

SEA-BASED X-BAND (SBX) RADAR VESSEL MAINTENANCE AND REPAIR ENVIRONMENTAL ASSESSMENT

MISSILE DEFENSE AGENCY

AGENCY: Missile Defense Agency

ACTION: Finding of No Significant Impact

BACKGROUND: Pursuant to the National Environmental Policy Act (NEPA) of 1969 as amended (42 United States Code 4321, et seq.), the Council on Environmental Quality Regulations for Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations [CFR] 1500-1508), Department of Defense (DoD) Instruction 4715.9, Environmental Planning and Analysis, Chief of Naval Operations Instruction (OPNAVINST) 5090.1C, Environmental Readiness Program (Environmental and Natural Resources), Department of the Navy Procedures for Implementing NEPA (32 CFR § 775[2005]), and the applicable Service environmental instructions that implement these laws and regulations, DoD officials should consider environmental consequences when authorizing and approving Federal actions.

Within the DoD, the Missile Defense Agency (MDA) is responsible for developing, testing, and deploying the Ballistic Missile Defense System (BMDS). The BMDS is designed to intercept threat missiles during all phases of their flight: boost, midcourse, and terminal. The mission of the Sea-Based X-Band (SBX) Radar Vessel, is two-fold. It supports BMDS testing in order to improve the system. In addition, the SBX Radar serves as a component of the BMDS, which is an integrated, layered system to defend the United States, its deployed forces and allies, against all ranges of enemy ballistic missiles. The SBX Radar may also be used for related missions such as space surveillance.

The SBX Radar Vessel became operational in 2005. As with any vessel, it requires routine maintenance as well as mandatory recertification of structural and propulsion components. Both the hull and the four thrusters require a 5-year maintenance cycle and certification in order to continue operation. The thruster maintenance was due in 2010; however, MDA received an extension until 31 May 2011. The hull certification, as well as some additional scheduled maintenance, was performed at Joint Base Pearl Harbor–Hickam in July and August 2010. Thruster maintenance must be performed at a deep-water (a minimum of 50 feet) facility. Some additional maintenance would be performed concurrent with the thruster work. Non-completion of the maintenance of the thrusters would lead to the eventual invalidation of the American Bureau of Shipping (ABS) Classification and the United States Coast Guard (USCG) Certificate of Inspection of this SBX Radar Vessel and prevent its vital use as part of the BMDS.

MDA is currently planning for the maintenance work to be done at Todd Pacific Shipyards, a commercial shipyard in Seattle, WA beginning in May of 2011. MDA must conduct this maintenance around the SBX Radar Vessel's scheduled participation in BMDS flight testing planned throughout the year. Therefore, MDA is also developing contingency plans to potentially utilize other locations should the test schedule change or other unforeseen circumstances occur that would affect the ability to obtain the required maintenance at Todd Pacific Shipyards. MDA is proposing to perform necessary maintenance activities on the SBX

Radar Vessel at one of two proposed contingency locations (Naval Station Everett [NSE], WA or Naval Base Coronado-Naval Air Station North Island [NASNI], San Diego). This work could commence in the Spring/Summer of 2011, if Todd Pacific Shipyards becomes unavailable, and would require approximately 3 months to complete. However, due to the operational requirements of the SBX Radar Vessel and shifting world events, the commencement date could change. NSE and NASNI are not typically used as maintenance and repair facilities. Although minor maintenance and repair activities are currently performed at NSE and NASNI, they are not functioning shipyards and do not perform shipyard-type work. Therefore, this Environmental Assessment (EA) is being prepared to examine the potential for impacts to the environment as a result of the proposed maintenance activities associated with the SBX Radar Vessel at NSE and NASNI only.

