engaged on international voyages, cargo ships of 500 gross tonnage and upwards not engaged on international voyages, and passenger ships irrespective of size built on or after July 1, 2002. The United States, through the USCG, works closely with the international community in AIS standards development and implementation. The AIS performance standards adopted by IMO include that AIS should be capable of providing information automatically from a ship and with the required accuracy and frequency to other ships and competent authorities to facilitate accurate tracking.

Maritime Transportation Security Act (MTSA) of 2002. Section 70113 of the MTSA of 2002 directs the Secretary of the Department of Homeland Security (DHS) to "... implement a system to collect, integrate, and analyze information concerning vessels operating on or bound for waters subject to the jurisdiction of the United States, including information related to crew, passengers, cargo, and intermodal shipments." Further, Section 70114 of the MTSA requires that certain vessels "while operating on the navigable waters of the United States, shall be equipped with and operate an automatic identification system under regulations prescribed by the Secretary." The USCG has determined that this Congressional directive would be largely satisfied through AIS carriage requirements and implementation of the proposed NAIS project.

Other Congressional Actions. In Senate Report 108-86, which accompanied the DHS Appropriations Bill for 2004, Congress directed that the AIS initiative be funded and identify specific capabilities that

should be part of the system. Moreover, signaling its interest in timely performance, Congress required submission of a report detailing how and when the AIS would be implemented nationwide.

National Security Presidential Directive 14/Homeland Security Presidential Directive 13. In December 2004, the President of the United States directed the Secretaries of the Department of Defense (DOD) and DHS to lead the Federal effort to develop a comprehensive National Strategy for Maritime Security, to better integrate and synchronize the existing department-level strategies and ensure their effective and efficient implementation. The National Strategy for Maritime Security aligns all Federal government maritime security programs and initiatives into a comprehensive and cohesive national effort involving appropriate Federal, state, local, and private sector entities.

Eight supporting plans to the National Strategy for Maritime Security address the specific threats and challenges of the maritime environment. While the plans address different aspects of maritime security, they are mutually linked and reinforce each other. Of particular relevance to the Proposed Action is the *National Plan to Achieve Maritime Domain Awareness (MDA)*. The MDA Plan is a cornerstone for successful execution of the security plans tasked in the National Strategy for Maritime Security. As stated in this plan, the basis for effective prevention measures is awareness and threat knowledge, along with credible deterrent and interdiction capabilities. Without effective understanding of maritime domain activities, gained through persistent awareness, vital opportunities for an early response can be lost. Awareness grants time and distance to detect, deter, interdict, and defeat adversaries. NAIS will provide the nation with the tools to conduct nationwide persistent surveillance of vessels operating in or bound for U.S. waters.

USCG Missions and NAIS Operational Requirements. The USCG has statutory responsibilities that include ensuring marine safety and security, preserving maritime mobility, protecting the marine environment, enforcing U.S. laws and international treaties, and performing search and rescue. The USCG supports the DHS' overarching goal of mobilizing and organizing our nation to secure the homeland from terrorist attacks, natural disasters, and other emergencies. NAIS supports accomplishment of these statutory responsibilities by providing the USCG with a highly effective system that enhances maritime domain awareness and facilitates emergency response operations.

Alternatives Examined

The technical and operational requirements for NAIS require the system to be operational in both designated inland navigable waters and the open ocean out to 2,000 nautical miles (NM) offshore. No single implementation alternative could meet the technical and operational requirements of this large and geographically variable area. As a result, the USCG believes that a combination of implementation alternatives would be needed to meet the technical and operational requirements. The PEIS provides a discussion of the process used by the USCG to formulate the alternatives carried forward for analysis in the document. A summary of alternatives discussed in the PEIS is provided below.

Non AIS-Based System Alternatives. AIS was the system chosen for implementing the proposed NAIS project. In addition to AIS, other non AIS-based systems were initially considered. However, these were not analyzed in detail in the PEIS because they have common limitations including limited messaging capabilities, insufficient report rates, limits of one-way communications, they are closed systems, they are not autonomous, and additional communication costs limit their effectiveness. The factors render all of

the non AIS-based systems insufficient for meeting the USCG's operational requirements and purpose and need for the Proposed Action. The non AIS-based systems include manual call-in, Vessel Monitoring System (VMS), Global Maritime Distress and Safety System (GMDSS), radar systems, acoustic systems, manual visual systems, and electronic emissions tracking systems.

