



**DEPARTMENT OF THE NAVY**  
NAVAL FACILITIES ENGINEERING COMMAND  
ATLANTIC  
6506 HAMPTON BLVD  
NORFOLK VA 23508-1278

9/9/05-02443  
TELEPHONE NO:

IN REPLY REFER TO:

September 9, 2005

U.S. Department Of Interior Fish & Wildlife Service  
Boqueron Field Office  
Attn: Mr. Edwin E. Muñiz  
Field Supervisor  
Carr. 301, KM 5.1, Bo. Corozo  
PO Box 491 Boqueron, PR 00622

Re: Eastern Vieques Wildlife Refuge, Vieques Island, PR; Sstantive Requirements of the ESA For the LIA Time Critical Removal Action Involving Munitions Clean-Up

Dear Mr. Muñiz:

As discussed in our letter dated June 30, 2005, the Navy intends to meet the substantive requirements of the Endangered Species Act of 1973 (ESA), and its amendments, under the provisions of Comprehensive Environmental Response Compensation and Liability Act (CERCLA). Because of the precedents set by CERCLA ARARs (Applicable and Relevant Appropriate Requirements), the Navy will implement the munitions clean-up mitigation and conservation measures presented in this letter for the protection of the listed species in accordance with the CERCLA ARARs substantive to the ESA. One of the conservation measures already initiated to ensure the protection of the endangered species and their habitats was to conduct a vegetation survey of the western 400 acres within the Live Impact Area (LIA) where munitions will be removed from the surface during the next nine months. The field survey was conducted from May 11, 2005 to May 25, 2005. The results are presented in a letter report from Geo-Marine Inc. dated June 23, 2005, which is enclosed for your review. Geo-Marine is currently conducting a separate survey on the remaining 450 LIA acres. The results of this survey will be presented at a later date.

**Project Description**

The Time Critical Removal Action (TCRA) is being conducted as part of the phased CERCLA approach for munitions response actions at the Former VNTR, which include site inspections, site investigations, interim munitions removal actions, time-critical munitions removal actions, and permanent remedial actions. Please refer to the enclosed location map (Figure # 1) depicting the VNTR and the affected 400 acres targeted for surface removal of munitions. The TCRA is part of the CERCLA process and represents a response action to address areas that pose an imminent threat to human health and the environment. The TCRA Work Plan has been developed to provide the technical approach necessary to complete a removal of surface munitions for approximately 400 acres and mitigate the hazard posed to authorized and unauthorized land users.

The following actions will be performed as part of the TCRA:

1. Site preparation, including vegetation removal from the areas to be cleared of munitions items and performance of UXO safety support required for this operation. The vegetation removal will be conducted primarily using either mechanical brush cutting equipment or hand tools such as machetes and weed eaters. Vegetation will be cleared to a level approximately six inches above ground level with minimal soil disturbance. Vegetation removal may also require prescribed or controlled fire burns. Where ordnance detonation occurs, there will always be the inherent problem of accidental fires ignited by exploding ordnance. The Navy is preparing a wildland fire mitigation plan to address the issues in the event of accidental fires.
2. Identification of surface munitions items using a visual inspections assisted with metal detectors,

Removal and disposal of surface munitions equal to and greater in size to a 20mm projectile will occur. The surface removal will initially consist of detonating the munitions items with an explosive charge, then removing the metallic scrap to a central holding area for subsequent off-site disposal.

### Summary of Geo-Marine Endangered Species Survey Report

During May, 2005 Geo-Marine Inc. (GMI) conducted a 400-acre flora and fauna survey, with 100% coverage, of the westernmost 400 acres of the former bombing range known as the Live Impact Area (LIA) within the former VNTR. The purpose of the survey was to identify federal and state threatened and endangered plant species and or new plant species within the 400-acre area. The survey was initiated in the northwest corner of the LIA and preceded south and eastward along 35 transects, each 200 ft wide. The transect locations are shown on GMI Figure 1. Along each transect four biologists trained in bird and plant species identification; spaced 50 feet apart inspected the area.

