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## United States Department of the Interior



### FISH AND WILDLIFE SERVICE

Boqueron Field Office  
Carr. 301, KM 5.1, Bo. Corozo  
P.O. Box 491  
Boqueron, PR 00622  
**MAR 28 2006**

Christopher T. Penny, P.E.  
Eastern Vieques Project Coordinator  
Environmental Programs Branch (Caribbean Section)  
Department of the Navy  
Naval Facilities Engineering Command  
Atlantic  
6506 Hampton Blvd  
Norfolk VA 23508-1278

Re: Draft Biological Assessment of  
the Former Live Impact Area  
within the Former Vieques Naval  
Training Range, Vieques, Puerto  
Rico

Dear Mr. Penney:

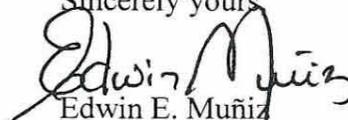
We are writing to provide comments regarding the Draft Biological Assessment (BA) of the Former Live Impact Area (LIA) within the Former Vieques Naval Training Range, Vieques, Puerto Rico dated January, 2006, received in our office on February 7, 2006.

A site visit was conducted by Service biologists Marelisa Rivera and Felix López to the former Live Impact Area (LIA) on February 24, 2006 with personnel from the Navy, CH2MHill, Department of Natural and Environmental Resources (DNER), and Vieques National Wildlife Refuge (VNWR). The visit was very useful for us in evaluating the BA, characterizing sea turtle nesting habitat, and identifying conservation measures to minimize possible adverse effects resulting from the vegetation removal, vehicular traffic, and detonation of munitions on sea turtles within the LIA.

Enclosed to this letter you will find our specific comments to your draft BA. We recommend that you carefully review our comments and modify the draft BA accordingly.

Thank you for the opportunity to comment the draft BA. If you have any questions, please feel free to contact Marelisa Rivera at 787-851-7297 extension 231.

Sincerely yours

  
Edwin E. Muñiz  
Field Supervisor

cc:

Vieques NWR, Vieques

EPA, Vieques

Yarrisa Martinez, EQB, San Juan

DNER, Vieques

John Tomik, CH2MHILL, Virginia Beach ✓

Carlton Finley, Vieques

GeoMarine, Plano, Texas

## **Service comments regarding the BA for LIA beaches, Vieques, Puerto Rico.**

### **General Comments:**

It is important to note that this BA does not include the recently proposed amendments to the TCRA which recommend the addition of more MRS sites including the Eastern Conservation Zone, nor the proposed Non Time Critical Removal Action for other sites outside of the LIA. These areas will have to be addressed under a separate document.

The beaches in the BA have been numbered by GeoMarine 1-28. We recommend that the MRS numbering system also be included since that will aid both the Navy and its contractors in understanding the Service's site specific recommendations and help in the development of future munitions removal work plans.

### **Vegetation Removal:**

Section 3.3.4 of the BA mentioned that Service biologists will be notified in advance of the areas where vegetation clearance will be conducted and, if necessary, will conduct a site reconnaissance of the proposed work area (grid) prior to vegetation removal activities to identify and flag any biota that may be federally protected.

### **Service position:**

The purpose of conducting consultation during the planning phase of a project is to anticipate possible presence of the species in the area and provide technical assistance, in advanced, to avoid or minimize possible effects. Implementation of the conservation measures should be done by the Navy or its contractor. The Service is willing to coordinate with the Navy's contractor and comment on their findings, but cannot commit to a site reconnaissance for every grid prior to vegetation removal. We can provide some technical assistance but as mentioned in other correspondence, the Navy should seriously consider a site natural resource manager to liaison with the Service. Once all the conservation measures are in place, the Service reserves the right to be present during MEC operations to monitor for compliance and or provide on site technical assistance if needed.

**Designation of Zones for Vegetation Removal and Munitions Detonation:** Section 3.3.8 of the BA proposes to establish three work zones, based on sea turtle sightings, to ensure sea turtle nest protection during vegetation removal and munitions detonation activities.

BA proposes:

Zone 1. No restrictions because sea turtle nesting is not expected within the area. Boundaries of this zone are presented in Figure 3-2.

Zone 2. Minor restrictions because 1-3 historical sea turtle nesting events have occurred within the zone. Within Zone 2, beaches will be surveyed weekly, no driving will occur, but if nests are identified during the surveys, no conservation measures are proposed. Zone 2 beaches are showed in green in Figure 3-2 [Bahía Icacos (25-28), Bahía Salinas Norte (22-24), Beach 10, Beach 9, and Beach 8).

