

Letter I19

Comments

Responses

James "Sparky" Rodrigues
 86-222 Puhawai Road
 Wai'anae Hawaii 96792
 696-2823

Submitted via email (DO NOT use Email address)

I19-1 | I have repeated asked for more time, 120 days, to review and digest the content of the three volumes. The Army took several years compiling the document and you ask us to make comment. This is totally unfair and unreasonable. This is part of the social impact not addressed in the EIS. The information is reported in terms not easily understandable for most of us.

For example. The air quality study. three samples taken... demonstrating effort, clean bill of health for the activities conducted with a no significant impact. However in truth the test were done after training activity was reduced. No documentation on the level of intensity and the level of weapons systems used. measuring a match vs a bon fire. the test presented itself as honest but in truth is not. the other item not taken into consideration is air direction while testing.

I19-2 | It appears that test were done when wind blew away from the monitoring devices. NO real testing during intense live fire training makes the air test a sham. NO testing with the wind blowing toward the testing instruments. Testing protocol should have documented each and every training event. Testing should be conducted and several locations within and outside of MMR. The test results gives false results and impressions.

I19-3 | The document does not include MSDS or Health implications of each chemical constituent our community is being exposed. There are no Health baselines to identify how training will further impact our communities health. Community includes all aspects.

I19-4 | The SEGMENTING of the Stryker/Transformation EIS did not give our community a clear understanding of training requirements that would include Makua. We were assured that the Strykers would not be used in Makua. We were promised that if the Strykers came to Hawaii, Makua would no longer be used as a live fire training area. COMMUTATIVE IMPACT from all Military activity and industry upon our community MUS be addressed and included in this EIS.

I19-5 | Our community consistently testified that Makua is not appropriated for Live Fire training and should be returned to a cultural and traditional use.

I19-1

The Army extended the public review period from 60 days to 75 days. The commentor received Volume 1 of the Draft EIS and a CD containing all three volumes at the beginning of the review period. In addition, the commentor was notified that paper copies of the three volume sets were available for review at several local libraries. In response to comments, an additional 60 days were provided to the community to review the Draft EIS and associated studies related to marine resources and archaeological surveys, from February 2 to April 3, 2007.

I19-2

CALFEX monitoring was done during typical company-level CALFEX events, including use of artillery and mortar support units, use of aviation support units, and use of demolition charges. CALFEX monitoring was done on days with prevailing winds from typical northeast and east-northeast directions. Air monitoring stations were located north, east, south, and west of the main target areas in the ordnance impact area, allowing for monitoring of resulting air emissions regardless of wind direction. At MMR, wind directions varied throughout the course of the day, primarily due to surface heating and topographic effects. Coastal valleys on the western and southern sides of the Hawaiian Islands experience offshore wind flows at night, with winds rotating to on-shore and upslope directions during the day. As shown in Figure 3-5 of the Draft EIS, the sampling locations were inside the MMR boundary as well as at Makua Beach and the Silva Ranch. The sampling conditions were addressed in the Appendix G-6 of the Draft EIS.

I19-3

The impacts resulting from various chemical compounds have been assessed both in the Draft EIS and in the supporting investigations by analyzing air, water, and soil samples against health-based criteria in Chapter 4 and 5. Chapter 4 addresses health based criteria by comparing collected data to health-based EPA Region IX Preliminary Remediation Goals (PRGs).

Comments

Responses

(Cont.)

I19-4

The SBCT EIS, Chapter 2 (page 2-43), section on Combined Live-Fire Maneuver Training, addresses how SBCT forces would conduct dismounted training to include company-level CALFEXs. MMR is important to military training in Hawaii, and thus SBCT forces would use MMR if the ranges were available after completion of the MMR Final EIS and ROD. The MMR EIS contains an analysis of the potential environmental impacts associated with dismounted CALFEXs for current forces and the SBCT (see Chapter 5). Two separate EISs were prepared for two different proposed actions, training at MMR and SBCT transformation. For these reasons, segmentation did not occur.

I19-5

The Army thanks you for your comment and appreciates your participation in this public review process. Your comment has been considered and has been included as part of the administrative record for this process

Comments

Responses

I19-6 Technical assistance is needed to translate the content of the volume of material to properly understand the content of the document. TetraTech has thousands of educated professionals focusing their skills and talents to create the Makua Draft EIS. We are not able to compete on a level playing field. The sheer power of the USArmy budget focused on the Makua EIS further weights against the Wai'anae community. We are at a disadvantage socially and economically when dealing with these odds.

