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From: Commanding Officer, Engineering Field Activity, West, Naval Facilities
Engineering Command

To: Distribution

Subj: RESPONSE TO COMMENTS ON THE DRAFT WORK PLAN FOR THE
TERRESTRIAL SCOPING ASSESSMENT AND THREATENED AND
ENDANGERED SPECIES SURVEY, NAVAL AIR STATION (NAS),
ALAMEDA, CALIFORNIA

Encl: (1) Response to Comments from the DTSC, RWQCB, USEPA, and RAB
Members Roberta Hough and Tom Okey on the Subject Document

1. Enclosure (1) are responses to comments on the Draft Work Plan for the Ecological Risk Assessment: Terrestrial Scoping Assessment and Threatened and Endangered Species Survey for NAS Alameda. Both comments and their responses are included.
2. If no additional comments are received within 15 days, the Draft Work Plan for the Ecological Risk Assessment: Terrestrial Scoping Assessment and Threatened and Endangered Species Survey for NAS will be finalized.
3. If you have any questions regarding the Navy response to comments, please contact Mr. George Kikugawa, Code 18312GK, (415) 244-2549 or FAX (415) 244-2654.

original signed by:

CAMILLE GARIBALDI
By direction of
the Commanding Officer

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California Regional Water Quality Control Board (Attn: James Nusrala)
U.S. Environmental Protection Agency (Attn: James Ricks)
RAB Member (Attn: Roberta Hough)
RAB Member (Attn: Tom Okey)

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**RESPONSES TO COMMENTS ON THE DRAFT WORK PLAN FOR
THE TERRESTRIAL ECOLOGICAL ASSESSMENT/SCOPING ASSESSMENT
AND THREATENED AND ENDANGERED SPECIES SURVEY
NAVAL AIR STATION ALAMEDA**

This document has been prepared in response to comments received from the following regulatory agencies and restoration advisory board (RAB) members on the above-referenced draft work plan, dated February 27, 1995.

- California Department of Toxic Substances Control (DTSC), dated May 23, 1995
- San Francisco Bay Regional Water Quality Control Board (RWQCB), dated May 18, 1995
- U.S. Environmental Protection Agency (EPA), dated May 19, 1995
- Roberta Hough, RAB member, dated May 22, 1995
- Tom Okey, RAB member, dated May 12, 1995

GENERAL COMMENT FROM DTSC

1. **Comment:** The Ecological Risk Assessment: Terrestrial Scoping Assessment and Threatened and Endangered Species Survey clearly identifies the steps to be taken in conducting the assessment and survey. However, the work plan is lacking in details. More detailed methodologies should be included.

Response: The revised work plan will more fully explain survey methodologies and will reference applicable documents. This general comment is addressed in the following responses to specific comments from DTSC.

SPECIFIC COMMENTS FROM DTSC

1. **Comment:** Please identify and reference the U.S. EPA and State of California guidance documents which were used in developing the Terrestrial Scoping Assessment and Threatened and Endangered Species Survey.

Response: The following DTSC, EPA, and RWQCB documents will be cited in the revised work plan.

- "Guidance for Ecological Risk Assessment at Hazardous Waste Sites and Permitted Facilities, Part A: Overview" and "Part B: Scoping Assessment" (DTSC 1994a, b)

- "Framework for Ecological Risk Assessment" (EPA 1992)
- "Protocols for Site Walk Requirement for Ecological Assessments" (RWQCB undated)

2. **Comment:** Please identify the qualifications of the PRC scientist and field biologist.

Response: The revised work plan will briefly describe the qualifications of the project team. Steve Clark is the PRC team leader for the terrestrial ecological assessment/scoping assessment and threatened and endangered species survey. Mr. Clark is a zoologist with more than 10 years of project management and support experience in ecological risk assessment, endangerment assessment, threatened and endangered species surveys, and biological surveys. The project team also includes Debbie Modrell, a vegetation ecologist specializing in California plant communities; she has 6 years of research experience. Jody Brauner, another project team member, is an ecologist with 2 years of experience in ecological risk assessment and biological surveys.