DESCRIPTION OF THE PROPOSED ACTION: The Proposed Action analyzed in this EA is to conduct maintenance activities at one of the contingency locations (NSE or NASNI), with a deep-water port capable of providing the required maintenance activities. Thruster maintenance requires an in-port depth of 50 feet. Inspection, maintenance, and repair activities on the SBX Radar Vessel are similar to activities that are performed on all U.S. Navy ships. These activities include thruster maintenance, painting, welding, blasting, sanding, plasma cutting, inspections, installation of new equipment, removal of broken and obsolete equipment, equipment calibration, washing of equipment and vessel, and purging of systems (e.g., cooling, sewage, water, etc.). These activities would occur inside the vessel, outside the vessel (topside and below the waterline), and pier-side. Established standard industry Best Management Practices (BMPs) would apply to these activities. The vessel would be in-port for maintenance and repair for approximately 3 months, unless affected by operational needs or world events, and the maintenance and repair period could commence in the Spring/Summer of 2011. The X-Band Radar (XBR) and the weather radar would not be operated while at pier-side. The SBX vessel does not have or operate any C-Band radar systems, nor does it operate radar for launch and recovery operations. The SBX Radar Vessel utilizes commercial satellite communications service operating in the C Band. However, the antennas are directional and are not expected to interfere with other communication systems or signals. No radar tracking, testing, or calibration would occur during the proposed maintenance activities.

ALTERNATIVES CONSIDERED

NO-ACTION ALTERNATIVE:

The No-action Alternative was evaluated because it provides a baseline against which to measure the impacts of the Proposed Action. Under the No-action Alternative, the inspections, maintenance, and repair work on the SBX Radar Vessel would not be performed at NSE or NASNI, and there would be no disruption to the current operations at either of these locations. Under this alternative, the SBX Radar Vessel would not require a contingency location for deep water maintenance.

ALTERNATIVE 1: Under Alternative 1, the inspection, maintenance, and repair work on the SBX Radar Vessel would be performed at NSE, Everett, WA. Environmental analysis was performed for regional air quality, airspace, biological resources, hazardous material and waste production or collection, noise, socioeconomics, visual and aesthetics, and water resources.

ALTERNATIVE 2: Under Alternative 2, the inspection, maintenance, and repair work on the SBX Radar Vessel would be performed at NASNI, Naval Base Coronado, San Diego, CA. Environmental analysis was performed for regional air quality, airspace, biological resources, hazardous material and waste production or collection, noise, socioeconomics, transportation modes (i.e., ground), visual and aesthetics, and water resources.

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

Air Quality

For Alternatives 1 and 2, predicted air emissions from maintenance and repair would not exceed General Air Conformity *de minimis* (negligible/smallest) levels. Applicable *de minimis* levels are 100 tons/year for nitrogen oxides (NO_x), volatile organic compounds (VOCs), carbon monoxide (CO), and particulate matter equal to or less than 10 microns in size (PM₁₀). A Record of Non-Applicability has been prepared to document that the Proposed Action would not require a formal conformity determination.

Concentrations of criteria pollutants would cause short-term impacts to air quality. The major ozone and CO air pollutant emissions sources include shipboard diesel generators, employee commuting, and diesel equipment. The estimated air emissions from these sources during the maintenance period would be 54.19 tons of NO_x, 6.09 tons of VOCs, and 15.71 tons of CO. For Alternative 1, where the PM₁₀ *de minimis* level applies as well, the estimated emissions would be 0.81 ton of PM₁₀. For Alternatives 1 and 2, these emissions would be temporary and would not significantly impact the air quality within the respective air sheds with the implementation of BMPs. However, for Alternative 2, if the San Diego air shed is re-designated to serious nonattainment, the *de minimis* levels would change from 100 to 50 tons per year. If the proposed maintenance were conducted after the one-year grace period for the lower *de-minimis* levels, the use of shipboard generators would need to be mitigated to meet the new standard.

Airspace

For Alternative 1, no impacts to controlled and uncontrolled or special use airspace are anticipated, and no impacts are anticipated to the two low altitude air routes in the area. MDA would submit an Obstruction Notification to the Federal Aviation Administration (FAA) if applicable due to the height of the SBX Radar Vessel and the potential for it to be a height obstruction for flights into and out of Paine Field. Under Alternative 2, no impacts to controlled and uncontrolled or special use airspace are anticipated, and no impacts are anticipated to the visual flight rules corridor overlying San Diego International Airport. MDA would submit an Obstruction Notification to the FAA if required due to the height of the SBX Radar Vessel and the potential for it to be a height obstruction for flights into and out of the San Diego airport.

