UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
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San Francisco, CA 94105-3901

April 10, 2008

Tom Clements
Public Affairs Officer
Pacific Missile Range Facility
P.O. Box 128
Kehaha, Kauai, HI 96752-0128

Subject: Draft Environmental Impact Statement/Overseas Environmental Impact Statement (EIS/OEIS), Hawaii Range Complex, Hawaii (CEQ # 20070312)

Dear Mr. Clements:

The U.S. Environmental Protection Agency (EPA) has reviewed the above-referenced document pursuant to the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500-1508), and our NEPA review authority under Section 309 of the Clean Air Act. Our detailed comments are enclosed.

EPA reviewed the Draft Environmental Impact Statement (DEIS) and provided comments to the Department of the Navy (DON) on September 17, 2007. We rated the DEIS as Environmental Concerns - Insufficient Information (EC-2) due to concerns regarding impacts to marine resources from the preferred alternative. We recommended additional alternatives be evaluated and a more precautionary approach be taken regarding the use of mid-frequency active (MFA) sonar in training exercises due to the substantial uncertainty of these impacts on marine resources. We also requested additional information regarding impacts to fish from MFA sonar and additional discussion of the potential for underwater detonations to disperse polychlorinated biphenyls (PCBs) and heavy metal contamination in Pearl Harbor.

DON has prepared this Supplemental DEIS (SDEIS) to address impacts to marine mammals from Navy acoustic sources. Specifically, the Navy has changed the methodology used to estimate sonar hours of mid-frequency active (MFA) use for the exercises and has changed the methodology used to evaluate effects of MFA sonar on marine mammals. The new methodologies result in substantially lower estimates of sonar hours and predicted adverse impacts to marine mammals.

The Supplement DEIS also includes an additional Alternative 3 which proposes the same increased frequency and tempo of training events, addition of major exercises including supporting up to three Strike Groups, and increased research, development, test and evaluation (RDT&E) operations as the previously preferred Alternative 2, but with the amount of MFA sonar use as occurs in current ongoing training, RDT&E operations and support of existing range

capabilities (No Action Alternative). Alternative 3 is the new preferred alternative.

We must commend the Navy for reducing the proposed increase in mid-frequency sonar use under Alternative 2. However, we have concerns regarding the changes to the methodologies for impact assessment, the basis of which contains substantial uncertainties, and for the possibility that impacts could be underestimated. We are also concerned with impacts to the endangered Hawaiian Monk Seal, especially since the threshold for harassment has been raised in the SDEIS for this species. The Hawaiian Monk Seal is in precipitous decline with extinction a real possibility in the Northwest Hawaiian Islands. Additionally, we note that the Record of Decision for this action will utilize the National Defense Exemption from the Marine Mammal Protection Act. We are rating the DSEIS as Environmental Concerns - Insufficient Information (EC-2) (see enclosed "Summary of Rating Definitions").

EPA recommends the Navy identify and explore additional ways of minimizing MFA sonar use in its Anti-submarine Warfare (ASW) training and utilize the NEPA process to develop a broader range of alternatives which avoid potentially significant impacts (40 CFR 1500.2(e)). We encourage precaution, as a remedy for the significant uncertainties that abound in the impact assessment, and in the use of MFA sonar. We also encourage collaboration and joint fact-finding with interested agencies and organizations to resolve disputes over scientific and technical issues.

We note that EPA's comments on the DEIS regarding the potential for underwater detonations to disperse polychlorinated biphenyls (PCBs) and heavy metal contamination in Pearl Harbor and our request for disclosure of the amount of munitions use and their associated pollutants for all alternatives were not addressed in this SDEIS. We continue to extend these requests.

EPA appreciates the opportunity to review this SDEIS. When the Final EIS is released for public review, please send one copy to the address above (mail code: CED-2). If you have any questions, please contact me at (415) 972-3846 or Karen Vitulano, the lead reviewer for this project, at 415-947-4178 or vitulano.karen@epa.gov.

Sincerely,

Connell Dunning

For Nova Blazej, Manager
Environmental Review Office

Enclosure: Summary of EPA Rating Definitions
EPA's Detailed Comments

cc: Chris Yates, National Marine Fisheries Service

SUMMARY OF EPA RATING DEFINITIONS

This rating system was developed as a means to summarize EPA's level of concern with a proposed action. The ratings are a combination of alphabetical categories for evaluation of the environmental impacts of the proposal and numerical categories for evaluation of the adequacy of the EIS.