3. **Comment:** Are grasslands also expected to be found in Operable Unit 3?

Response: Nonnative grasslands are expected in operable unit (OU) 3 and in the Runway Area. The revised work plan will reflect this expectation.

4. **Comment:** The California Department of Toxic Substances Control's *Guidance for Ecological Risk Assessment at Hazardous Waste Sites and Permitted Facilities, Part B: Scoping Assessment* includes other literature sources. If practical, the references included in the Guidance should be consulted.

Was the California Department of Fish and Game, Natural Heritage Division, contacted for current special animal and special plant lists?

Response: "A Guide to Wildlife Habitats of California" (Mayer 1988) will be used during habitat characterization at Naval Air Station (NAS) Alameda. Also, "California's Wildlife," Volumes 1, 2, and 3 (Zeiner and others 1988, 1990a, b) will be used to evaluate potential ecological receptors.

The California Department of Fish and Game, Natural Heritage Division, has been contacted for current lists of special animals and plants. The department will show on a topographic map locations of habitats suitable for special species at NAS Alameda and within a 1-mile radius. The Natural Diversity Database (NDDDB) of Special Animals (CFG 1994) and Special Plants (CFG 1993) was used to prepare the species lists included in Appendix A. The NDDDB was queried for natural history information on expected bird species.

5. **Comment:** A pathway should be considered complete unless there is scientific justification to demonstrate the chemical will not enter the medium or the receptor will not contact the medium of exposure. The media are: air, soil, water, and biota. Please do not limit the exposure pathways for any Operable Units until a conceptual model can be completed.

Response: Exposure pathways will be assumed to be complete unless shown otherwise by the site reconnaissance and the site conceptual model. This will be stated in the revised work plan.

6. **Comment:** Please identify and reference the U.S. Fish and Wildlife Service concurrence with the approach for the vegetation survey.

Response: The revised work plan will cite all telephone conversations with university and arboretum experts and the National Biological Survey, regarding survey methodology. Also, the U.S. Fish and Wildlife Service's (FWS) concurrence with the vegetation survey methodology will be cited. The minutes from the meeting on June 2, 1995, summarize the vegetation survey methodology as well.

GENERAL COMMENT FROM RWQCB

1. **Comment:** In general, the work plan does not describe specifically how the habitat identification/vegetation survey, and the potential receptor identification will be carried out. For example, will surveys be conducted in a grid or transect pattern, or in a perimeter type survey? The surveys may vary in each OU, depending upon habitat type and percentage of vegetative cover. In addition, the Navy has not described how seasonal variations will be taken into account nor how transition zones between aquatic and terrestrial habitats will be assessed. Lastly, the Navy has not described how the terrestrial assessments will be related to the aquatic assessment, particularly where potential receptors of concern are utilizing both habitats.

Response: The methodology for habitat identification is described in the draft work plan. Aerial photographs have been analyzed to identify habitats at NAS Alameda. Dominant plant species will be identified and used to characterize habitats.

Potential special plant species and potentially suitable habitats at NAS Alameda have been identified. Habitats suitable for potential special plants will be searched. Each vegetative community will be bisected by an observational transect. The precise number and placement of the observational transects will be determined in the field, and will be based on the size and relative heterogeneity of the vegetative communities. Two field biologists will qualitatively evaluate each vegetative community and transition zone by searching for special plants identified before the survey.

Vegetative transition zones encountered between distinct plant communities will be evaluated by establishing observational transects 5 to 10 feet apart in order to sufficiently characterize the transition zone. If a protected plant species is encountered, a detailed survey method, such as a quadrat survey, will be used. The survey method used will be appropriate for the specific protected plant species encountered and its associated vegetative community. The survey is scheduled during the flowering period for most potential special plants. Potential special plants will be photographed and their locations documented. The minutes from the meeting on June 2, 1995, summarize the vegetation survey methodology as well.