Biological Resources

Under Alternative 1, no significant long-term adverse impacts are anticipated to marine vegetation or regional fish species. Noise associated with maintenance and repair activities

under the Proposed Action is not likely to significantly impact Endangered Species Act (ESA)-listed salmonids. Physical and visual barriers associated with the presence of the SBX Radar Vessel and expended materials from underwater welding activities are not likely to significantly impact fish including ESA-listed salmonids. Implementation of BMPs such as keeping decks clear of debris, cleaning spills and residues, and engaging in spill and pollution prevention practices would preclude significant long-term adverse impacts to area ESA-listed species, marine mammals, and essential fish habitat. The presence of the moored SBX Radar Vessel would not impact ESA-listed killer whales. No significant long-term adverse impacts are anticipated to seabirds due to implementation of BMPs. The presence of the SBX Radar Vessel would not adversely affect threatened marbled murrelets. Maintenance activities would not destroy or adversely modify critical habitat for the bull trout, Chinook salmon, or southern resident killer whale.

Under Alternative 2, no significant long-term adverse impacts are anticipated to marine vegetation or regional fish species. No threatened or endangered fish species have been identified in San Diego Bay. Since the SBX Radar Vessel would incorporate marine pollution control BMPs such as keeping decks clear of debris, cleaning spills and residues, and engaging in spill and pollution prevention practices for discharge incidental to the normal operation of Armed Forces' vessels, no significant long-term adverse impacts are anticipated to Essential Fish Habitat.

Collisions between the SBX Radar Vessel and sea turtles are unlikely since it would be slow moving, and sea turtles should be able to avoid it. Noise from the maintenance activities is not likely to adversely affect the green sea turtle since the noise would be similar to that of maintenance on other vessels. No significant long-term adverse impacts are anticipated to area marine mammals. None of the four marine mammal species that inhabit or regularly transit the area are listed as threatened or endangered. Implementation of BMPs such as keeping decks clear of debris, cleaning spills and residues, and engaging in spill and pollution prevention practices would preclude significant long-term adverse impacts to area fish, marine mammals, or seabirds. The presence of the SBX Radar Vessel is not likely to adversely affect threatened or endangered birds (California brown pelican, California least tern, and western snowy plover) at NASNI.

Hazardous Material and Waste

Under Alternatives 1 and 2, with the implementation of BMPs, substantial impacts to the environment are not expected from the proper handling of large quantities of petroleum products, hazardous materials, or wastes during the maintenance of the SBX Radar Vessel.

Noise

The proximity of the vessel to off-base sensitive noise receptors and alternate alignments of the SBX Radar Vessel would affect the noise exposure of local residents. Under Alternative 1, noise from the two generators would not significantly impact the ambient sound levels in the community surrounding NSE. At a received level of 63.3 Day-Night Level (DNL) if the generators were aligned towards the community and 57.8 DNL if pointed away from the community, the SBX Radar Vessel would be audible at night in the closest neighborhood (Tulalip and 33rd Street). However, both alignments would be within the standard that DoD has adopted (DNL of 65) as a criterion that still protects those most impacted by noise. The equipment noise impact would be minimized by scheduling any noise-producing work done after 7:00 p.m. to be inside the vessel. The testing of the Radiate Warning System's (siren

system/loudspeaker) additional speakers will be intermittently during the day. The additional speakers will not be tested at night. There would be no significant noise impact due to increased traffic.

