
To: Glen Ford
From: Chris Jansen
Date: February 22, 1999
Re: **Comments on the *Preliminary Methodology for Estimation of Damages to Seabirds from the 24 August 1998 Tesoro SPM Hose Spill***

Tesoro appreciates this opportunity to review and comment on the 22 January 1999 preliminary draft of the *Preliminary Methodology for Estimation of Damages to Seabirds from the 24 August 1998 Tesoro SPM Hose Spill*. If you have any questions regarding these comments or need further clarification, please feel free to contact me at (808) 547-3242. We look forward to discussing Tesoro's and the Trustee's comments at our next Bird TWG teleconference call.

The comments and suggestions that follow are divided into two main categories, including general and specific comments. The general comments raise issues and concerns regarding how to move forward as quickly as possible using existing data and/or mutually agreed upon assumptions. The specific comments are presented to establish Tesoro's current position and for consideration after Tesoro and the Trustees have utilized all available data and mutually agreed upon assumptions.

Generally Comments

Tesoro wishes to move forward towards restoration by bringing closure to the pathway/exposure/injury phases of NRDA. Tesoro believes that we can accomplish this by optimizing existing data, such as acquiring and reviewing the analytical results of the feather samples and USCG data. Hopefully, by reviewing these data, we can fill in some of the data gaps that will allow us to progress forward. Tesoro believes that several assumptions within the document will be clarified by reviewing these data.

The report details numerous data gaps and are well highlighted in Priorities 1 -5 at the end of the document. As much of these data are not currently available, acquiring or constructing these data will be difficult. Moreover, even with these data, there may still be a degree uncertainty. Given the relatively small scale of the SPM Hose Spill and several data gaps or unknowns, Tesoro recommends that we explore alternative approaches, such as the use of multipliers, in order to address the data gap priorities and thereby create a simplified approach to the assessment to exposure and possible injury.

In summary, Tesoro believes that the current approach for estimating damages to birds is unnecessarily complicated and probably unrealistic, given obvious data gaps. We would welcome the opportunity to discuss a truncated approach to resolving this issue based upon mutually agreed assumptions.

Specific Comments

The comments presented below focus primarily on providing clarification of statements made throughout the document. We acknowledge that some statements are made without proper citation for the associated reference. Ideally, we would like the opportunity to acquire and review some of these references. However, since we wish to minimize the level for this task, citing these references to support statements, as identified below, would suffice at this time. Finally, some comments present alternative approaches or considerations for estimating the potential effect of the oil spill on Hawaiian seabirds. The comments that follow consolidate the joint input of Tesoro and ENTRIX. The comments are referenced by page number, paragraph number and line number.

1. Page 1, paragraph 1, line 3: Please indicate, in days (12 days), the period between the spill event and the first birds being observed.
2. Page 1, paragraph 1, line 4: Please define what is meant by "the main impacts on birds" and how this relates to the known information on the oil distribution.
3. Page 1, paragraph 1, line 8: Oil samples collected on Niihau have not been analyzed. Tar balls, oil, and soil samples were collected by DOH and currently are stored in the evidence freezer at CIC. Until these samples are finger-printed and compared with the source oil, we will not know if this oil originated from the Tesoro SPM Hose Spill. No oiled wildlife was observed.
4. Page 1, paragraph 1, last sentence: Given the statements in the previous two sentences, that is, uncertain oil trajectories, the oceanic conditions of the area, and the apparent absence of real-time oil slick observations the last line appears speculative.
5. Page 1, paragraph 2, line 4: Please clarify what is meant by "the effects of the oil on seabird populations were generally consistent with observations made during other small spill incidents". Also, please cite reference to support this statement. In particular, please indicate the basis of the reference to "seabird populations" and what is meant by this comment. Please define what is meant by abundant seabirds around Kauai and Kaula. Our interpretation of the October 1998 aerial surveys is that relatively few birds were recorded over a three day period, that is, out of 1700nm, only 1011 birds were recorded. Is this abundant?
6. Page 1, paragraph 2, line 6: Please clarify what is meant by "seriously impacted". We assume this refers to the most commonly exposed (e.g. oiled feathers) species.
7. Page 1, paragraph 2, line 13: It should be noted that some of the recovered seabirds collected during the spill may not have been oiled (i.e., Mokapu - 2 birds), Laysan Island - 1 bird) or may have been oiled by non-Tesoro sources (i.e., Laysan Island - 1 bird). Status of other recovered birds will be clarified as feather samples are analyzed.
8. Page 2, paragraph 1: IBRRC search and collection teams were deployed following calls from the public and spill responders during beach survey cleaning operation.
9. Page 2, paragraph 2: It should be noted that birds which were captured and counted as oiled were, in fact, not oiled (i.e., Mokapu 2 of 3 birds analyzed which had been classified as oiled showed no oil by A.D. Little analysis).
10. Page 2, paragraph 4: Oil response activities including shoreline surveys commenced