Site reconnaissance protocol will be detailed in the revised work plan and will be based on RWQCB recommendations (RWQCB undated). The site reconnaissance will take place during early summer when most plants expected at NAS Alameda are flowering, according to the California Native Plant Society, and when the frequency of occurrence of most animal species expected at NAS Alameda is relatively high.

The terrestrial ecological assessment/scoping assessment will qualitatively evaluate species that use both terrestrial and aquatic habitats. Exposure modeling results from the OU 4 ecological assessment would be considered with exposure modeling results from a possible phase 1 terrestrial ecological risk assessment. The unified exposure model would account for species that use both terrestrial and aquatic habitats.

SPECIFIC COMMENTS FROM RWQCB

1. **Comment:** Typo? "during the field surveys at OUs 1, 2, 3, and at the *wetland* areas in OU 4, the survey team will delineate terrestrial habitats . . . "

Response: The first sentence will be changed to read, "During the field surveys at OUs 1, 2, 3, the Runway Area, and the wetlands in OU 4, the survey team will delineate . . ." The Runway Area is included in the terrestrial ecological assessment/scoping assessment and will be added to the revised work plan when referring to the survey areas. Also, there are two wetland areas at NAS Alameda: the West Beach Landfill wetland and the Runway Area wetland. The seasonal pools in the north part of the Runway Area have not been classified as jurisdictional wetlands by the U.S. Army Corps of Engineers.

2. **Comment:** Preferably, the receptor survey should be carried out during midday, as well as sunrise (as opposed to "morning") and dusk.

- Response:** Identification of receptors will take place in morning and at dusk to avoid disturbing nesting birds with eggs or young during the hottest part of the day. Habitats where nesting birds are not expected will be surveyed during midday.
3. **Comment:** The project team should begin discussing how the criteria used to describe COPCs will be used to eliminate or include chemicals in the list of COCs.
- Response:** The contaminants of potential concern (COPC) screening approach will be described in more detail in the revised work plan. For example, the initial list of chemicals will be site-related chemicals detected by laboratory analysis. Retained COPCs will be those chemicals with concentrations exceeding background values (if available) and ecological screening criteria being developed by the Navy in cooperation with EPA Region 9 Biological Technical Assistance Group.
4. **Comment:** Potential exposure pathways should also include potential vegetation chemical uptake via groundwater.
- Response:** Uptake of chemicals by vegetation via absorption will be included in the site conceptual model that will be developed as part of the terrestrial ecological assessment/scoping assessment.
5. **Comment:** The Navy should describe what is meant by a general field survey.
- Response:** The revised work plan will provide details on the vegetation survey methodology. See response to RWQCB's general comments above.
6. **Comment:** Typo? Should Least Tern Status be CE (California endangered) instead of SE (state endangered)?
- Response:** The status of the California least tern will be changed from SE to CE.
7. **Comment:** This table should include the Least Tern.
- Response:** The table in Appendix B of the draft work plan is a partial list and only an example. Following the literature reviews and field surveys, this table will be revised to include all candidate and listed threatened and endangered species that may be found at NAS Alameda.

SPECIFIC COMMENT FROM EPA

1. **Comment:** In terms of the proposed Ecologic Assessment Scoping Report, one salient issue that the NAVY should clearly address concerns the issue of complete exposure pathways and the effects that changes in land use may have on those pathways. At present, the greatest proportion of the more industrial parts of NAS Alameda, where higher concentrations of COPCs may be located, are paved or have buildings that prevent complete exposure pathways to ecologic receptors. Should those areas be demolished and the contaminated soil (and groundwater) be exposed, the formerly incomplete pathways may become completed. There was a reference to "current and historic land use maps" (p. 8), but no reference to future land use decisions nor as whether any have been made. It is EPA's understanding that the interim or short-term reuse plan for NAS Alameda has been made available for public comment. The Agency recommends that the issue of potential implications of environmental conditions on future land use at the facility be examined in the context of the proposed scoping for ecologic assessment. We further urge the NAVY to share these concerns with the reuse authority as final reuse plans are being considered.