Zone 3. Major restrictions because 4 or more historical sea turtle nesting events have occurred within the zone. Within Zone 3, beaches will be surveyed every morning by a qualified biologist utilizing pedestrian surveys beginning 75 days prior to the scheduled start date of the project and until ordnance or vegetation removal actions are completed. If nests are found, a 70 m exclusion zone will be established, and no ordnance will be detonated or vegetation removed within the 70 meter exclusion zone. During the incubation period, the biologist will continue to monitor the Zone 3 beaches at least three times per week until all nests have hatched or the nests are no longer active. Zone 3 beaches are shown in pink in Figure 3-2 [Beach 20 and Playa de Barco (19); Beach 18, Playa Brava (15-18), Tamarindo Sur (11-14), Beach 6, Beach 7, Bahía Salinas del Sur (1-5)].

Service comments regarding zone designations:

We agree that dividing the beaches into zones utilizing the nesting frequency as the criteria is an excellent idea and we concur with the approach. However, we do not agree with the final results of the analysis and the proposed measures to minimize possible adverse effects.

Only beach is included in Zone 1, Fossil Beach, we recommend reclassifying this beach as Zone 2.

We do not agree with frequency of surveys proposed for Zone 2 beaches. We recommend surveys at least two times per week on Zone 2 beaches.

We concur that intensive and extensive monitoring of Zone 3 beaches with the designation of an exclusion zone (protection zone) during vegetation removal activities are effective measures to minimize possible adverse effects to the three sea turtle species on the four designated Zone 3 beaches. Although we could not identify this in the BA, we concur that minimizing the amount of sea grape cleared would help curtail possible effects to the hawksbill sea turtle.

Additionally, we do not agree with the designation of a 70 m exclusion zone around active nests to protect them from detonation. The 70 m distance is based on how far from the line of the water a hawksbill sea turtle can crawl. This distance is not based on the

size of the munitions, the distance the energy is deflected, size of the craters, and other factors that should be considered when evaluating the effects of detonations on sea turtle nests.

Table 1 summarizes the number of nests (historical records) we have in our files for each of the beaches, and our comments regarding the Zone designation and survey frequency. The BA only included sea turtle data collected during aerial surveys conducted by GeoMarine from January 2000 to February 2003. However, we included in our analysis the data collected by DNER (Belardo *et al.* 1990-1999). .

Table 1. Summary of number of nests per beach, Zone designation, and frequency of surveys per beach.

Beach	# nesting activities Belardo et al (1990-99)	# nesting activities Geomarine 2000-03 (data in the BA)	Proposed Zone in the BA	Recommended Zone by the USFWS	Proposed Survey Frequency in the BA	Proposed Survey Frequency by the USFWS	USFWS Comments and Recommendations
Bahía Icacos (25-29)	0	1	2	2	WEEKLY	TWICE A WEEK	The Service does not recommend sea turtle nesting surveys once a week, particularly in narrow beaches. Hawksbill crawls are small in size, are located below the vegetation, and tracks may be erased by wind and wave action. A minimum survey frequency of twice a week (every 3-4 days), if conducted by experienced and qualified personnel and searching for nests below the vegetation, may be effective to detect hawksbill nests.
Bahía Salinas N (22-24)	0	1 nest and 6-8 tracks	2	2	WEEKLY	TWICE A WEEK	Same as above.
Fossil (21)	1 Dc 6 Ei	2 tracks	1	2	None	TWICE A WEEK	Same as above.
Playa de Barco (19 and 20)	6 Dc 2 Ei 28 Cm	2 nests >20 tracks	3	3	DAILY	DAILY	Area shown in Figure 3-2 needs to be reviewed. Beach 20 does not have a 70 m set back yellow line.
Playa Brava (15-18)	36 Dc 16 Ei 105 Cm	> 10 nests > 50 tracks	3	3	DAILY	DAILY	Area shown in Figure 3-2 needs to be reviewed. Beach 18 does not have a 70 m set back yellow line. Figures 6-1 to 6-5 showed this beach as Playa Blanca instead of Playa Brava.
Tamarindo Sur (11-14)	3 Dc 45 Ei	8 nests 21 tracks	3	3	DAILY	DAILY	

Cont.

Table 1. Summary of number of nests per beach, Zone designation, and frequency of surveys per beach.