Implementation Alternatives. The proposed implementation of the NAIS project includes using a combination of the following coverage mechanisms, as analyzed in detail in the PEIS.

NAIS Short-Range Coverage – Shore-Based Radio Frequency (RF) Sites. The establishment of shore-based RF sites was the only alternative found by the USCG to be viable for achieving short-range NAIS coverage. Short-range NAIS coverage includes inland navigable waters as defined in the PEIS, and out to 50 nautical miles (NM). Shore-based RF sites would consist of AIS equipment mounted on towers, buildings, bridges, or other structures; the USCG anticipates the majority of these sites would be tower-based. The USCG would be faced with the choice of installing AIS equipment at new sites (“new build”); installing AIS equipment adjacent to existing communications equipment (“collocation”); or, programwide, using a combination of the collocation and new build sites for shore-based RF sites.

For the proposed implementation of the NAIS project, the USCG chose to bound or bracket the programmatic environmental analysis of the shore-based RF sites by evaluating three potential NAIS siting alternatives. The siting alternatives include the all new tower builds alternative, combination of collocations and new tower builds alternative, and all collocations alternative.

NAIS Long-Range Coverage – Satellites. For long-range coverage, satellite services are expected to be procured from commercial satellite providers or the government. The USCG is currently assessing technology development to support this capability. The analysis of this alternative assumes that the initial technology development would yield a deployable solution. The satellite system is envisioned to consist of a number of low earth orbit satellites fitted with AIS receiver capability to provide the needed long-range maritime tracking of vessels (i.e., coverage requirement to receive AIS signals with a minimum 4-hour reporting rate out to 2,000 NM offshore).

NAIS Long-Range Coverage – Offshore Platforms and Data Buoys. NAIS long-range coverage is expected to be provided, in part, by using existing offshore platform and data buoy capabilities to provide additional coverage availability. The USCG is currently evaluating the effectiveness of deploying AIS base stations and AIS receivers on various offshore Gulf of Mexico oil and gas platforms and National Oceanic and Atmospheric Administration (NOAA) data buoys. Potential offshore platforms of interest include existing active U.S. Department of the Interior Minerals Management Service-regulated oil and gas infrastructures in the Gulf of Mexico, Pacific, and Alaska regions.

Other Coverage Mechanism Alternatives Considered. In addition to the coverage mechanisms analyzed in detail in the PEIS, the USCG initially considered other alternatives for satisfying the coverage requirements as defined by the Proposed Action. These coverage mechanism alternatives were evaluated based on screening criteria that considered reliability and continuity of coverage, feasibility, and cost. The alternative coverage mechanisms that were eliminated from detailed analysis in the PEIS because they did not satisfy the initial screening criteria include: unmanned aerial vehicles (UAVs), aerostats, radiosondes, commercial air carriers, and commercial or national maritime assets.

Preferred Alternative. In analyzing the proposed action, the USCG has identified the Preferred Alternative to implement the NAIS project using AIS based technology and a combination of the following coverage mechanisms:

1. Establishing a combination of collocated and newly built shore-based RF sites for short-range AIS coverage.
2. Leasing commercial satellite services for long-range AIS coverage.
3. Installing AIS equipment on existing offshore oil and gas platforms and data buoys for supplemental long-range coverage.

No Action Alternative. Under the No Action Alternative, the USCG would not implement the NAIS project. The No Action Alternative would not meet the requirements of MTSA, would not improve MDA, and would not satisfy Congressional or Presidential direction. Although the No Action Alternative would not meet the purpose and need, analysis of the No Action Alternative is a requirement of the Council on Environmental Quality (CEQ) regulations for implementing NEPA and serves as a baseline against which proposed Federal actions can be evaluated.

Environmental Consequences. For the No Action Alternative, adverse environmental impacts may be expected. If the No Action Alternative were to be adopted, the risk of delayed response to vessel mishaps is increased, the Coast Guard's ability to establish Maritime Domain Awareness is decreased, and the risk of a successful attack on United States critical infrastructure/key resources is more likely; all of which result in an increased risk of environmental harm. Therefore, potential beneficial impacts associated with the Preferred Alternative would not be realized if the No Action Alternative were selected. The No Action Alternative would also not meet the purpose and need as discussed above.

