

Orote Seafood Advisory Study

Orote Landfill Site

COMNAVMARIANAS, GUAM



Fact Sheet No.2

August 2002

Seafood Advisory Update...

The Agat Bay Seafood Advisory has been reduced and renamed.

The Guam Department of Public Health and Social Services (Guam DPHSS) issued two Seafood Advisories in May 2002 warning people not to eat seafood caught in designated nearshore areas near the west side of the Orote Peninsula and near Gabgab Beach in Apra Harbor. Both advisories are highlighted on the figure to the right. The advisories are based on results from reef fish and other seafood samples taken by the Navy in Agat Bay and near Gabgab Beach. The samples contained polychlorinated biphenyls (PCBs), chlorinated pesticides, and/or dioxin at levels that may not be safe to eat.

- The first seafood advisory is the **Orote Seafood Advisory**. It is a revision of the original Agat Bay Seafood Advisory that was issued in September 2001. The revised advisory covers a smaller area in Agat Bay. It includes the area from Spanish Steps at Orote Point down to the Navy's fence line at Rizal Beach. The area south of Rizal Beach down to Nimitz Beach that was part of the original Advisory Area is no longer included in the Orote Seafood Advisory.
- The second seafood advisory is the **Gabgab Beach Seafood Advisory**. This is a new Advisory Area that is approximately 1½ miles wide from Kilo Wharf in the west to the Old Fuel Piers off of San Luis Beach in the east.



The Navy, in cooperation with Guam Environmental Protection Agency (EPA), is conducting a detailed study to locate the source of the PCBs and other chemicals around the Orote Landfill, and clean up the area if needed. The Seafood Advisories are based on results from the first phase of this study. The remainder of this fact sheet will provide background information on the Orote Landfill, a summary of Phase I of the study, and an update on what to expect next.

Background...



The Orote Landfill (see map above) occupies approximately 9.4 acres of land within Commander U.S. Naval Forces Marianas (COMNAVMARIANAS), on the southern portion of the Orote Peninsula.

The Orote Landfill was used for disposal of residential, industrial, and construction wastes from approximately 1944 to 1969. The face of the cliff that partially borders the landfill was the most active disposal area. Flammable material was burned, and the remaining ash was buried on the cliff above the nearby cove. Nonflammable material was either buried behind the cliff or bulldozed over the cliff onto the beach. Due to erosion of the landfill cliff, the beach contained large amounts of rusted material and other debris.

THE PHASED APPROACH

Phase I : Addressing Human Health Concerns and Revising the Advisory Area Boundaries; is complete. Results of Phase I are discussed below.

Phase II: Associating Fish Contamination to Specific Sources; results from Phase II will focus on linking fish contamination to specific sources. The results of Phase II sampling will be used to conduct a more comprehensive human health and ecological risk assessment

Phase III: Determine Source Area; the investigation will then establish land source locations. This phase may include monitoring well installation to sample groundwater.

Phase IV: Cleanup of Potential Sources; once the information on PCBs sources are known, cleanup can be conducted if required.

The Navy implemented cleanup actions to contain the material within the landfill. These activities included:

- the removal of all loose debris from the cliff face, beach, and water at the shoreline;
- the construction of a seawall, and
- placement of a cover on the surface of the landfill.

In June 2001, the Navy established a program to determine if the cleanup actions at the landfill were effective and if the health of the marine life near the Orote Landfill was impacted. Fish samples collected near the seawall and at Barracuda Rock contained PCBs, chlorinated pesticides, and dioxin at levels that may not be safe to eat. As a result, Guam DPHSS issued a seafood advisory warning people not to eat any seafood caught in Agat Bay from Orote Point to Nimitz Beach.

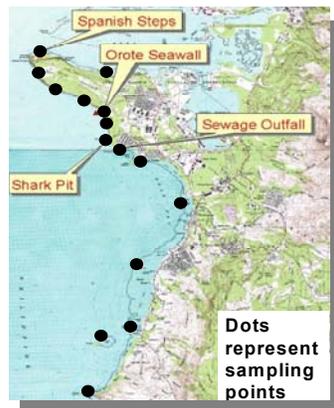
In October 2001, the Navy, Guam DPHSS, Guam EPA, USEPA, and other regulatory agencies agreed that more information is needed to address the potential health concerns from eating seafood within the Advisory Area. The Navy, with cooperation from these agencies, came up with a plan for a four-phased study to address this issue as presented on the right.

Phase I Results...

There were two main components of Phase I of the study:

1. Nearshore Fish Sampling – This sampling was done to help Guam DPHSS and the other agencies decide if the boundaries of the Advisory Area should be changed.

Three *Hiyoks* (or Blue-banded Surgeon fish) and one *Gâdao* (or Hexagon Grouper fish) were collected, at each of 15 sampling locations, along the coast from Gabgab Beach south to Facpi Point. The *Hiyoks* and *Gâdao* were selected because they are territorial and generally live in a small area rather than move around to different areas. Therefore, if these fish contained chemicals, it is likely that they picked them up from something in or near the area where they were caught.



PCBs, chlorinated pesticides, and dioxin results from Phase I fish samples are available and have been reviewed by the Navy, Guam EPA, USEPA, ATSDR, and several other agencies. The samples caught near the seawall and at Gabgab Beach, Spanish Steps, and Shark Pit contained these chemicals at levels that may not be

safe to eat. The fish caught south of Rizal Beach contained lower amounts of these chemicals and are considered safe to eat.

2. Seafood Consumption Survey – The Navy, Guam EPA, and other regulatory agencies agreed that a seafood consumption survey was needed to provide information about the amount and types of seafood that local Guam residents are eating. The information was used to better estimate the risk from eating fish caught in Agat Bay and determine if it is safe for people to eat seafood from the Advisory Area. More information on the seafood consumption survey is available in a separate August 2002 Seafood Consumption Survey fact sheet.

What's Next...

The Navy in conjunction with Guam EPA and other regulatory agencies is currently working on plans for Phase II investigations for the Orote Seafood Advisory Area. They will focus on:

- locating where the PCBs and other chemicals are coming from (the source areas), and
- gathering more information to help us understand the risks to people and the environment from these chemicals.

The plans will be finalized in early 2003 and work is expected to begin in the spring of 2003.

The Gabgab Beach Seafood Advisory Area will be studied under a future investigation. Current studies will focus on the Orote Seafood Advisory Area.

FOR MORE INFORMATION

Contact the Commander U.S. Naval Forces Marianas (COMNAV Marianas) at (671) 339-5207. Past studies and reports on the Orote Landfill are currently available at the information repository at Nieves M. Flores Memorial Library in Hagatna.