Beach	# nesting activities Belardo et al (1990-99)	# nesting activities Geomarine 2000-03 (data in the BA)	Proposed Zone in the BA	Recommended Zone by the USFWS	Proposed Survey Frequency in the BA	Proposed Survey Frequency by the USFWS	USFWS Comments and Recommendations
B 10	0	1 nest 1 track	2	2	WEEKLY	TWICE A WEEK	The Service does not recommend sea turtle nesting surveys once a week, particularly in narrow beaches. Hawksbill crawls are small in size, are located below the vegetation, and tracks may be erased by wind and wave action. A minimum survey frequency of twice a week (every 3-4 days), if conducted by experienced and qualified personnel and searching for nests below the vegetation, may be effective to detect hawksbill nests.
B 9	0	1 nest 7 tracks	2	2	WEEKLY	TWICE A WEEK	Same as above.
B 8	0	1 nest 3 tracks	2	2	WEEKLY	TWICE A WEEK	Same as above.
B 6	0	2 nests	2	2	WEEKLY	TWICE A WEEK	Same as above.
B 7	0	1 nest	2	2	WEEKLY	TWICE A WEEK	Same as above.
Bahía Salinas	4 Dc	5 nests 7 tracks	3	3	DAILY	DAILY	

The following are our comments regarding proposed measures to minimize possible adverse effects of the proposed activities on sea turtles within the LIA discussed in Section 7 of the BA. To improve understanding of our comments, we separated proposed activities on vegetation removal, vehicular traffic, and detonation of munitions.

### **Measures to Minimize Possible Effects resulting from Vegetation Removal Activities**

Section 7.1.1 proposes to establish a 70 m set back from high tide for hawksbill sea turtle habitat within the LIA. Based on Figure 3-2, this 70 m set back zone was applied to 9 beach areas [Bahía Icacos (25-28), Bahía Salinas (22-24), Playa de Barco (19), Playa Brava (15-17), Tamarindo Sur (11-14), Beach 10, Beach 9, Beach 8, and Bahía Salinas del Sur (1-5)].

#### *Service comments regarding measures to minimize possible effects resulting from Vegetation Removal Activities:*

Designating set backs for construction activities and vegetation removal is an effective measure to protect suitable nesting habitat for the endangered hawksbill sea turtles in adjacent areas (Zone 1). The same approach is effective for light installation, fencing, vehicular traffic, and other activities. However, this approach is not effective to avoid or minimize adverse effects from detonation to sea turtle nests left in situ.

Based on the characteristics of the nesting habitat observed during our visit, the 70 m set back can be reduced on all beaches within the LIA. During our visit, we evaluated the hawksbill sea turtle nesting habitat from the line of the woody vegetation instead of the high water line. Measuring and flagging the set back on these beaches might be easier if measured landward from the edge of the existing woody vegetation since the high water line may change every day. The following table summarizes the proposed set backs for all beaches for vegetation removal activities.

Table 2. Proposed set back for protecting sea turtle nesting habitat during vegetation removal activities.

Beach	Proposed set back from high tide	Recommended set back from edge of the woody vegetation	Observations gathered during the site visit
Bahia Icacos (25-28)	70m	10m	Pocket sandy beach. Suitable habitat for hawksbill sea turtle. Mesquite trees can be removed. Sea grapes and mangroves should be maintained or, at most, pruned instead of removed.
Bahia Salinas N (22-24)	70m	10m	Pocket sandy beach. Suitable habitat for hawksbill sea turtle. Coastal vegetation is highly disturbed
Fossil Beach 21	none	20m	Not visited.
Playa de Barco (19 and 20)	25 m (Beach 20) 70m (Beach 19)	20m both	Sandy beach, high energy, forested berm with woody vegetation (sea grape and mangrove). Old green sea turtle nests observed at the edge of grassy habitat. Native vegetation should be maintained or, at most, pruned instead of removed.
Playa Brava (15-18)	None Beach 18 70m (Beach 15-17)	10 m from the crest (top) of the dune	Wide sandy beach, high energy, forested dune. Hawksbill sea turtle nests have been documented on the dune. Native vegetation should be maintained or, at most, pruned instead of removed.
Tamarindo Sur (13-14)	70 m	10m	Pocket rocky beach with forested back dune (sea grape, mangrove, emajaguilla). Hawksbill sea turtle beach. Native vegetation should be maintained or, at most, pruned instead of removed. Mesquite trees should be removed.
Tamarindo Sur (11-12)	70m	20m	Sandy pocket beach with pebbles and forested berm (sea grape and black mangrove). Four old hawksbill nests were observed below sea grape. Native vegetation should be maintained or, at most, pruned instead of removed.
Beaches 10, 9 and 8	70m	10m	Pocket rocky beaches with very narrow sand. Hawksbill sea turtle beaches.
Beaches 6 and 7	25m	10 m	Not visited
Bahia Salinas del Sur (1-5)	70m	25 m	Wide sandy beach with forested berm. Supports habitat for both hawksbill sea turtle and leatherback sea turtle. Vehicular traffic should be limited to below the high tide line. Mesquite trees can be removed. Native vegetation should be maintained or, at most, pruned instead of removed.

