UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
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November 8, 2012

Gene Beale
Naval Facilities Engineering Command
1220 Pacific Highway
San Diego, California 92132

Subject: Draft Environmental Impact Statement/Legislative Environmental Impact Statement (DLEIS) for the Renewal of Naval Air Weapons Station China Lake Public Land Withdrawal, Kern, Inyo and San Bernardino Counties California, August 2012, (CEQ # 20120258)

The U. S. Environmental Protection Agency is providing comments on the subject document, in accordance with our responsibilities under Section 309 of the Clean Air Act and the National Environmental Policy Act (NEPA). We acknowledge the importance of research, development, acquisition, test and evaluation of weapons and armaments at the Naval Air Weapons Station China Lake (NAWSCL). The land withdrawal would allow NAWSCL to continue this essential mission for the next 25 years.

The DLEIS acknowledges the significant noise impacts of the proposed alterative. It would expose an additional 695 off-installation residents to noise levels between 65 and 69 decibel (A-weighted, dBA) Community Noise Equivalent Level (CNEL) (from 3,970 to 4,665 individuals) and an additional 280 residents to noise levels between 70 and74 dBA CNEL (1,050 to 1,330 individuals). As the Naval Facilities Engineering Command has noted in *Guidelines for Sound Insulation of Residences Exposed to Aircraft Operations*, residential use is discouraged in 65 to 69 dBA DNL and strongly discouraged from 70 to 75 dBA DNL.

The DLEIS includes NAWSCL's current mitigation measures to reduce noise impacts from Armitage Airfield. Because these measures are already in place, we consider these to be existing procedures. Since the DLEIS does not include new mitigation measures for noise in the proposed alternative, we recommend that discussion be included in the Final LEIS per NEPA requirement to discuss mitigation (40 CFR 1502.16(h)).

We have rated the LEIS as Environmental Concerns – Insufficient Information (EC-2) (see enclosed "Summary of Rating Definitions"), based on our concerns about acoustic impacts, range assessment, water resources, and threatened and endangered species. Please see the enclosed detailed comments for more information about these concerns.

EPA appreciates the opportunity to review this DLEIS. When the Final LEIS 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) 972-3521 or Tom Kelly, the lead reviewer for this project, at 415-972-3856 or kelly.thomasp@epa.gov.

Sincerely,

Connell Dunning

FOR

Kathleen Martyn Goforth, Manager
Environmental Review Office (CED-2)

Enclosures: Summary of EPA Rating Definitions
Detailed Comments

cc: Captain Dennis Lazar, Naval Air Weapons Station China Lake
Ray Bransfield, U.S. Fish and Wildlife Service
Matthew Alexander, City of Ridgecrest
Rob Dmohowski, Kern County

US EPA DETAILED COMMENTS ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT/ LEGISLATIVE ENVIRONMENTAL IMPACT STATEMENT (DLEIS) FOR THE RENEWAL FOR THE OF NAVAL AIR WEAPONS STATION CHINA LAKE PUBLIC LAND WITHDRAWAL, KERN, INYO AND SAN BERNARDINO COUNTIES CALIFORNIA, NOVEMBER 8, 2012

Acoustic Impacts

The DLEIS acknowledges the significant noise impacts of the proposed alterative. It would increase the number of (off-installation) residents exposed to noise from 65 to 69 decibel (A-weighted, dBA) Community Noise Equivalent Level (CNEL) from 3,970 to 4,665 and 70-74 dBA CNEL from 1,050 to 1330[1]. As the Naval Facilities Engineering Command has noted[2], residential use is discouraged between 65 to 69 dBA DNL and strongly discouraged from 70 to 75 dBA DNL. Even though the proposed alternative increases the number of people living within the 65 to 69 dBA CNEL, the areal extent of that off-site contour is reduced by nearly 11% (1,017 acres), while the 70 to 74 dBA CNEL contour expands by more than 24% (721 acres, Table 4.2-2). The cost to achieve the Navy's recommended 25 dBA to 35 dBA noise level reduction (for homes between 65 to 74 dBA DNL) ranges from $10,000 to $50,000 per home[3].