Response: Potential ecological risks posed by future reuse at NAS Alameda will be addressed in the terrestrial ecological assessment and scoping assessment. Future areas of concern may be identified through the COPC screening process and in the future reuse plan for NAS Alameda. Source areas that currently exhibit incomplete exposure pathways to terrestrial ecological receptors will be evaluated in terms of the proposed future reuse plan, potential ecological receptors, COPCs, and potentially complete exposure pathways.

SPECIFIC COMMENTS FROM ROBERTA HOUGH, RAB

1. **Comment:** A variety of habitats have been identified: open-waters of San Francisco Bay, breakwaters, rip-rap, beaches, piers, tidal wetlands, permanent brackish wetlands, seasonal wetlands, ruderal (weedy) areas, open grasslands, trees near the shooting range, and urban cultivated areas. Please confirm whether:
- San Francisco Bay is only to be considered in the "aquatic" portion of the ecological assessment and is the only habitat excluded from this scoping work.
 - The seasonal wetlands have been delineated yet results are unpublished.
 - The habitat list of appendix A will be expanded to include the cultivated urban areas that were not included in the preliminary fauna list and to distinguish between types of wetlands.

Response: San Francisco Bay, the Oakland Inner Harbor, and inundated portions of the wetland areas will be addressed in the aquatic ecological risk assessment. The seasonal pools have been evaluated by the Navy using the U.S. Army Corps of Engineers guidelines (COE 1987). The results of the wetland delineation are summarized in a Navy report (1994). The terrestrial ecological assessment/scoping assessment will address the seasonal pools. Habitat characterization and classification will include industrial, residential, and landscaped areas at NAS Alameda. Wetlands will be classified using available wetland delineation reports and results from the vegetation survey.

2. **Comment:** The "Table of Threatened and Endangered Species Expected to Occur at NAS Alameda", Appendix B of the scoping work plan, omits the California least tern, the western snowy plover, the American peregrine falcon, the Canadian goose, the western aquatic garter snake, and the saltmarsh harvest mouse although listed in App. A. Appendix A did not include the double crested cormorant of Appendix B. What is the significance of excluding species for Appendix A such as the black-crowned night heron and willet which have been observed at NAS Alameda?

Response: The table in Appendix A is a list of *representative* ecological receptors at NAS Alameda. This table will be expanded to include all terrestrial species expected at NAS Alameda. The table in Appendix B is an example of the format that will be used in the threatened and endangered species survey report. The threatened and endangered species table that will be presented in the survey report will be comprehensive and will include protected terrestrial and aquatic species identified during the literature review and field surveys.

3. **Comment:** It has been suggested by biologist Laura Collins that least tern eggs [shells] could be collected early in the nesting season with little damage to the colony's fledgling production for contaminant analysis. Has any consultation occurred on this point to accelerate the overall ecological assessment process?

Response: The terrestrial ecological assessment/scoping assessment will propose assessment and measurement endpoints for evaluation. Protection of the California least tern population and nesting colony may be a proposed assessment endpoint, and chemical analysis of egg shells may be a relevant measurement endpoint that addresses the assessment endpoint. These potential endpoints will be considered in the terrestrial ecological assessment/scoping assessment.

4. **Comment:** "Species of Special Concern" are given emphasis in selection of potential receptors for follow-on work and it would be helpful to include them in any subset, particularly since the requirements of some, such as the loggerhead shrike, do not overlap those of the threatened or endangered list. Please confirm whether the assessment endpoint will be protection of biological

resources selected primarily from the list of special species. Please confirm whether population distributions will be considered in determining the sensitivity of species to contamination, which may be particularly important for long-lived species such as the terns. This information could be included in the "natural history data" of App. B.

Response: Protection of threatened or endangered species populations and critical habitats that may support these populations will be considered, but is not a necessary criterion for selection of assessment endpoints. The range and foraging habitats of species are important in evaluating risk to ecological receptors. The magnitude, duration, and frequency of exposure to COPCs will be qualitatively evaluated in the terrestrial ecological assessment/scoping assessment. An exposure model based on species range, foraging habitat, diet, and ingestion rate may be developed in the phase 1 terrestrial ecological risk assessment.