I19-1 I received my copies of the EIS nearly a month into the review time. This is not enough time for comments based on the volume of information to review. You deny our community the ability to participate fully in the EIS Process.

As a Vietnam vet, training in my community has a negative impact on me and my family. Reliving the wartime stresses every time the convoy passes, chopper flies overhead and the sound of explosives as well as gunfire. This has gone on for years and is getting more difficult to endure emotionally and mentally. These impacts are not addressed in the EIS. I'm sure the mental health and quality of life is diminished because of the live fire training for our entire community. This is not included in the EIS.

I19-8 Property value is not discussed. My property is devalued because of the military in my community. Other properties of comparable size and build are 2 to 300% higher in value. Property Values of our community is not compared to other communities in this EIS.

I19-9 Half of all students entering the 9th grade on the Wai'anae coast do not graduate high school. Of those who do graduate high school only a small number enters college. Education, employment and income of our community is not included in your EIS. The level of homelessness is not included in your EIS. All part of the COMMUTATIVE IMPACTS to activities documented in your EIS.

I19-10 Troop harassment of citizens while on duty and off duty is not included in the EIS.

Poor institutional memory of pass commanders promises to the community. Poor behavior of leadership and troops demonstrate cultural insensitivity toward the host culture and beliefs.

I19-11 Endangered species out planting with no fire plan demonstrate the failure of the Fish & Wildlife to protect our resources. Denying the cultural practitioners to participate in the determining practices to preserve cultural resources. Continuing current practices will further force endangered species in Makua to go extinct as the fire plan has failed every fire occurrence. Maintenance of native resources have failed and based on the EIS will continue to fail.

ALL of the above issues must be included in the study.
A finding of NO USE is the preferred choice for Makua.

Mahalo, James "Sparky" Rodrigues. 10-6-05

I19-6

The Army provided Malama Makua with funds for technical assistants to assist Malama Makua and other members of the Waianae Coast in understanding the issues involved during the EIS process in order to facilitate and inform public participation and comment in the NEPA process.

I19-7

The assessment of psychological impacts on the civilian population is outside the scope of NEPA. The focus of NEPA is on the environment. Pursuant to CEQ Regulations 40 CFR Part 1500, "NEPA is our basic national charter for protection of the environment." "The NEPA process is intended to help public officials make decisions that are based on understanding of environmental consequences, and take actions that protect, restore, and enhance the environment."

I19-8

The EIS addresses the environmental effects expected from military training at MMR, and the associated socioeconomic issues that would result from those environmental effects. Socioeconomic issues were addressed in Sections 4.12 and 5.3.12 of the Draft EIS.

I19-9

The EIS addresses the environmental affects expected from the proposed action and the associated socioeconomic issues that would result from those environmental effects in Sections 3.12.2, 3.12.3, and 4.12.3.

I19-10

Harassment of community members by Soldiers is not authorized by Army commanders, and will be dealt with in accordance with the Uniform Code of Military Justice.

Comments**Responses**

(Cont.)

I19-11

The 2005 ignition of a white phosphorous round and the 2003 prescribed burn are both good examples of the success of the Army's wildfire management plan. In both cases, firefighting resources were able to stop the fire before it burned onto lower Ohikilolo, where there are two endangered plant populations, *Chamaesyce celastroides* var. *kaenana* and *Hibiscus brackenridgei* ssp. *moku-leianus*. The intensive management of endangered species currently occurring within Makua Valley is not only maintaining the current on-site resources but also bolstering their numbers on- and off-site. In fact, two different endangered plant species, *Cyanea superba* and *Phyllostegia kaalaensis*, have been saved from extinction as a direct result of Army actions. The natural resources program collects propagules and other plant material as a means of storing the genetic material for the species threatened by military activities. Due to this collection, there is material available to propagate these two species and reintroduce them back into the wild and there are now over 100 individuals of

I19-11 (part 2)

the *Cyanea superba* in Makua. No species have gone extinct due to Army training activities in Hawaii.

Letter I20

Comments

**Review of Draft Environmental Impact Statement:
Military Training Activities at Makua Military Reservation, Hawai'i
March 2005**

By
Goro Uehara¹
Review prepared October 5, 2005

In an agreement between Malama Makua and the Department of the Army, the Army agreed to complete an environmental impact statement that includes, among other actions, studies to identify potential contamination of soil, surface water, and ground water, and of potential impacts on air quality, associated with training activities at Makua Military Reservation (MMR). My review will primarily focus on the soil and surface water study and the conclusions reached by the investigators.