- 6 September. Official shoreline clean-up assessment teams (SCAT) surveyed the coast between 15 and 23 September.
11. Page 2, paragraph 6: The two estimates of oiled birds, (1) recovered by IBRRC and (2) oiled birds observed in the colony *do* represent accurate accounts of observed/recovered birds. These are accurate and not biased accounts as indicated. However, they may not represent the total number of birds impacted by the spill.
 12. Page 2, paragraph 7: Please indicate why there is likely to be a 'constant base level of bird beachings'. Presumably bird beachings will be determined by a number of factors which include seasonal presence, seasonal sea and weather conditions, and seasonal abundance. These factors might indicate a more erratic pattern of bird beachings rather than a 'constant base level'. Some of the background beached birds will be due to unknown oil spills and/or natural causes. This may also be the case of some of the beached birds apparently associated with this spill.
 13. Page 2, paragraph 7, line 1: Similarly, it should be noted that birds recovered on Oahu and Lanai may not have been exposed to oil released during the Tesoro SPM Hose Spill. This will be verified when the recovered bird feather samples are available for testing and USCG bird data is reviewed.
 14. Page 2, paragraph 8: It is only an assumption that the observed number of oiled birds in a colony represents a 'subsample of the impacted population'. We only know for certain that 'x' individuals were impacted, consequently any extrapolation from this is speculation.
 15. Page 2, paragraph 8: It is possible that some birds may have died at the colonies and not recovered. However, it will be difficult to provide retrospective estimates of how many died as a result of oiling versus stress-associated with breeding, colony abandonment due to other factors or early fledging, adult departure and reduction/increase in food resources due to El Nino.
 16. Page 2, paragraph 8: "Signs of oiling became less detectable with time". This comment might be construed that birds were able to remove or molt oil from affected feathers and had survived the effect of oiling. Please clarify what is meant by this statement.
 17. Page 3, paragraph 1: Other taxa such as petrels (large and small) typically avoid, except for breeding, coming close to land independent of whether they are oiled or not. Consequently mortality estimates and the recovery of carcasses for these birds can be difficult given their oceanic ecology. Without colony or species-specific population and mortality estimates, it is difficult to see how one can calculate spill-specific mortality. Existing data of wedge-tailed shearwaters obtained from two surveys (Kilauea Point and Kaena Point) resulted in no evidence of oiling on all 439 birds examined. We believe that this represents valid data and should be considered in an assessment of exposure and injury.
 18. Page 3, paragraph 1: Please provide a reference and scale to the "large aggregation" of shearwaters near to the colonies. It is our understanding that the results of the October 1998 aerial seabird surveys indicated that the combined total of Newell's shearwaters and Hawaiian petrels only represented two percent of the total observed seabirds.
 19. Page 3, paragraph 2: Add bullet: How many recovered birds were counted as oiled