5. **Comment:** Pesticides, herbicides, and PCBs should receive particular emphasis as thresholds for noticeable deleterious effects are lower for wildlife than humans. Please confirm that the existing IR database will be used.

Response: The installation restoration (IR) database will be used to identify and screen chemicals detected at NAS Alameda. Contaminants that bioaccumulate and biomagnify will be included in the list of COPCs.

6. **Comment:** Please confirm that pathways are assumed to be complete unless shown otherwise.

Response: The revised work plan will state that exposure pathways are assumed to be complete unless shown otherwise.

GENERAL COMMENTS FROM TOM OKEY, RAB

1. **Comment:** The study objectives are not clearly defined. If the only objective is to "characterize" then the study is flawed from the beginning. Identify your questions and identify your working hypotheses. Finally, what will the resulting information tell us?

Response: The scope of the terrestrial ecological assessment/scoping assessment was discussed and agreed upon by the Navy and the lead regulatory agencies at a work plan scoping meeting on November 9, 1994. DTSC's scoping assessment guidance will be used to guide the terrestrial ecological assessment. As stated in the draft work plan, the terrestrial ecological assessment/scoping assessment is qualitative and will focus the phase 1 terrestrial ecological risk assessment scope of work. The terrestrial ecological

assessment/scoping assessment report will present site conceptual models for the source areas of concern and propose assessment endpoints, testable hypotheses, and measurement endpoints.

2. **Comment:** I found no science whatsoever in this work plan; no specific quantitative methodologies are proposed for the surveys. Established methodologies for such scientific surveys can be found in the literature. Work plans are the appropriate place to specify these methodologies and cite the appropriate literature. It appears that the authors are not familiar with the types of surveys addressed in the work plan.

Response: The terrestrial ecological assessment/scoping assessment is qualitative pursuant to DTSC guidelines, the above-referenced meeting, and the draft work plan. Its purpose is to determine source areas of concern and receptor species of concern for further quantitative analyses based on agreed-upon assessment endpoints, testable hypotheses, and measurement endpoints.

SPECIFIC COMMENTS FROM TOM OKEY, RAB

1. **Comment:** Important guidelines and documents are not cited and referenced (e.g., paragraph 1).

Response: The revised work plan will cite the guidance documents used during the terrestrial ecological assessment/scoping assessment.

2. **Comment:** The reference section is incomplete. A number of manuals and field guides have been listed but not included in the reference section.

Response: Abbreviated citations are presented on page 6 of the draft work plan; complete citations will be added to the reference list in the revised work plan.

3. **Comment:** Potentially complete exposure pathways include suspected routes of chemical exposure as well as "known routes of chemical exposure," unless you stop using the word 'potentially'. Please fix this in section 2.3.

Response: Exposure pathways will be characterized as potentially complete until chemical fate and transport mechanisms are evaluated further and confirmed.

4. **Comment:** The last sentence of section 2.2 does not indicate how the researchers will address complex mixtures of chemicals during the ecological risk assessment process. Why?

Response: It is inappropriate to address complex chemical mixtures at this time. The results of the terrestrial ecological assessment/scoping assessment will help form the basis of a focused terrestrial ecological risk assessment that may address synergistic effects through media-specific toxicity tests, for example.

5. **Comment:** The explanation and logic is incomplete and somewhat backwards or circular in the first sentence of the third paragraph of section 2.3. One needs information on magnitude, duration, and frequency of exposure in order to study exposure pathways.

Response: If it is known that a potential exposure pathway is incomplete then it is not necessary to consider the magnitude, duration, and frequency of exposure to COPCs.

6. **Comment:** In section 3.3 the authors imply that trap density is the only component of a mouse survey design. Do they believe this? Also, please use some cotton or poly fiber in the traps to prevent thermal stress.