For implementation of the NAIS project, the USCG chose to bound the programmatic environmental analysis of the shore-based RF sites by evaluating three potential NAIS siting alternatives: all new tower builds, combination of collocations and new tower builds, and all collocations. This approach allows presentation of not only the highest and lowest level of impacts that would be expected, but also provides a mid-range of impacts that would likely be more representative of what would actually occur. Utilizing this method, new programmatic NEPA documentation would not be required if the actual implementation ratio (i.e., collocations vs. new tower builds) moves away from the mid-range analysis. The USCG expects that the actual impacts from implementing the NAIS project will fall somewhere within the bracketed range as analyzed in the PEIS.

For the implementation of the chosen or preferred alternatives, short-term impacts are expected from construction and long-term impacts would occur from operations at a site. For each alternative evaluated in detail in the PEIS, a set of assumptions was developed to describe possible requirements for installation of communication equipment, i.e., NAIS tower siting, equipment building, and access road construction. The PEIS found that, at the programmatic level, possible impacts fall within a wide range, from potentially major to potentially no impacts, depending on the specific environmental resource category considered within each siting alternative.

The PEIS impact analysis determined that the majority of impacts would likely be short or long term negligible to minor. For some resource categories, such as hazardous substances or waste, no impacts would be expected as a result of implementing the proposed NAIS project. However, implementing the proposed NAIS project could potentially have moderate impacts on visual and biological resources, or major impacts on cultural resources. For example, constructing a new RF tower within the viewshed of

an historic building, structure, or district could have indirect impacts because the tower would visually affect the historic resource and its setting. The degree (minor, moderate, or major) to which a new RF site would have a visual impact on historic buildings, structures, or districts would depend upon the type of historic setting, existing visual clutter, and height of the tower in relation to the height of existing features, topography, and vegetation. The all new tower build siting alternative is associated with the greatest possibility for major adverse impacts. The majority of potentially significant adverse impacts are associated with visual, biological, and cultural resources under the all new tower builds alternative and combination of collocations and all new tower builds alternative.

The USCG would have some flexibility in the exact siting of NAIS towers and equipment and would seek to avoid impacts to the greatest extent possible. In addition, under each of the alternatives considered, locations selected as NAIS sites might already possess attributes that eliminate the need for a portion, or in some cases all, of the construction. In such a case, no impacts or negligible impacts would be expected at that particular location.

Decision

As supported by the analysis in the PEIS, I have decided to implement the proposed NAIS project using a combination of coverage mechanisms, including a combination of collocated and newly built shore-based RF sites for short-range AIS coverage as described under the Preferred Alternative. Implementation of the proposed NAIS project through the Preferred Alternative would ensure that the USCG satisfies the purpose and need for NAIS. The Preferred Alternative implementation approach will offer siting flexibility that will help mitigate or minimize the potential for environmental impacts, and allow the USCG to maximize the use of existing assets to meet coverage requirements.

Environmentally Preferable Alternative

The environmentally preferable alternative is to implement the proposed NAIS project by collocating all shore-based RF sites needed for achieving the required short-range coverage, in addition to the use of offshore oil and gas platforms, data buoys and satellites for long-range and supplemental coverage. This is because collocation of all sites would eliminate the need to construct new towers by taking advantage of existing towers, and no environmental impacts are expected from the use of offshore oil and gas platforms, data buoys, or satellites. However, the USCG recognizes that for some locations where shore-based NAIS coverage is required, collocation opportunities might not exist. Therefore, I did not select the environmentally preferable alternative, because it is highly unlikely that collocation opportunities will exist for all areas of the coastline where NAIS coverage is required. While the USCG will give preference to collocating on existing towers, adopting the Preferred Alternative offers the greatest flexibility to achieve a balance between meeting NAIS operational requirements and protecting the environment.