ENVIRONMENTAL IMPACT OF THE ACTION

"LO" (Lack of Objections)

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

"EC" (Environmental Concerns)

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

"EO" (Environmental Objections)

The EPA review has identified significant environmental impacts that must be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

"EU" (Environmentally Unsatisfactory)

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potentially unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the CEQ.

ADEQUACY OF THE IMPACT STATEMENT

Category 1" (Adequate)

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

"Category 2" (Insufficient Information)

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analysed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

"Category 3" (Inadequate)

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analysed in the draft EIS, which should be analysed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

*From EPA Manual 1640, "Policy and Procedures for the Review of Federal Actions Impacting the Environment."

EPA DETAILED COMMENTS ON THE SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT, HAWAII RANGE COMPLEX, HAWAII, APRIL 9, 2008

Minimizing Mid-Frequency Sonar Use

We understand the need for the Navy to use mid-frequency active (MFA) sonar in its anti-submarine warfare (ASW) training. MFA sonar is currently the only way to detect modern quiet submarines, and the Navy maintains that its use is the only way to provide realistic training and testing with this sonar technology. However, the potentially significant impacts from MFA sonar on marine mammals are of significant concern to the public, as evidenced in high litigation for these projects. EPA is also concerned about these impacts, especially considering future anticipated effects of climate change on marine ecosystems[1] and the additional strain MFA sonar impacts may have on increasingly stressed resources.

EPA recommends a comprehensive strategy for meeting ASW training needs while minimizing the use of MFA sonar. Since, as the Navy indicates, the effective use of sonar is a perishable skill that must be practiced frequently, additional means of practicing these skills should be developed. Computer-assisted simulations of sonar use and response that simulates what sonar technicians see on ship should be explored, if this is not already occurring, to augment and complement the use of MFA sonar in training. The drawbacks of simulation must be compared to training situations that include the various court and agency imposed restrictions on MFA sonar use, not to an ideal situation with no restrictions.

The clear identification of minimum training needs with regard to MFA sonar use can be useful in planning training programs that minimize MFA sonar use and maximize the skills gained from its use. This was the basis for our comment on the DEIS which recommended that the document include a range of alternatives developed with reference to how well they meet immediate and future training needs. Without specifically identifying minimum training needs, it is difficult to devise alternatives that avoid potentially significant impacts. The inclusion of an additional alternative in the SDEIS that proposes to stretch the existing hours of MFA sonar use (no action alternative) across additional training exercises demonstrates that there is flexibility in the amount of MFA sonar use that occurs during training. The NEPA documents do not identify the minimum requirements that are needed for the Hawaii Range Complex, nor is there evidence of Navy coordination with other Range Complexes in Southern California, the Northern Mariana Islands, and the Pacific Northwest for opportunities to maximize the training benefit of MFA sonar use.

EPA also encourages the Navy to consider the benefits of collaboration in addressing this controversial issue. The Council on Environmental Quality, by releasing new guidance on Collaboration in NEPA[2], has communicated the need for Federal agencies to better engage interested parties in collaborative environmental analysis and federal decision-making. We understand national security issues would limit some opportunities to collaborate, but we suspect

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[1] Intergovernmental Panel on Climate Change, 4th Assessment Report ""Impacts, Adaptation and Vulnerability", Section 4.4.9 – Oceans and Shallow Seas. Available: http://www.ipcc.ch/ipccreports/ar4-wg2.htm

[2] Available: http://www.nepa.gov/ntf/Collaboration_in_NEPA_Oct_2007.pdf

that some opportunities with other interested parties may exist, such as in developing a broader range of alternatives and/or in joint fact-finding (an inclusive and deliberative process to foster mutual learning and resolve disputes over scientific and technical issues). Collaboration might offer an alternative to litigation and we recommend its consideration.

> *Recommendation:* EPA recommends that the FEIS identify all efforts that the Navy is taking to minimize MFA sonar use in ASW training and to identify additional opportunities to meet training needs while minimizing MFA sonar use. We continue to recommend that a broader range of alternatives be evaluated, and the identification of minimum training requirements and minimum sonar use for ASW exercises will facilitate the development of alternatives that avoid potentially significant impacts (40 CFR 1500.2(e)).
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> We also recommend the Navy explore the use of simulations to augment the use of MFA sonar training, or if this is occurring, to invest in better simulations. We request that information about these efforts be included in the FEIS. We also recommend coordination of ASW training that is occurring in other Range Complexes in Southern California, the Northern Mariana Islands, and the Pacific Northwest for opportunities to maximize the benefit gained from each MFA sonar use.
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> We encourage collaboration with interested outside parties where possible, especially in the development of alternatives and in joint fact-finding to resolve disputes over scientific and technical issues. Please address this possibility in the FEIS.