CEQ regulations require a discussion of mitigation for adverse environmental impacts (40 CFR 1502.16(h)) even when the impacts are not considered significant[4]. The DLEIS identifies existing mitigation measures in Section 3.2 but proposes no new mitigation for the project's significant impact (p. 4.2-5). Because noise is a significant impact of the proposed alternative, the Navy should thoroughly consider possible mitigation measures.

The DLEIS did not consider the possibility of upgrading one of the three South Range airfields to accommodate a portion of the operations at Armitage Air Field. If paving and lengthening a South Parcel air field to accommodate some aircraft operations (thereby reducing noise impacts to the community near Armitage Airfield) is feasible, EPA recommends including a discussion of this as an option for operational flexibility for NAWSCL.

EPA recommends additional noise monitoring to assure the accuracy of noise modeling, if it has not been a part of previous noise studies. The noise data in the DLEIS is based on the 2011 Air Installations Compatible Use Zones (AICUZ) Study for NAWSCL, which noted an expansion beyond the contours of the 2007 AICUZ Study. The 2011 AICUZ Study expanded the off-site 65-69 dBA CNEL area by a factor of six (1,292 to 8,417 acres) and the 70 – 74 dBA CNEL area by nearly a factor of 10 (31 to 3151 acres)[5]. According to the 2011 AICUZ study, the increase is primarily due to the inclusion of aircraft missions in the

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[1] Noted from comparisons of Table 3.2-4 and 4.2-1.
[2] Guidelines for Sound Insulation of Residences Exposed to Aircraft Operations, prepared for Naval Facilities Engineering Command, April 2005
[3] Page 5-1, Guidelines for Sound Insulation of Residences Exposed to Aircraft Operations, prepared for Naval Facilities Engineering Command, April 2005
[4] Question 19a, NEPA's 40 Most Asked Questions, Council on Environmental Quality
[5] Comparison of Table 5-4 and 5-3 in the Final Air Installations Compatible Use Zones (AICUZ) Study, Naval Air Weapons Station China Lake, California April 2011.

Baker range, and changing the ground impedance of the desert terrain from acoustically soft to acoustically hard[6]. Given the location of the Baker Range and the flight paths for the Armitage Airfield, it appears that the change in model parameters is a primary reason that the noise contours expanded off-site south of NAWSCL. The DLEIS and 2011 AICUZ do not mention whether NAWSCL has ever conducted noise monitoring to verify the accuracy of the ground impedance and other model inputs.

Recommendations:
The FEIS should discuss specific mitigation measures of significant adverse noise impacts of the proposed alternative.

The FEIS should discuss the possibility of upgrading one of the South Range airfields to partially reduce operations, and associated noise impacts, at Armitage Air Field.

The FEIS should also discuss noise monitoring to verify the accuracy of modeled noise impacts, or commit to monitor noise levels at NAWSCL perimeter near Armitage Airfield.

Contaminant Migration

An important environmental consideration in the decision to continue operations (approve the land withdrawal) at Naval Air Weapons Station China Lake is whether contamination may migrate within or away from the range. The DLEIS provides many reasons contaminant off-site migration from current operations is unlikely, such as: 80% of ordinance used at NAWSCL is inert (p. 3.1-13); high explosive ordinance is primarily used at the Airport Lake target area, which does not drain off-site (3.1-13); ordinance is not used within 1 mile of riparian areas (p. 4.7-1, also see discussion of Water Resources below); hydraulic barriers (clay soils) are located between the ground surface and groundwater in the Indian Wells Valley aquifer underlying much of the North Range (p. 4.7-2); and a study at the Yuma Proving Ground[7] showed limited migration of ordinance residue at a site with a similar mission and climate (4.7-2).