Under Alternative 2, the Proposed Action would not significantly alter the ambient noise environment in the city of Coronado if moored in either orientation at Pier N. There would be effects to the noise environment from the shipboard generators if moored with the generators aligned towards the community at Pier P. Alignment of the generators' exhaust away from residences would mitigate this impact. Equipment noise would be below the city of Coronado's construction noise ordinance within NASNI property limits. The equipment noise impact would be minimized by scheduling any work done after 7:00 p.m. to be inside the vessel. Additionally, noise-producing maintenance activities between early morning hours (5:30 a.m. to 7:00 a.m.) and evening hours between (7:00 p.m. to 10:00 p.m.) would be limited to those internal to the vessel. The testing of the Radiate Warning System's (siren system/loudspeaker) additional speakers will be limited to one day, several hours between 7:00 a.m. and 7:00 p.m., and only intermittently. The additional speakers will not be tested at night. There would be no significant noise impact due to increased traffic.

Socioeconomics

Under Alternatives 1 and 2, the socioeconomic impact from the Proposed Action would be positive, but negligible.

Transportation

Under Alternative 1, there is no potential for impact; therefore, no analysis was performed. Under Alternative 2, there would be a negligible impact on the ground transportation on city of Coronado roadways leading to and from NASNI during the temporary mooring of the SBX Radar Vessel. With continuing consideration of established mitigation measures, the already negligible impacts would lessen.

Visual and Aesthetics

Under Alternatives 1 and 2, the Proposed Action would not have long-term impact on the visual and aesthetic resources in the Study Areas. For the short-term, although the overall appearance of the SBX Radar Vessel is unique and may be perceived as intrusive, the visual impact of mooring of the SBX Radar Vessel at piers would be temporary and comparable to the visual impact of Navy vessels normally berthed at these locations.

Water Resources

Under Alternatives 1 and 2, the Proposed Action would not have long-term impacts on marine water resources in the Study Areas. Short-term impacts on marine waters from this activity would be negligible given the BMPs and mitigation measures in place to prevent any adverse effect on water resources.

MITIGATION MEASURES: Table 1 lists mitigation measures that could be implemented to minimize potential impacts. The mitigation measures listed in Table 1 would ensure Federal and State environmental laws concerning potential resources concerns are adhered to. Additionally, contractor or personnel performing the maintenance and repair activities would be

required to obtain and follow established BMPs and/or mitigation measures for the activities at the appropriate location (NSE or NASNI).

Table 1—Mitigation Measures

Resource	Mitigation Measures	
	Alt. 1 - Naval Station Everett	Alt. 2 - Naval Air Station North Island
Air Quality	No mitigation measures are proposed.	As anticipated, if the San Diego Air Basin is newly designated as a serious nonattainment area for 8-hour ozone and the Proposed Action is not completed within the one-year grace period following the nonattainment designation; the Missile Defense Agency (MDA) would need to mitigate the nitrogen oxides (NOx) air emission from the shipboard generators to meet the NOx emissions requirements.
Airspace	Although not anticipated, if required MDA would submit an Obstruction Notification to the FAA due to the height of the SBX Radar Vessel.	Although not anticipated, if required MDA would submit an Obstruction Notification to the FAA due to the height of the SBX Radar Vessel.
Biological Resources	No mitigation measures are proposed.	No mitigation measures are proposed.
Hazardous Materials and Waste	No mitigation measures are proposed.	Follow the instructions in the Commander Navy Region Southwest (COMNAVREGSW) <i>Afloat Environmental Quick Response Guide</i> .
Noise	<p>Although the vessel may be turned about (orientation of the bow and stern may vary) to best access thrusters (one half of the ≈45 days) and pier side equipment, consideration of the alignments of the SBX Radar Vessel would mitigate the noise levels produced by the Proposed Action. As a means of reducing the noise (during the 3-month maintenance period) from the two diesel generators, the use of the existing noise baffles and the alignment of the generators' exhaust away from residences (i.e., towards NSE) would provide a greater buffering of the noise-sensitive areas.</p> <p>Prior to conducting tests of the Radiate Warning System's (siren system/loudspeaker) additional speakers, the community would receive advance notice. The additional speakers will not be tested at night.</p>	<p>Although the vessel may be turned about (orientation of the bow and stern may vary) to best access thrusters (one half of the ≈ 45 days) and pier side equipment, consideration of the alignments of the SBX Radar Vessel would mitigate the noise levels produced by the Proposed Action. As a means of reducing the noise (during the 3-month maintenance period) from the two diesel generators, the use of the existing noise baffles and the alignment of the generators' exhaust away from residences (i.e., towards NASNI) would provide a greater buffering of the noise-sensitive areas.</p> <p>If moored at Pier P, the shipboard generators would be aligned away from residences, as practicable, as a means of reducing the noise from the two diesel generators.</p> <p>Noise-producing maintenance activities between early morning hours (5:30 a.m. to 7:00 am) and evening hours between (7:00 pm to 10:00 pm) would be limited to those internal to the vessel.</p> <p>Prior to conducting tests of the Radiate Warning System's (siren system/loudspeaker) additional speakers, the community would receive advance notice. The testing of the speakers will be limited to one day, several hours between 7:00 a.m. and 7:00 p.m., and only intermittently. The additional speakers will not be tested at night.</p>
Socioeconomics	No mitigation measures are proposed.	No mitigation measures are proposed.