Changes to Sonar Hours

The new method of calculating sonar hours utilizes the Sonar Positional Reporting System (SPORTS), a database tool established in March 2006 to determine geographic locations of sonar use and into which all commands employing MFA sonar and sonobuoys are to input MFA sonar use daily. We commend the Navy for attempting to refine the estimated sonar hour usage originally collected, and for including submarine sonar in the analysis in the SDEIS (p. 2-1). However, very little information regarding the SPORTS database is revealed in the SDEIS. We understand from the Navy that the database is classified, had been in use for 14 months, and contained some inaccuracies that were corrected using best professional judgment. Since so little information about this data is revealed, it is not clear that the SPORTS data is in fact more representative; certainly the documentation in the SDEIS does not demonstrate this. Since this new method of calculating sonar use produced an estimate that is much lower than that estimated in the DEIS, more information is needed to substantiate its use to ensure that sonar use is not being underreported.

> *Recommendation:* The FEIS should include more information about the data in the SPORTS database. The FEIS should also provide detail of the method previously used, which we understand from the Navy was based on a 2-year study for the Range Complex Management Plan and involved estimates and the use of best professional judgment. Additional discussion as to why the SPORTS method is considered more accurate should

be included in the FEIS. EPA recommends that this discussion include a comparison of the attributes and limitations of both methodologies in a comparative manner for the benefit of the reader and decision-maker.

Analytical Methodology

The Supplemental Draft Environmental Impact Statement (SDEIS) modifies the analytical methodology used to evaluate marine mammal behavior responses to MFA sonar in the Hawaii Range Complex (HRC). The DEIS had used a dose function analytical approach, and the SDEIS uses a risk function developed with the National Marine Fisheries Service (NMFS). The SDEIS indicates that this change resulted from efforts to develop more appropriate model input parameters (p. es-2) in the hopes of increasing the accuracy of the Navy's assessment. It also indicates that the Navy believed that the methodology in the DEIS had overestimated potential effects (p. 3-14).

We commend the Navy for attempting to refine and improve methods for impact analysis, however substantial limitations and uncertainty appear to exist for the risk function. The SDEIS admits the risk function is based on "very limited data" (p. 3-6) consisting of just three data sets. One of the three data sets used acoustic stimuli that was unlike the Navy's MFA sonar (p. 3-9), and another data set's observations were "anecdotal and inconsistent" and lacked controls (p. 3-10). Additionally, the data sets represent responses from a limited number of species (four).

> *Recommendation:* EPA has concerns due to the substantial scientific uncertainty associated with the data that informed the Navy's new methodology. In the process of refining methods for impact analysis, the Navy should ensure that impacts are not underreported. Because of the high level of uncertainty, it is prudent to err on the side of more precaution. We recommend application of buffers in calculating impacts to account for this uncertainty and that considers cumulative impacts that these resources are receiving from other stressors. As we stated in our comments on the DEIS, the determination of impact significance, as it relates to NEPA disclosure, must consider this uncertainty.[3]
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> As mentioned above, opportunities for joint fact-finding with interested parties to resolve disputes over scientific and technical issues should be considered.

Impacts to the Hawaiian Monk Seal

The impact analysis in the SDEIS raised the threshold for determining harassment to the endangered Hawaiian monk seal (HMS). The determination of temporary threshold shift (TTS), a temporary shift in hearing sensitivity, and the permanent threshold shift (PTS), a permanent hearing loss, were altered to utilize the TTS of the elephant seal which the SDEIS states is more closely related to the HMS than other pinnepeds. The SDEIS provides very little information regarding this change, which appears to be based on the information from one researcher. We

[3] The Council on Environmental Quality Regulations for Implementing NEPA state that "the degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks" should be considered in evaluating significance (40 CFR 1508.27 (b) 5)

are concerned with potentially underestimating impacts to the HMS because the species is in such precipitous decline, with extinction of the Northwest HMS a real possibility.[4]

> *Recommendation:* Provide additional information in the FEIS regarding the use of a higher harassment threshold for the rapidly declining HMS. Unless there is complete scientific agreement that these thresholds are more appropriate, we recommend against change to the assessment methodology, believing a more precautionary approach is appropriate for such a vulnerable species.

Additional Comment

We recommend that the tables in Chapter 3 of the SDEIS be reviewed as it appears there are some errors, at least for the humpback whale PTS in Table 3.3.1-1 and on pages 3-22, 3-26, and 3-28.

[4] Western Pacific Regional Fishery Management Council, Pacific Islands Fishery News, Winter 2008