- birds in association with the Tesoro SPM Hose Spill, but were wrongly classified (i.e., Mokapu birds, 1 Laysan bird).
20. Page 3, paragraph 3, line 1: ...editorial comment - delete second "seabird".
 21. Page 3, paragraph 3: The document assumes that the arrival rate is the same between all sectors. Given the winds and currents in the Hawaiian waters, it seems difficult to make this assumption.
 22. Page 3, paragraph 4: In the absence of other information the available data do provide a range of carcass persistence rates. The available information does not refer to persistence rates in the tropics but we know of no evidence to suggest that persistence rate in this region should be any different from elsewhere. We believe that existing persistence rates will provide a range of values from which we may choose a rate which most likely resembles the environmental conditions found on Kauai.
 23. Page 3, paragraph 4: Please clarify why the relationship between the daily persistence rate and the estimated number of beached birds is nonlinear.
 24. Page 3, paragraph 4: Please provide the formula/explain how an estimated 43 recovered birds would result in model estimates of 71, 80, 95 and 143 beached birds given 99%, 95%, 90% and 80% persistence rates.
 25. Page 4, paragraph 1: Please see comment No. 8 and the critique of the assumed relationship between oiled and non-oiled birds.
 26. Page 4, paragraph 1, line 3: See comment 11. The method used to record the 1,150 RFB at Kilauea Point in September 1998 is based on a fairly accurate count, as these observations were made within 50 feet or less of the birds. Thus, the ability to detect oil by the observer was fairly accurate.
 27. Page 4, paragraph 1, line 5: Why mention using data from repeated counts when these data does not exist?
 28. Page 4, paragraph 1: The application of an estimated "rate at which the number of oiled individuals declines" assumes that the rate of decline is constant temporally and within and between species and colonies. Please provide some justification for this assumption.
 29. Page 4, paragraph 1, line 12: The estimate could also be higher if dark plumage or other markings are misinterpreted as oil.
 30. Page 4, paragraph 3: Available information suggests that there were relatively few Newell's shearwaters and Hawaiian petrels off the north and west coast of Kauai. Please provide a reference to the timing and abundance of shearwaters and petrels roosting along the north and western sides of Kauai.
 31. Page 4, paragraph 3: The possibility that rafts of birds may have been at risk is speculative. Given the apparently large numbers of individuals apparently reported in the area one would expect some birds to have been washed ashore even allowing for the environmental conditions of the area. Similarly, based on the October 1998 aerial seabird surveys, Newell's shearwaters and Hawaiian petrels only collectively represented two percent of the total observed seabirds.
 32. Page 4, Priority 1: In the absence of spill-specific data, it seems reasonable to use available information on persistence rates from other studies even though these may have been conducted outside the tropics. Please see comment No. 22.
 33. Page 4, Priority 2: We believe these data are unavailable. We should not suggest

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data collection that is impractical and, consequently, which would require an unreasonable level of effort to acquire. Ultimately, these data would most likely be speculative.

34. Page 4, Priority 3: The application of any "background" rate should take account of species abundance, species seasonality, comparable current sea and wind conditions.
35. Page 4, Priority 4: See comments 18, 30 and 31. Please explain how it will be determined whether the Newell's shearwaters and Hawaiian petrels were 1) present in the area, 2) the scale at which they were present, and 3) if and how they were impacted by the spill. See comment No. 21.
36. Page 4, Priority 5(i): Please provide criteria that will be used to determine whether birds near Kaula or Lehua a) may have been exposed to oil, and b) may have been impacted by oil.
37. Page 4, Priority 5(ii): In the light of an earlier statement (Page 3, paragraph 1) that oiled birds such as boobies etc., are likely to return to land, please explain why live-oiled or dead-oiled birds that were impacted by the spill would not have been seen/found on Kaula or Lehua irrespective of the delay in searching these locations. In terms of Lehua, the island was visited on September 23, 1998 and no oiled seabirds were found and no oil was detected along the rocky intertidal zone on the south side of the island. Since oiled birds were still being observed at Kilauea Point, it is likely that if there were oiled birds on Lehua, they would have been detected. Another consideration is that tourist boat traffic is heavy along the Napali (west) Coast during late summer and early fall yet no reports were received from these eco-tourist business operators or their passengers on observed oil or oiled birds.