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

SEP 0 8 2009

Lisa McCarrick
56 FW/RMO,
7224 N 139th Drive
Luke Air Force Base, Arizona 85309-1420

Subject: Draft Environmental Impact Statement for the Proposed Barry M. Goldwater Range East Range Enhancements, Yuma, Prima and Maricopa Counties, Arizona (CEQ # 20090227)

Dear Ms. McCarrick:

The U.S. Environmental Protection Agency (EPA) has reviewed the above-referenced project pursuant to the National Environmental Policy Act, Council on Environmental Quality's Regulations for Implementing NEPA (40 CFR 1500-1508), and Section 309 of the Clean Air Act. Our detailed comments are enclosed.

EPA commends the Air Force on its planned use of laser sensors rather than munitions at the Sensor Training Area. We also commend the low impact development at the New Taxiway and Air Traffic Control Tower at Gila Bend Air Force Auxiliary Field. EPA's resources on low impact development may be of assistance to you, and can be found at http://epa.gov/nps/lid/. EPA also supports road paving in Proposal 9, estimated to reduce 10 micron particulate matter (PM-10) emissions by more than 18 tons per year.

While we acknowledge the benefits of the 10 proposals to enhance range operations and training at the range, we have rated the Draft Environmental Impact Statement (DEIS) as Environmental Concerns – Insufficient Information (EC-2) (see enclosed "*Summary of Rating Definitions*") due to our concerns regarding coordination with the nearby range and proving grounds, surface water impacts, and air emissions.

We appreciate the opportunity to review this DEIS. When the FEIS is released for public review, please send one (1) hard copy to the address above (mail code: CED-2). If you have any questions, please contact me at (415) 972-3521, or contact Tom Kelly, the lead reviewer for this project. Tom can be reached at (415) 972-3852 or kelly.thomasp@epa.gov.

Sincerely,

Kathleen M. Goforth, Manager
Environmental Review Office
Communities and Ecosystems Division

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Enclosures:
Summary of Ratings Definitions
Detailed Comments

cc: Sally McGuire, U.S. Army Corps of Engineers
Tim Murphy, Maricopa County Flood Control District
Doug Irwin, Maricopa County Air Quality Department
Curt McCasland, U.S. Fish and Wildlife Service
Chris Henninger, Arizona Department of Environmental Quality

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.

EPA DETAILED DEIS COMMENTS FOR PROPOSED BARRY M. GOLDWATER RANGE EAST RANGE ENHANCEMENTS, YUMA, PIMA AND MARICOPA COUNTIES, AZ, SEPTEMBER 8, 2009

Coordination with BMGR West and the Yuma Proving Ground

The DEIS would benefit from a discussion of operations at Barry M. Goldwater Range (BMGR) West and the Yuma Proving Grounds. The abstract for the DEIS states, "[t]he purpose of and need for these actions is to modernize BMGR East to provide the training resources needed to prepare air and ground forces to meet current and future defense missions." As far as EPA is aware, BMGR West and Yuma Proving Ground at least partially share the goal of providing training resources needed to prepare air and ground forces to meet current and future defense missions.

The DEIS mentions high cost to move units to alternate locations as justification to eliminate use of alternate ranges from consideration as an option. This point would be bolstered by clarifying that training resources similar to those proposed in the DEIS are not available at other military installations in Southwestern Arizona.

Surface Water Impacts

Permit Applicability

On page 3-13, the DEIS notes:

> "Some of the ephemeral surface drainage ways in BMGR East, including the major wash systems described above, may be considered jurisdictional waters of the United States and possibly subject to the CWA. Activities in and around jurisdictional waters require adherence to the CWA. Activities with the potential to impact such waters may require state water quality certification under Section 401 and/or federal permit under Section 402 and/or 404 of the CWA. The U.S. Army Corps of Engineers, Environmental Protection Agency (EPA), and ADEQ, as authorized by the EPA, administer these permits."
>
> Recommendation: Prior to development of the FEIS, EPA recommends the Army Corps of Engineers determine whether any of the washes impacted by the proposals are considered a water of the United States. The results of the Army Corps work can then be included in the FEIS, to resolve any confusion about the applicability of Clean Water Act requirements.

Sand and gravel pits are a covered sector under stormwater regulations, and a multi-sector general permit may be required. Additionally, an individual NPDES Clean Water

Act Permit may also be necessary if discharges are planned from sand and gravel processing, but neither of these was discussed in the DEIS.

> Recommendation: The FEIS should discuss the type of sand and gravel processing envisioned and the applicability of stormwater and NPDES permits.