My personal knowledge of the soils and vegetation of Makua is based on a review of the Soil Survey Report of Oahu published by the U.S. Department of Agriculture, and two visits to Makua Valley made within the last six years. My first visit to Makua Valley was made in late 2001 to collect soil samples to conduct a greenhouse bioremediation study of contaminated soils from the Open Burn/Open Detonation (OB/OD) site. This study showed that guinea grass (*Panicum maximum*), one of the dominant plants in the valley, is very effective in detoxifying RDX and HMX, two chemicals associated with the use of explosives in the MMR. Another plant that was found to degrade the two chemicals was beach naupaka (*Scaveaola sericea*). Since both species do not adsorb RDX and HMX, it is more likely that they contribute to chemical degradation by supporting a healthy microbial soil population that, in turn, consumes and degrades the chemicals. My second visit to Makua Valley was made in 2002 as part of my review of the draft work plan for the Army's hydrogeologic study.

Impact of fires on soil and water quality

Based on the bioremediation study, it now appears that vegetative cover not only protects the soil from the elements, but creates an unseen, below-ground environment that favors degradation of toxic chemicals. Burning of vegetation associated with live-fire training at MMR interferes with these natural processes promoting remediation of past contamination in Makua Valley. It also prevents build-up of soil organic matter and results in gradual loss of soil health. Soil organic matter is an important adsorbent of chemicals and prevents their movement into the groundwater with infiltrating rain water. Although the draft environmental impact statement (DEIS) recognizes fires as a problem in other contexts, it fails to take into account the long-term, adverse impacts on the soil's ability to provide important environmental services such as adsorbing and filtering water, sequestering carbon, recycling nutrients, reducing runoff and detoxifying chemicals.

I20-1

I20-2

¹ A copy of my resume is attached hereto.

Responses

I20-1

The EIS was prepared in accordance with the National Environmental Policy Act and with applicable federal and Army regulations. Review of the Draft EIS by the US Environmental Protection Agency found the document to be adequate. Fires associated with live fire training is addressed in the IWFMP.

I20-2

Please see response to Comment I20-1.

Comments

Review of Draft Environmental Impact Statement for MMR
October 5, 2005
Page 2

Biased Soil Sampling

- I20-3 The Army did not correct the problems with its sampling methodology that I identified in comments on the draft hydrogeologic investigation work plan I prepared in 2002, and, thus, the sampling that was conducted failed to allow the Army to provide a reasonable picture of the amount and distribution of contaminants in the topsoil at MMR.² While the biased sampling scheme may have been designed to include the most highly contaminated sites, it greatly diminished the value of the samples for modeling purposes.
- I20-4
- I20-5 Modeling of ecosystem processes in spatially variable landscapes requires unbiased data that reflect the true spatial variability in the area under study. The purpose of models is to mimic natural processes that occur over space and time in the MMR. The biased sampling reduces the probability that the model will be able to mimic accurately processes such as transport of contaminants over space and time in the valley.

Model Calibration and Validation

- In Appendix G-1 (Hydrogeologic Investigation Report), page 168, the report states that "The model was calibrated to the February 14 flow event by comparing flows of water and sediment with measured flows, and the adjusting parameters until an acceptable match is achieved." In the same paragraph, the report goes on to say that "The model provides acceptable agreement between the simulated and measured stream flows." It appears from a reading of this section that the measured data set that was used to calibrate the model was reused to compare predicted versus measured results. If so, this is not a valid way of testing the capability of a model to predict transport processes over space and time in a watershed. Validation of a model requires comparison of predicted outcomes with independent sets of observed data not used in model calibration. If the Hydrogeologic Investigation Report failed to validate the model in this manner, results obtained from application of the model are not reliable.
- I20-6
- I20-7

Model Application

- If the Army now has a simulation model that performs as claimed in the Hydrogeologic Investigation Report, it should be able to simulate past, present and future rainfall events of varying intensities, and assess the impact of rare rainfall events that occur once in 10, 25, 50, 100 or 1000 years on Makua Valley's ecosystem under alternative land uses, including military training. A model serves no useful purpose if it is developed simply to prove that it can predict hydrologic processes in Makua Valley. Why was the model not used to investigate the impact of alternative military training practices, including worst-case scenarios, on such processes as soil erosion and sediment transport to the ocean?
- I20-8

² For your convenience, a copy of my comment letter is attached hereto.

