

MEMORANDUM

TO: Dennis Saito
Tesoro Hawaii Corp.

DATE: October 8, 1998

FROM: Joan Duffield *J.D./nic*
ENTRIX, Inc.

SUBJECT: *Survey Results of Adult Wedge tailed Shearwaters (Puffinus pacificus) at Kaena Point, Oahu*

As part of the ongoing effort to determine the potential extent of oiling on wedge-tailed shearwaters, a nocturnal survey of adult wedge-tailed shearwaters was conducted on October 7, 1998 at Kaena Point on Oahu. The colony was surveyed from approximately 1900 to 2030 by three biologists, including Joan Duffield (ENTRIX), Rusty Nall (PENCO) and Lance Tanino, a local biologist. Although Dave Smith, the wildlife manager on Oahu for the Department of Land and Natural Resources, was unable to participate in the survey, he verbally approved of the field effort, as the collection of this data was time critical. Dave was extremely helpful in providing information on the location and access to the colony at Kaena Point.

There were two survey areas, one located on the north side and one on the south side of Kaena Point. There was one team of three biologists censusing a sampling area. The census in each sampling area was limited to no more than 45 minutes to avoid extensive disturbance to the birds. Thus, all adults and/or burrows in a survey area were not surveyed. Although the birds were not marked, the two surveyors in the sampling area made every attempt to avoid double counting.

Most of the adults were sitting on the ground in the dense cover of the naupake shrubs. Only a few adults were inside the burrows. For those birds outside the burrow, the individual was caught by hand. For birds inside the burrow, the adult was either grabbed by the bill or rump area, depending on the bird's orientation in the burrow, and gently pulled from the burrow. While in the biologist's hand, each bird was examined over its entire body (plumage, feet and bill) for any evidence of oiling. After examining the bird, the bird was returned to the location where it was captured. Due to the inaccessibility of birds in the dense thickets of naupake, only those burrows along the interface of open sandy areas were checked. Consequently, no burrows were collapsed.

A total of 40 adult wedge-tailed shearwaters were examined for oil. None of the birds examined had any evidence of oiling. Based on the absence of oiling on the 399 adult wedge-tailed shearwaters examined on September 21, 1998 at Kilauea Point and on the 40 adults observed on October 7, 1998 at Kaena Point, the need for additional surveys at wedge-tailed shearwater colonies is probably not warranted.