GMI also conducted a roseate tern (*Sterna dougallii dougallii*) and least tern (*Sterna antillarum antillarum*) survey within the 400-acre area to identify potential habitat and nesting occurrence for these species. The May 2005 survey did not identify any suitable breeding/nesting habitats preferred by the roseate tern. The May 2005 survey did identify three pairs of nesting least terns at the northern end of Laguna Amones and one pair of least terns was observed roosting on a salt substrate in the lagoon west of the strafing range. Potential least tern nesting areas were identified in the LIA and located within a one-acre area located at the north end of Laguna Amores and a roosting area at the western end of the LIA. The locations of these areas are shown on GMI Report, Figure 3. Repeated observations made during the month of August 2005 indicated that the nesting sites were flooded by recurring and excessive rainfall events. As a result, the least tern is no longer observable at these sites.

GMI's Flora and Fauna Survey Report concludes that no federal or state endangered, threatened, or new plant species were found within the 400-acre area. Therefore, Navy has determined that the proposed activities are not likely to adversely affect the two plant species of concern: *Stahlia monosperma* and *Chamaecrista grandulosa var mirabilis*. GMI did not conduct surveys for the Virgin Island tree boa (*Epicrates monensis granti*), Antillean manatee (*Trichechus manatus manatus*), or Brown pelican (*Pelecanus occidentalis occidentalis*) during the 400 ac survey. However, based on historical information the Virgin Island Boa is not expected to occur within the LIA and no adverse affects are expected. GMI conducted aerial surveys from January 2000 through March 2004, and recorded one occurrence of the manatee within the Eastern Maneuver Area (EMA) near the western boundary of the LIA. Because the TCRA is a land based operation, there will be no adverse effects to the Antillean manatee. The Brown pelican is a shoreline bird that can be found in the adjacent bay waters, foraging, or flying over the LIA. Based on GMI's 2000, 2001, and 2002 surveys during Navy training exercises, the Brown Pelican's primary nesting season occurs between April and August with

the secondary nesting season occurring through October. The Brown pelican's nesting habitat is located on the island of Cayo Conejo, south of the LIA. There will be no adverse effects to the Brown pelican because the TCRA is limited to the LIA and away from the species nesting sites and adjacent waters. As a result, with the exception of the potential tern nesting areas and turtle nesting habitats (Figure 2, Areas A & B respectively) the vegetation clearance operations within the 400-acre operations site can commence (identified as Area C on Figure 2). This area comprises approximately 300 acres and excludes designated, seasonal (May to August) mitigation buffers for tern protection (identified on Figure 2 as Area A). Additional flora and fauna surveys are currently being conducted by GMI at the remaining 450 acres of the LIA to identify if any endangered species are present and to develop conservation measures for this specific area to avoid any impact likely to jeopardize the continued existence of the above listed species, or to destroy or adversely modify designated critical habitat.

### Conservation Measures

During the LIA munitions clean-up operations and based on the results of the GMI Report and additional information regarding the endangered species on Vieques, the Navy has identified the following mitigation and protection measures for the 400 acre area to minimize possible adverse effects on the two species of terns and sea turtles: leatherback sea turtle (*Dermochelys coriacea*), the hawksbill sea turtle (*Eretmochelys imbricata*) and the green sea turtle (*Chelonia mydas*), in three designated areas, shown on Figure 2.

1. Area A. This area consists of potential least tern nesting habitats within the wetland areas of the westernmost 400 acres of the LIA (Figure 2, Area A). During tern nesting and roosting season (May-August), a 100-foot (30 meters) undisturbed vegetation buffer zone was maintained around the wetlands where the tern nesting and roosting sites are located to minimize disturbance and encroachment from clean up operations. Now that the tern nesting season is completed, the vegetation buffer will be cleared and munitions removed. When these wetland areas dry up, munitions will be removed from the surface of these areas. Upon completion of the munitions clean-up at these specific sites, natural vegetation regrowth and cessation of human disturbance will permit the habitat to return to normal functioning.