We recommend that Figure 3-2 be revised with the above mentioned information. Copy of the map should be provided to the contractor to ensure that the set backs are identified and flagged. Once all suitable hawksbill sea turtle nesting habitat is excluded from Zone 1, we agree with vegetation removal in **Zone 1**.

Measure 1 of Section 7.1.2 of the BA proposes to comply with vegetation removal zones. The BA proposes to survey **Zone 2** beaches weekly until vegetation removal and detonation activities conclude. In **Zone 3**, Measure 1 of Section 7.1.2 proposes to survey Zone 3 beaches every morning until vegetation removal and detonation activities conclude. Morning surveys will be conducted by qualified personnel and will start 75 days prior to the scheduled start date and will continue until the project is completed. If nests are found, the BA proposes to establish a 70 m protection zone and remove vegetation and detonate munitions in the area outside the 70 meters.

Service Position:

We do not agree with weekly surveys in Zone 2 beaches, particularly in narrow beaches because hawksbill sea turtle crawls may be obscured and become undetectable during the time between surveys. We recommend surveys be conducted at least twice a week by experienced and qualified personnel. Surveys should cover both the open sand and the area below the vegetation.

In Zone 2 beaches, if no nests are found, cutting of trees smaller than 3 inches in diameter may occur. Manual cutting using machetes is the preferred alternative to allow for re-growth. If mechanical methods are required, we recommend pruning branches instead of removing the trees (except for mesquite trees). Both techniques would allow for re-growth of suitable habitat.

The BA failed to provide for conservation measures if nests are found in Zone 2 beaches (page 3-6). Although we anticipate low number of nests in Zone 2 beaches, we recommend the implementation of conservation measures if nests are found. When nests are found, a protection or exclusion zone of 8m should be designated around the nest and marked with flagging tape. Vegetation removal outside of the exclusion zone may occur if conducted manually. Vegetation removal within the nest area should be postponed until 5 days after hatching is documented.

We concur with the BA recommendation of considering Playa de Barco (19&20), Playa Brava (15-18), Tamarindo Sur (11-14), and Bahía Salinas del Sur (1-5) as Zone 3 beaches. We concur with the proposed frequency of surveys for Zone 3 beaches (daily morning surveys). We also concur with the concept of designating an exclusion zone for the vegetation removal activities.

Vegetation removal within the hawksbill sea turtle nesting habitat should not occur from June to mid December (peak of the nesting season). Based on our observation during the field visit, hawksbill sea turtle nesting habitat varies from 10 m from the edge of the woody vegetation to 25m from the edge of the woody vegetation.

Table 3. Suitable hawksbill sea turtle nesting habitat in Zone 3 beaches.

<b>Beach</b>	<b>Suitable hawksbill sea turtle nesting habitat from the edge of the woody vegetation</b>	<b>Comments</b>
B. Salinas del Sur (1-5)	25m	The nesting habitat has been heavily affected by previous activities. Large number of mesquite trees is present within the nesting habitat. Native woody vegetation (sea grape and mangrove) should be maintained, but mesquite trees removed. Sea grape planting after removal of mesquite trees is highly recommended.
Tamarindo Sur (13-14)	10m	Nesting habitat consists of mangrove, sea grape and emajaguilla trees. Mesquite trees are present within the habitat. Mesquite trees can be removed. Sea grape planting after removal of mesquite trees is highly recommended.
Tamarindo Sur (11-12)	20m	Nesting habitat consists of mangrove and sea grape trees. Old nests were observed below existing vegetation.
Playa Brava	10m from the top of the existing dune.	Nesting habitat consists of a forested dune. Hawksbill nests have been documented at the crest (top) of the dune. Nesting habitat should be measured from the base of the dune to 10 m from the top of the dune.
Playa de Barco (19 and 20)	20m	Nesting habitat consists of woody vegetation.