Spent Munitions and Propellants

The DEIS refers to the June 2004 Limited Field Study and states ". . . all munitions constituents were below detectable concentrations, laboratory sample quantification limits, or residual human-health screening levels" (p. 3-107). Based on the Limited Field Study and the 2005 Qualitative Assessment, the DEIS states, "it was determined that there are no complete munitions constituent exposure routes to potential receptors in the vicinity of BMGR East" (p. 3-107). This is a significant conclusion worthy of additional disclosure. Human health screening level concentrations, for example, can vary by orders of magnitude depending on the expected human exposure used in development of the screening levels.

> Recommendation: The FEIS should include a table of munitions and propellant constituent concentrations, a map of sampled locations, human health and ecological screening levels, and a description of the method used to determine that no complete exposure routes exist (e.g. the method used for estimating surface water or groundwater concentrations from sediment sample concentrations), along with estimated concentration results for exposure pathways.

The DEIS acknowledges that the new target for live air to ground missles, the East TAC Range, will be located "in close proximity to Quilotosa Wash" (Table S-4). Because the new location is much closer to Quilotosa Wash than the prior locations, conclusions drawn about the migration of munitions and propellant constituents may no longer be accurate.

> Recommendation: The FEIS should discuss the potential for munitions and propellant constituents from the TAC Range to migrate with surface water or percolate downward to groundwater. The FEIS should also commit to several annual monitoring events (e.g. stormwater monitoring of initial seasonal rainfall) downstream of East TAC Range to ensure contaminants are not leaving the facility during the initial years of operation. Additionally, the FEIS should commit to contingent mitigation measures if unacceptably high concentrations are measured.

Air Emissions

EPA is concerned the DEIS may not include all PM10 emissions. Proposal 10 details sand and gravel excavation from on-site washes for on-site use in road maintenance,

target reconfiguration, and target maintenance. The DEIS states, "[a]nnual emissions are negligible with the exception of PM-10 (5.36 tons according to Table 4-11) which is primarily generated by the movement of dump trucks on unpaved roads as they travel to and from the storage locations." EPA seeks clarification that the DEIS PM-10 emissions estimate includes emissions associated with processing soil extracted from the washes. In addition to sand and gravel, the soil to be extracted will likely include silt, clay, and possibly cobbles. The process of digging and processing soil to obtain sand and gravel will create PM-10. Maricopa County's Emission Inventory Help Sheet for Sand and Gravel Plants (http://www.maricopa.gov/aq/divisions/planning_analysis/docs/2008_reporting_forms/08_Sand_and_Gravel.pdf) includes emissions factors for mining/plant feed, surge pile forming, crushing with watering, screening with watering, conveyor transfer, pile forming (with and without watering) and raw material and product storage.

> Recommendation: The FEIS should clarify whether or not PM-10 emissions from processing sand and gravel have already been included in the values of Table 4-11; and if not, adjust the estimate to account for the additional emissions. The FEIS should include any mitigation measure, such as the application of water, that will be implemented to reduce PM-10 emissions during processing.

The DEIS explains that a dust control permit will be required, from Maricopa County, for some of the proposals. EPA suggests the FEIS include specific mitigation measures to control dust for the entire facility, rather than preparing separate plans by county. EPA offers the following as potential dust control measures:

- stabilizing open storage piles and disturbed areas by covering and/or applying water or chemical/organic dust palliative, where appropriate, to both inactive and active sites, during workdays, weekends, holidays, and windy conditions;
- installing wind fencing and phase grading operations where appropriate; operating water trucks for surface stabilization under windy conditions; and preventing spillage and limiting vehicle speed to 15 miles per hour (mph) when hauling material and operating non-earthmoving equipment;
- limiting the speed of earth-moving equipment to 10 mph;
- covering or tarping vehicles hauling soil or other loose materials;
- watering active construction sites as needed or applying a non-toxic soil stabilizer;
- covering or applying soil stabilizers to disturbed areas within five days of completion of the activity at each site; and
- reclaiming and revegetating disturbed areas as soon as practicable after completion of activity at each site.

Green Ammunition

Consistent with the policy on pollution prevention (Department of Defense Instruction 4715.4, Sections 4.1.2, 4.2.2), EPA suggests the FEIS discuss the opportunity for green ammunition (i.e. does not contain lead [Pb]). EPA is aware that the initial research and testing on green ammunition has focused on smaller caliber ammunition than used at the BMGR East. Additionally, many have raised concerns about tungsten, one alternative to

lead (see National Park Service advisory at http://data2.itc.nps.gov/digest/printheadline.cfm?type=Announcements&id=3726). Still, provided an acceptable alternative can be found, green ammunition has the potential to eliminate lead contamination in the new areas of the range that will be coming under live fire.

Recommendation: The FEIS should include a discussion of the potential for green ammunition during live fire training.