2. Area B. This area consists of the sandy beaches along the perimeter of the designated 400 acre area within the LIA and the coastal vegetated areas extending 70 meters inland from the high tide for the shoreline (Figure 2, Area B). This area constitutes suitable nesting habitat for the endangered sea turtles; including the hawksbill, leatherback and green sea turtle. As stated in your letter dated May 17, 2005 and previous studies conducted by GMI, the nesting area for the Hawksbill sea turtle may extend up to 70 meters from the high tide mark whereas the leatherback and green sea turtles conduct their nesting between the high tide and the vegetation line. In order to minimize possible adverse effects to these species, all surface munitions were previously removed from the beach surfaces. To date, there have been no vegetation removal or blow in place activities within the 70 m buffer zone. Before the vegetation removal and UXO detection activities take place, the Navy will have qualified biologists survey the beaches for suitable and unsuitable nesting sites to refine the 70 m buffer zone. Nesting beach sites will be marked and monitored before and after vegetation clearance. There will be an effort to preserve sea grapes scrubs where safety concerns will allow. Before any blow in place activities occur, the biologists will coordinate with the UXO personnel to assess risk to sea turtle nesting sites and personnel. If risk is identified, further considerations for on-site mitigation or transplanting of sea turtle eggs to a safer location will be undertaken. The Navy will advise the USFWS of any mitigation and transplant operations. Such mitigation measures include daylight munitions removal or sandbagging nesting sites. For safety reasons, there will be no night or dark hour munitions removal operations during the course of the cleanup. This safety requirement provides protection to adult sea turtles when they come ashore.

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3. Area C. This area consist of the central area of the current 400 acre project area and excludes the habitat areas identified above for sea turtles and terns (Figure 2, Area A). The recent GMI survey indicates that this area is not likely to contain any federal or state threatened/endangered flora or fauna species. Therefore, munitions removal actions in this area will not have an impact on these species. As a result, the vegetation and munitions removal actions will proceed in this area. The vegetation removal will consist of cutting the vegetation to a depth of at least six inches above the ground surface to minimize soil erosion and to allow the vegetation to regrow.

### Summary

Based upon the results of the GMI survey, and the proposed conservation measures, the Navy has determined that the proposed munitions response activities incorporating the described conservation measure, will not affect federal or state threatened/endangered listed flora or fauna species. Additionally, since the clean-up activities within tern nesting habitat was avoided during nesting season, and further surveys will be completed to better define the potential habitats for the three species of sea turtles, the Navy concludes that the proposed ongoing activities within the LIA are not likely to adversely affect these species. Beach surface areas have been cleared of surface munitions, providing additional safety for adult sea turtles coming ashore to nest and return to sea. Additional oversight of nesting sites will provide adequate protection for sea turtle eggs and habitat. Future biological and habitat surveys will be conducted throughout the remaining 450 acres of the LIA. As the information from these surveys becomes available, they will be provided to USFWS, along with any associated endangered species conservation measures.

We trust that you will find that the Navy has cooperated in good faith by providing the necessary LIA munitions clean-up operation details and endangered species conservation measure. As a result, the Navy is notifying USFWS that the Navy is meeting the intent of the CERCLA ARAR's substantive to the ESA by implementing the conservation measures identified for the TCRA munitions removal from the VNTR, now the USFWS Vieques Wildlife Refuge.

We appreciate your input in this process and look forward to continue the communication flow between the Navy and experts. If you have any questions, please don't hesitate in contacting me at 757-322-4815.

Sincerely,



Christopher T. Penny, P.E.  
Eastern Vieques Project Coordinator  
Environmental Programs Branch (Caribbean Section)  
Environmental Division  
By direction of the Commander

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