When appropriate surveys are conducted in Zone 3 beaches, vegetation cutting may be conducted outside of the peak nesting season of the hawksbill sea turtle. A protection zone of 10 meters (measured landward from the edge of the woody vegetation) should be established to protect leatherback and green sea turtle nesting habitat. If leatherback and/or green sea turtle nests are left in situ (in place), vegetation removal activities should not occur within 10 meters of the landward edge of the nest track. The preferred alternative for cutting the vegetation, if nests are in situ, is hand cutting using machetes.

#### **Measures to Minimize Possible Effects resulting from Munitions Detonation Activities**

Regarding detonation in Zone 2 beaches, the BA does not specify which measures are proposed to minimize possible adverse effects. In Zone 3, the BA proposes to designate

a 70 m exclusion zone around the nest and continue with the detonation activities outside the exclusion area.

Service Position:

We believe that the above measures are not appropriate to minimize possible adverse effects from detonation activities and, therefore, we cannot concur that the proposed activities are not likely to adversely affect the three sea turtle species. The proposed 70 meters are based on the distance a hawksbill sea turtle can crawl inland, but this does not take into consideration the size and type of the munitions to be detonated and the potential area to be affected by detonation activities (craters, wave action and fragments).

Zone 2 beaches support limited sea turtle nesting records. Detonation activities can be scheduled when no nests are present on the beaches. Based on the data from our records, the possibility of having nests present on Zone 2 beaches from January to March is very limited. However, surveys should be conducted to determine the presence of nests during this period.

In Zone 3 beaches, once nesting activities are documented, our preferred alternative to minimize possible adverse effects resulting from detonation activities is to conduct a relocation program by qualified and experienced personnel with the required DNER endangered species permit. This approach was utilized by the Navy from 1990-2000 to protect sea turtle nests from military operations in this same area. The project was conducted by DNER personnel and hatching success of relocated nests was over 80%. The conservation measure of designating a 70 m exclusion zone should not be implemented if nests are left in situ. The Navy should explore other conservation alternatives under this scenario.

We are including the following analysis for Zone 3 beaches which can be useful for looking for alternatives to minimize possible effects related to detonation of munitions.

Playa de Barco

Most of the nesting activities reported for this beach are from leatherback and green sea turtles. When nests are found, relocation of nests by qualified and experienced personnel to a safe beach should be the preferred alternative. However, if the Navy decides to leave nests in situ, we do not recommend detonation of munitions from April to mid December to protect nests. If no detonations will occur during this time, and no vegetation removal will occur outside of Zone 1, no surveys are needed during this period of time unless the work will begin within 75 days of the end of the nesting season (mid December). In this case, nesting surveys should start 75 days prior to scheduled activities.

If detonation is planned from mid December to mid March, we recommend daily morning surveys be conducted by qualified and experienced personnel and any nest found be relocated to a safe beach within 6-12 hours after nesting occurred. The

advantage of conducting daily surveys by qualified and experienced personnel is that activities may be accommodated in a window of time when no nests are present.

#### Bahia Salinas del Sur

Based on the information from our files, Bahia Salinas del Sur supports primarily leatherback sea turtle nesting activities. When nests are found, relocation of nests by qualified and experienced personnel to a safe beach should be the preferred alternative. However, if nests will be left in situ, we do not recommend detonation from mid March to mid September. If no detonation will occur during this time, and no vegetation removal will occur outside of Zone 1, no surveys are needed during this period of time unless the work will begin within 75 days of the end of the nesting season (mid September). In this case, the surveys should start 75 days prior to scheduled activities.

From June to mid December, daily morning surveys should be conducted by qualified and experienced personnel to identify hawksbill nests. If nests are found the preferred alternative is to relocate all hawksbill nests within 6-12 hours after nesting occurred to a secure beach prior to conducting the operation. If the nests are left in situ, all activities should be postponed until 5 days after all hatching is documented in the beach. Based on the data from our files, we expect a small number of hawksbill nests in Bahia Salinas del Sur. If daily surveys are conducted, another alternative is to conduct the activities during the period of time when no nesting is expected (January to mid March).