While these factors may indicate that surface water and groundwater contamination are unlikely, we note that Department of Defense Instruction 4715.14 of 2005 requires an assessment of operational ranges. In response, the Navy created the Range Sustainability Environmental Program Assessment. This assessment "[i]dentifies and assesses potential for off-range migration at land-based ranges.[8]" The DLEIS does not provide any indication that an assessment has been completed or is planned for NAWSCL.

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[6] See p. iii, Final Air Installations Compatible Use Zones (AICUZ) Study, Naval Air Weapons Station China Lake, California April 2011.

[7] U.S. Army. 1999. *Human/Ecological Health Risk and Migration Assessment of a Conventional Munitions Test Range YPG -KOFA Range*, Yuma, AZ, September.

[8] Navy presentation on the Range Sustainability Environmental Program Assessment to the Environmental Council of States on February 10, 2006.

Recommendation:
The FEIS should summarize a completed range assessment for NAWSCL and its conclusions about contamination of surface soils, groundwater and surface water, or discuss the Navy's schedule to conduct a range assessment.

Range Clearance

With respect to range clearance, the DLEIS does not sharply define the differences between the alternatives. (40 CFR 1502.14). The DLEIS provides detailed information on ordinance use for the proposed alternative compared to the Baseline and No Action Alternatives (p. 2-49 and 2-50 for example). The discussion of range clearance, however, is much less explicit. The discussion of range ground effects for both the proposed alternative and Baseline Alternative state, NAWSCL "would continue its policy of clearing UXO [unexploded ordiance] and removing MPPEH [material potentially presenting an explosive hazard] from the ranges after tests are conducted as conditions allow" and emphasizes compliance with ESQD regulations (4.10-3 and p. 4.10-8). The same discussion is used to describe range clearance for both the proposed alternative and the baseline alternative.

The FEIS should clarify if the 25% increase in the use of ranges at NAWSCL, under the proposed alternative, will be accompanied by a corresponding increase in removal of UXO and MPPEH. For one location, the DEIS appears to state that current resources are insufficient to keep pace with training and testing: "[a]n EOD crew periodically clears ordinance items from Superior Valley and other South Range sites as time and budgets permit" (p. 3.10-19).

Page 3.10-19 also contains discussion of ordinance use that is unclear for some responsibilities. It states that tenant organizations are responsible for clearing MPPEH following individual training and testing. This would seem to imply that training and testing is not complete until MPPEH has been cleared, but that point is not explicitly stated. The DLEIS also states that Range Operations and Ordinance Tests and Evaluation personnel also clear MPPEH, without clarifying whether these personnel are assigned to each tenant. While stating that MPPEH is routinely cleared after training and testing, the DLEIS also states that UXO may remain. Further, UXO, once rendered safe, is then considered MPPEH. The DEIS clarified that Explosive Ordinance Disposal (EOD)/UXO crews have primary responsibility for UXO clearance but does not clarify responsibility for the resulting MPPEH.

Recommendations:
The FEIS should specify or estimate the frequency of clearance activities for both UXO and MPPEH for the proposed and baseline alternatives.

The FEIS should also describe impacts of delayed clearance, if appropriate.

Water Resources

The NAWSCL's 2005 Comprehensive Land Use Management Plan (CLUMP) included an objective to continue to inventory, protect and enhance seeps and other water sources. This objective has also been incorporated into the 2012 Draft CLUMP (Appendix D, p. 3-17). Wildlife and habitats at NAWSCL are described by the DLEIS as rich and varied (p. 3.4-8). Due to the scarcity of water, the seeps concentrate wildlife, creating an oasis effect (p. 3.4-12). While we are pleased to learn that ordinance is not used within one mile of (seep fed) riparian areas (p. 4.7-1), we question the accuracy of this statement in light of the incomplete seep inventory.

> *Recommendations:*
> The FEIS should include a schedule for completing an inventory of seeps at NAWSCL. The FEIS should also clarify the portions of the facility that have been surveyed (e.g. areas within one mile of current and former target areas have been surveyed).