Response: The work plan states that trap density is an outstanding issue to be resolved in the sampling design; it is not the only component of the sampling design. Most design issues have been resolved by Bill Van Peeters and FWS, such as trap density, survey duration, survey season, and permitting; these resolutions will be included in the revised work plan. Also, fiber bedding material will be used in the small mammal traps, which will be stated in the revised work plan.

7. **Comment:** Vague buzz-phrases that have no substantive meaning are used throughout the text. These phrases have no meaning because they are not defined and because specific methodologies have not been included. Examples follow:

pg. 1: "The objective of the scoping assessment is to characterize . . . "

pg. 2: "The terrestrial scoping assessment will characterize habitats and biota . . . "

pg. 9: "Field surveys are intended to address uncertainties associated with . . . "

pg. 9: "Data from the threatened and endangered species survey will be considered . . . "

pg. 10: "PRC will closely survey vegetation transition zones . . . "

pg. 11: "A PRC field biologist will perform a general field survey . . . "

pg. 11: "During the field survey, a visual search method will be used . . . "

Response: The terminology used in the work plan is meaningful in the context of the DTSC guidelines that are being used during the terrestrial ecological assessment/scoping assessment. The following statements will be revised or amended:

Page 9: Two objectives of the threatened and endangered species survey are to determine if threatened and endangered vegetation and the federally listed endangered salt marsh harvest mouse are present. The presence of these species at NAS Alameda is uncertain at this time.

Also, results from the threatened and endangered species survey will be integrated into the terrestrial ecological assessment/scoping assessment report.

Page 10: The statement concerning vegetation transition zones was added to the draft work plan following FWS and CSI recommendations on January 17, 1995, that PRC should closely evaluate vegetation transition zones because of their increased relative heterogeneity.

Page 11: The revised work plan will define the methodology used during the threatened and endangered vegetation survey in more detail; telephone conversation logs and technical references will be cited as well.

REFERENCES

- California Department of Fish and Game (CFG). 1994. "Special Animals." Natural Diversity Data Base. August.
- CFG. 1993. "Special Plants List." Natural Diversity Data Base. August.
- Department of Toxic Substances Control (DTSC). 1994a. "Guidance for Ecological Risk Assessment at Hazardous Waste Sites and Permitted Facilities, Part A: Overview." Draft. August.
- DTSC. 1994b. "Guidance for Ecological Risk Assessment at Hazardous Waste Sites and Permitted Facilities, Part B: Scoping Assessment." Draft. September.
- Mayer, K.E. and W.F. Laudenslayer, Jr. (eds.). 1988. "A Guide to Wildlife Habitats of California." California Department of Forestry and Fire Protection.
- San Francisco Bay Regional Water Quality Control Board (RWQCB). Undated. "Protocols for Site Walk Requirement for Ecological Assessments." Memorandum to Department of Defense, Department of Energy, and Superfund remedial project managers.
- U.S. Army Corps of Engineers (COE). 1987. "Corps of Engineers Wetlands Delineation Manual." Technical Report Y-87-1. January.
- U.S. Environmental Protection Agency (EPA). 1992. "Framework for Ecological Risk Assessment." EPA/630/R-92/001. February.
- U.S. Navy (Navy). 1994. "Results of Wetland Survey of Runway 25 Apron Margin, NAS Alameda." Prepared by Engineering Field Activity, West. Submitted to the District Engineer, U.S. Army Engineer District, San Francisco.
- Zeiner, D.C., W.F. Laudenslayer, Jr., and K.E. Mayer (Eds.). 1988. "California's Wildlife, Volume 1: Amphibians and Reptiles." California Department of Fish and Game. May.
- Zeiner, D.C., W.F. Laudenslayer, Jr., K.E. Mayer, and M. White (Eds.). 1990a. "California's Wildlife, Volume 2: Birds." California Department of Fish and Game. November.
- Zeiner, D.C., W.F. Laudenslayer, Jr., K.E. Mayer, and M. White (Eds.). 1990b. "California's Wildlife, Volume 3: Mammals." California Department of Fish and Game. April.