#### Tamarindo Sur

Based on the information from our files, Tamarindo Sur beaches support primarily hawksbill sea turtle nests. Only a few leatherback sea turtle nests have been documented on these beaches. Because it is primarily a hawksbill sea turtle beach, we do not recommend vegetation removal activities within the nesting habitat zone from June to mid December. If nests are found, relocation of nests by qualified and experienced personnel to a safe beach should be explored as the preferred alternative for detonation activities. However, if nests will be left in situ, detonation activities should be scheduled to occur during the period of time when no nesting is expected (January to mid March).

For vegetation removal, manual cutting using machetes is the preferred alternative to allow for re-growth. If mechanical methods are required, we recommend pruning branches instead of removing the trees. Both techniques would allow for re-growth of suitable habitat.

From mid March to May, morning surveys should be conducted daily to identify leatherback sea turtle nests. If nests are found, relocation of nests by qualified and experienced personnel to a safe beach should be explored as the preferred alternative for detonation activities. A maximum of 3 leatherback nests have been reported on these beaches.

### Playa Brava

Based on the information from our files, Playa Brava supports primarily leatherback and green sea turtle nesting. Only a few hawksbill sea turtle nests have been documented on this beach. If nests are found, relocation of nests by qualified and experienced personnel to a safe beach should be explored as the preferred alternative for detonation activities. However, if nests will be left in situ, no detonation activities should be conducted from mid March to mid December. If this alternative is selected, no surveys are needed during this period of time unless the work will begin within 75 days of the end of the nesting season (mid December). In this case, the surveys should start 75 days prior to scheduled activities.

If detonation is planned from mid December to mid March, we recommend daily morning surveys be conducted by qualified and experienced personnel and all hawksbill nests be relocated to a safe beach within 6-12 hours after nesting occurred. For vegetation removal, manual cutting using machetes is the preferred alternative to allow for re-growth. If mechanical methods are required, we recommend pruning branches instead of removing the trees. Both techniques would allow for re-growth of suitable habitat.

### Vehicular Traffic

The BA establishes that the driving of vehicles would not be allowed on beaches. However, we received additional information from the Navy on February 27, 2006 establishing that during MEC clearance of beach areas, the use of vehicles and or equipment may be necessary to clear the beach of ordnance. It should be noted that driving on sand beaches as a means of site access should be regarded as a measure of last resort after all other site access options have been explored. We concur with the Navy's recommendation of designating an entrance and an exit at the beach area, and monitoring of nesting events by qualified and experienced personnel. It is important that any nests that are deposited at or close to these two sites are immediately relocated to a safe beach.

If vehicular access is needed, we recommend the vehicular access be limited to the intertidal zone. Driving above the intertidal zone should not be allowed. All known nests should be marked by stake and survey tape or string in an area at least 20 feet (6 meters) in any direction from the center of the nest. No activities should enter in this area. Other alternative routes should be explored to avoid driving on sea turtle nesting beaches.

With regards to the current use of the beach at MRS 5 to access adjacent MRS units we understand that this is an interim measure to gain access to the other MRS sites farther east. We understand an alternate route has already been identified and once it is rehabilitated this practice will no longer occur.

## SPECIES DETERMINATION

Section 8.0 of the BA establishes the effects determination for several listed species known from the former LIA. On October 27, 2005, the Service concurred with the Navy's determination that the proposed activities were not likely to adversely affect *Stahlia monosperma*, *Chamaecrista glandulosa* var. *mirabilis*, Virgin Islands boa (*Epicrates monensis granti*), brown pelican (*Pelecanus occidentalis occidentalis*), Antillean manatee (*Trichechus manatus manatus*) and the roseate tern (*Sterna dougallii dougallii*).

The Navy also determined that the proposed activities are not likely to adversely affect the green sea turtle (*Chelonia mydas*) since the monitoring provisions proposed in Section 7 or the BA.0 would identify any active nests on the beach preventing ordnance detonation.

With regards to the hawksbill sea turtle (*Eretmochelys imbricata*), the BA concludes that the proposed project is not likely to adversely affect the species because the project has minimized the amount of sea grape cleared, and would implement other conservation measures prior to any explosives detonation.

For the leatherback sea turtle (*Dermochelys coriacea*) the BA concludes that the proposed project is not likely to adversely affect this species because extensive monitoring provisions are proposed in Section 7.0 that would identify any active nests on the beach.

We do not concur with the current monitoring proposal for Zone 2 beaches and the proposed monitoring should be modified in order for the Service to concur with the determinations made in Section 8 of the BA.