Relevant Decision Factors

The following are the economic, technical, USCG statutory mission, and national policy considerations that were weighed in reaching my decision:

Economic: From an economic standpoint, the USCG considered the costs of various implementation and coverage mechanisms for implementing the proposed NAIS project. Several alternatives that were initially considered technically feasible were eliminated from further study in the PEIS based on

prohibitively high implementation and ongoing operational costs. The Preferred Alternative, which is comprised of a combination of implementation mechanisms, strikes the best balance between costs and technical capability to successfully implement NAIS.

Other economic factors considered include the costs to collocate NAIS equipment compared to the higher costs of constructing new towers or other structures. Based on these cost factors, the USCG will screen future implementation sites and give priority to those sites where collocation on existing towers or other structures is possible.

Technical: From a technical standpoint, the Preferred Alternative was chosen because it best meets the purpose and need and takes advantage of AIS based systems that are currently required on most commercial vessels operating in, or bound for, waters subject to the jurisdiction of the United States. As discussed above, other non-AIS based systems were also initially considered for meeting the purpose and need for the Proposed Action. However, such systems have limitations in messaging capability, insufficient report rates, are limited to one-way communication, are closed systems, and are not autonomous. An AIS based system would not have these limitations, and was found to be the technically superior alternative system for meeting the USCG's operational requirements and the purpose and need.

AIS based technology is best suited to meeting USCG operational requirements. AIS is an "open system" which allows vessels operating in proximity to each other to automatically share AIS-related information and create a virtual network. Shore stations can also join these virtual networks, and can receive shipboard AIS signals, perform network and frequency management, and send additional broadcast or individual informational messages to AIS-equipped vessels. AIS equipment is currently required to be operated on most commercial vessels, and using AIS based technology for implementing the Proposed Action would leverage this existing use in the maritime environment.

USCG Statutory Missions: USCG statutory responsibilities include ensuring marine safety and security, preserving maritime mobility, protecting the marine environment, enforcing U.S. laws and international treaties, and performing search and rescue. The USCG supports the DHS' overarching goal of mobilizing and organizing our nation to secure the homeland from terrorist attacks, natural disasters, and other emergencies. In performing its duties, the USCG has established five strategic goals: maritime safety, protection of natural resources, maritime security, maritime mobility, and national defense. The information provided by the NAIS project would support USCG missions concerning the nation's maritime interest, from the safety of vessels and ports through collision avoidance, to the safety of the nation through detection, traffic identification, and classification of vessels out to 2,000 NM.

National Policy Considerations: NAIS will support the *National Plan to Achieve MDA*, which is a component of the overall National Strategy for Maritime Security, a 2004 Presidential Directive. This national policy consideration factors into the decision to implement the proposed NAIS project, and is summarized in the purpose and need section, above.

Mitigation

On a programmatic level, all practical means to avoid or minimize environmental harm from the selected alternative have been considered and are being adopted as described in the following paragraphs. However, because of the broad, programmatic nature of the NAIS PEIS, which addresses a very large and geographically variable area where specific installation sites have not yet been identified, it is not currently possible to state that all practical means of avoiding or minimizing environmental harm have been adopted at the site-specific level.

The USCG is committed at the programmatic level to a priority system for giving preference during the site selection process for shore-based RF sites. The priority system gives preference to collocating on existing towers or infrastructure to maximize the reuse of existing infrastructure and minimize cost and environmental impacts. If collocation on existing towers or infrastructure is not possible, the USCG will evaluate sites for building new towers or infrastructure in the following order of preference: 1) USCG-owned and -operated sites; 2) Other federally owned and operated sites; 3) state-owned sites; and 4) privately owned sites.

Furthermore, as a means to avoid or minimize environmental harm at the site-specific level, the USCG has stated in the PEIS, and restates here, that follow-on NEPA documentation will address site-specific issues, and expects that site-specific mitigation measures, if necessary, would be identified at that time. Such site-specific environmental review will take place in coordination with the affected states and other interested parties, as appropriate. This tiered documentation will be completed on a level as comprehensive as possible while remaining commensurate with USCG decisions being made.

In reaching my decision on this USCG Proposed Action, I have considered the information contained in the (Final) Programmatic Environmental Impact Statement for Implementation of the U.S. Coast Guard Nationwide Automatic Identification System Project dated October 6, 2006 on the potential for environmental impacts.

10/27/2006
Date


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