Resource	Mitigation Measures	
	Alt. 1 - Naval Station Everett	Alt. 2 - Naval Air Station North Island
Transportation	No mitigation measures are proposed.	Since traffic associated with maintenance of the SBX Radar Vessel would be negligible, no MDA mitigation measures are proposed. MDA would rely on the Navy to implement, as appropriate, any of the mitigation measures established in the 2009 Records of Decision for Developing Home Port Facilities for three NIMITZ-Class Aircraft Carriers in Support of the U.S. Pacific Fleet.
Visual and Aesthetics	No mitigation measures are proposed.	No mitigation measures are proposed.
Water	To mitigate potential loss of welding rods/electrodes from entering and accumulating on the floor of Everett Harbor, underwater welders are required to log and track the number of rods used during the underwater process.	To mitigate potential loss of welding rods/electrodes from entering and accumulating on the floor of the San Diego Bay, underwater welders are required to log and track the number of rods used during the underwater process.
General Requirement	Additionally, contractor or personnel performing the maintenance and repair activities must obtain and follow established BMPs and/or mitigation measures for the activities at NSE.	Additionally, contractor or personnel performing the maintenance and repair activities must obtain and follow established BMPs and/or mitigation measures for the activities at NASNI.

PUBLIC INVOLVEMENT

Naval Station Everett

Public information meetings were held at the Everett Community College and Langley Middle School in July 2010. A Notice of Availability of the Draft EA was published in the *Seattle Times*, *Everett Herald*, and *South Whidbey Record*. A Notice of Availability for the Final EA and Final Finding of No Significant Impact was published in the *Seattle Times*, *Everett Herald*, and *South Whidbey Record*.

Naval Air Station North Island

A Public information meeting was held for the cities of Coronado and San Diego on March 2, 2011 at the Coronado Community Center. A Notice of Availability of the Draft EA was published in the *Coronado Eagle & Journal* and the *San Diego Union-Tribune*. A Notice of Availability for the Final EA and Final Finding of No Significant Impact was published in the *Coronado Eagle & Journal* and the *San Diego Union-Tribune*.

CONCLUSION: The environmental analysis shows that no significant impacts would occur from maintenance activities associated with the Proposed Action. Preparation of an Environmental Impact Statement, therefore, is not required. The Final EA and Final Finding of No Significant Impact are available at: <http://www.govsupport.us/sbx/ea/default.aspx>.

PREFERRED ALTERNATIVE: Although it is currently anticipated that required maintenance on the SBX Radar Vessel will be performed at Todd Pacific Shipyards, in Seattle, both NSE and NASNI are viable Alternatives at which to perform this maintenance. The selection of one of the two locations, in the event Todd Pacific Shipyards is not available, would be determined based

on the contingency plans, which would be affected by logistics, the operational schedule of the SBX Radar Vessel, and pier availability at the two locations.

POINT OF CONTACT: Submit requests for a copy of the SBX Radar Vessel Final EA and Final Finding of No Significant Impact to:

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

ACTION: Finding of No Significant Impact

APPROVE:



DATE: 5 MAY 11

TERRENCE A. FEEHAN
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