Threatened and Endangered Species

Wildland Brush Fires

Section 3.4.10 of the DLEIS explains that fire is a major risk to critical habitat for the desert tortoise in the Superior Valley. Hot spot charges are a necessary safety precaution and aids in the location and recovery of spent ordinance; however, hot spotting charges may result in brush fires. Four hundred acres of critical desert tortoise habitat to burn were burned in 2011 and 1090 acres have been burned since 1998 (p. 4.4-8). Fires can result in direct tortoise mortality and allow the establishment of non-native grasses rather than native vegetation needed for food by the desert tortoise.

Appendix C, Draft CLUMP, notes that NAWSCL have relocated fire personnel and equipment out of Superior Valley (p. 3-16). NAWSCL increased training by 25% in 2004[9], and is proposing to further increase training another 25%. This increase in training also carries a corresponding increase fire risk. The DLEIS discusses measures to mitigate the fire risk, including the current fire management policy and a fire management plan currently in development; however, the element of the plan and policy -- clearing targets and establishing fire breaks (p. 3.4-28 and 29) -- were also discussed in the 2004 EIS. We suggest that additional fire protection measures would be appropriate to address the 56% increase in training (25% in 2004 and the 25% in the proposed alternative).

> *Recommendations:*
> The FEIS should include a year-by-year estimate for acres of critical habitat burned and an accompanying discussion of facility operational changes that may have impacted the fires (e.g. increased operations, relocation of fire fighting personnel

[9] Record of Decision Proposed Military Operational Increases and Implementation of Associated Land Use and Integrated Natural Resources Management Plans. Naval Air Weapons Station China Lake California, (69 FR 29931) May 26, 2004.

etc). In consultation with the U.S. Fish and Wildlife Service, the Navy should consider additional mitigation measures to reduce the increased fire risk to critical habitat in the Superior Valley (e.g. temporarily moving fire fighting personnel and equipment into Superior Valley or South Range, contracting for fire spotting services, altering operations during high fire danger etc.)

Species Status

The NAWSCL has consulted with the U.S. Fish and Wildlife Service and received Biological Opinions for three species: the endangered Mojave tui chub; the threatened desert tortoise and the threatened Inyo California towhee (3.4-3). NAWSCL has also entered into a Cooperative Management Agreement with Fish and Wildlife Service on a potential de-listing of the Inyo California towhee (p. 3.4-3). The DLEIS discusses habitat enhancement such as deepening and widening the Lark Seep south channel and fencing springs and riparian areas for protection from burro and horse grazing. The DLEIS also discusses mitigation measures to reduce impacts to critical habitat, such as the fire management policy (and fire management plan currently in development p. 3.4-28). While the DLEIS explains measures to protect and enhance threatened and endangered species, it does not provide an overall assessment of the effectiveness of these measures.

The DLEIS includes figures showing population densities for desert tortoise, but does not clarify whether the population has grown, declined or remained stable (3.4-4 and 3.4-5). NAWSCL reports take and mortality of desert tortoise annually to the Fish and Wildlife Service. The DLEIS mentions that that tortoise take "has been primarily a result of motor vehicles striking tortoises on established roadways," but does not provide take on an annual basis, allowing an assessment of current mitigation measures.

The Mojave tui chub habitat is limited to the Lark and G-1 Seep (Table 3.4-2). We would expect that NAWSCL has conducted many chub counts or surveys, but the DLEIS does not include current population and its historic trends. Similarly, surveys of the Inyo California towhee over time would provide information on the effectiveness of facility's protection and enhancement measures and the impact of its operations.

Recommendations:
The FEIS should include historic and current population estimates for threatened and endangered species at NAWSCL. The FEIS should also report take, mortality and harassment, of endangered species by year.

SUMMARY OF EPA RATING DEFINITIONS*

This rating system was developed as a means to summarize the U.S. Environmental Protection Agency's (EPA) 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 Environmental Impact Statement (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 should 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 Council on Environmental Quality (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.