Responses

I20-3

The sampling of all environmental media including air, soil, sediment, surface water and ground water was designed and the locations selected to maximize the data collected to ascertain the full range of impact of past and present military training at MMR. Further, soil samples collected at MMR were located in the areas of maximum concentrations of training activities. Background samples provided additional information to expand the spatial coverage. The sampling and analysis plan distributed to the public in 2002, as well as Appendix G-1 of the Draft EIS discuss soil study methodology and data.

I20-4

Please see response to Comment 20-3.

I20-5

Soil samples collected at MMR were located in the areas of maximum concentrations of training activities. Background samples provided additional information to expand the spatial coverage. The sampling and analysis plan distributed to the public in 2002, as well as Appendix G-1 of the Draft EIS, discuss soil study methodology and data. The data collected are representative of the existing conditions at MMR and were incorporated modeling.

I20-6

The surface water modeling was conducted in accordance with scientific practices. It is common to use data sets for calibration and comparison. Appendix G-1 has been revised to include expanded comparison to other surface water flows.

I20-7

The surface water modeling uses parameters obtained from both field data and information from the literature as discussed in Appendix G-1. It is standard practice in the surface water modeling field to use both field collected and literature obtained parameters to design the model.

Comments

Responses

(Cont.)

I20-8

The model simulates suspended sediment discharge and stream discharge for the 100 year storm event, which was the objective of the modeling effort. Appendix G-1 will be revised to provide a discussion of bed load.

Comments

Review of Draft Environmental Impact Statement for MMR
 October 5, 2005
 Page 3

Model input

To perform properly, a model needs reliable input data. The saying "garbage in, garbage out" applies here. In Appendix G-1, page 76, paragraph 3, the report states that "Soil hydraulic properties that control infiltration values for different soil types throughout the Makua Valley are input parameters required for the model. Values for shallow vertical hydraulic conductivity (Ks) varied from 0.10 to 25 cm hr⁻¹ (Figure 2.27). Most of the project area has the somewhat higher infiltration values of 25 cm hr⁻¹" The claim that most of the project area has infiltration rates of 25 cm/hr is not only highly unlikely, it would result in erroneous results if used in the model. Twenty five cm is equivalent to 10 inches. This implies that most of Makua valley could withstand rainfall intensities of up to 10 inches per hour. The soils of Makua valley, like most of the valley soils along the Waianae coast are high in the mineral smectite. These soils shrink and crack when dry and swell when wetted. They could accommodate 10 inches of rain for a few minutes owing to the large cracks that allow preferential flow to occur until the soil is saturated and the cracks seal to form an impermeable surface. The letter "s" in Ks is added when the hydraulic conductivity is measured for a water saturated soil. It would be more correct to say that most of the project area has soils with saturated hydraulic conductivities of 0.1 cm/hr. Most hydrologic models that require hydraulic properties of soils are sensitive to errors in Ks. Error exceeding two orders of magnitude should have been noticed by the model calibrators.

Conclusion

Inadequate knowledge of the soils of Makua Valley and incorrect assumptions about their properties and behavior have resulted in a DEIS that fails to give clear evidence of the long-term, cumulative effect of using the valley for military training. The long-term build-up of chemicals from explosives, the loss of remediating benefits of vegetation from fires and the inability to estimate the impact of hydrologic events on the fate of chemicals preclude concluding that Makua Valley can be used for military training without undergoing significant, adverse environmental changes.

Responses

I20-9

The value of 25 cm/hr is a hydraulic conductivity value of the material, not an infiltration rate. The hydraulic conductivity is a variable in Darcy's law $V=KI$, where the rate (V) is reduced by the vertical gradient (I).

I20-10

Please see response to Comment I20-9. A hydraulic conductivity value of 25 cm/hr (20 ft/day) is a reasonable value for Makua (the average K of slug test data is 12.6 ft/day).

I20-11

The EIS was prepared in accordance with the National Environmental Policy Act and with applicable federal and Army regulations. Review of the Draft EIS by the US Environmental Protection Agency found the document to be adequate. Soil sampling at the various locations (including background locations) provided information to evaluate the likely pathways of contaminate migration at MMR.

I20-12

The EIS was prepared in accordance with the National Environmental Policy Act and with applicable federal and Army regulations. Review of the Draft EIS by the US Environmental Protection Agency found the document to be adequate. Results of extensive sampling results reported by the analytical laboratory of soil, surface water, and groundwater showed no pattern of contamination.