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

August 25, 2008

Mr. Muhammad Bari
U.S. Army National Training Center
Attn: IMWE-IRW-PWE,
PO Box 105085
Fort Irwin, CA 92310-5085

Subject: Draft Programmatic Environmental Impact Statement (DPEIS), Brigade Combat Team Transformation, Fort Irwin, California (CEQ # 20080261)

Dear Mr. Bari:

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.

The Draft Programmatic Environmental Impact Statement (DPEIS) assesses the impacts from restructuring the 11th Armored Cavalry Regiment to a multi-component Heavy Brigade Combat Team (BCT) at Fort Irwin. This restructuring involves an increase in soldiers and family members, construction of new facilities, increases in operations, and increases in the number of training rotations. The Programmatic DEIS evaluates 4 action alternatives. The proposed action/preferred alternative (Alternative 5) is the most intensive and involves doubling the population of the installation and increasing training rotations by 20%.

EPA commends the Army for preparing a Programmatic EIS for this action. Programmatic analyses provide important information to agencies making broad program decisions. They address the environmental implications of proposed decisions at an early stage in decision-making so that agencies can allocate future resources according to their suitability and availability. They also provide an opportunity to incorporate sustainability, including comprehensive monitoring and mitigation strategies, into decision-making, and in so doing, these analyses serve as a significant tool for a federal agency to advance the nation's environmental policy set out in Section 101 of NEPA.[1]

Based on our review, we have rated the PDEIS's preferred alternative as Environmental Objections – Insufficient Information (EO-2) (see enclosed "Summary of Rating Definitions"). Our objections regard the significant and potentially permanent irreversible environmental impacts from mining the limited supply of groundwater, which represents an unsustainable use of

[1] 42 U.S.C. § 4331. See also Executive Order 13423 *available:* http://ceq.eh.doe.gov/nepa/regs/executiveorders.htm

this resource. We request additional information regarding mitigation measures, cumulative impacts, and compliance with the Clean Air Act and Endangered Species Act.

While this location has substantial resource limitations, it also offers an opportunity to achieve maximum efficiency of energy and resource use if the appropriate commitments to sustainability are made. However, it appears this is only achievable under Alternatives 2 or 4, which propose more modest population increases while increasing training rotations. As such, EPA recommends selection of Alternative 2 or 4 over the Preferred Alternative 5.

EPA appreciates the opportunity to review this PDEIS. We commend the Army on a well-organized and well-written document, with a clear presentation of the impact assessment methodologies. We would like to work with the Army to address our objections and concerns. We recommend setting up a meeting at your earliest possible convenience. If you have any questions, please contact me at 415-972-3521 or Karen Vitulano, the lead reviewer for this project, at 415-947-4178 or vitulano.karen@epa.gov.

Sincerely,

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

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

cc: Ray Bransfield, U.S. Fish and Wildlife Service
Alan Desalvio, Mojave Desert Air Quality Management District

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 PROGRAMMATIC DRAFT ENVIRONMENTAL IMPACT STATEMENT, BRIGADE COMBAT TEAM TRANSFORMATION, FORT IRWIN, CALIFORNIA, AUGUST 25, 2008

Groundwater Resources

The PDEIS acknowledges the finite nature of the long-term water supply at Fort Irwin. Groundwater pumping exceeds natural recharge in the three main groundwater basins being used for water supply, the basins are closed (no water transfer occurs between basins) and the groundwater being used is believed to be from the glacial ages so the Army is mining this limited supply of groundwater, estimated to last approximately 70 years at current pumping rates (p. 4-13). Continued pumping without recharge causes compression of water-bearing sediments and can result in land subsidence (fissures and sinkholes). Land subsidence is already evident at Bicycle Lake, one of the groundwater basins being used at Fort Irwin. Land subsidence permanently reduces the total storage capacity of an aquifer and is irreversible.

The Preferred Alternative 5 proposes to add 15,800 additional soldiers, family members and civilians to the current population of 13,500 (p. 4-25, ES-a). This would result in an 85% increase in water mining, greatly accelerating the drawdown of the existing groundwater basins, and reducing the time of depletion of the basins from 70 years to 35 years (p. 4-15). The PDEIS identifies the need for a water development project, possibly from a further groundwater basin at Coyote Lake; but that project would supply less than a third of the additional 3 million gallons per day of supply that would be needed under the preferred alternative (p. 4-65), and the drawdown and other undesirable effects including land subsidence would still occur.

To the Army's credit, it currently recharges the aquifer using effluent from the wastewater treatment plant; however, this is resulting in degradation of the water quality and is increasing the total dissolved solids in the groundwater, which must already be treated through reverse osmosis to meet California drinking water standards (p. 3-17).

The more modest population increases of Alternatives 2 and 4 (14%) will also provide water supply challenges, however these alternatives could include a mitigation component that represents a serious commitment to water conservation and full implementation of water reuse via the tertiary wastewater treatment system being constructed.

> *Recommendation:* EPA recommends that the Army severely limit the population increases at Fort Irwin and commit to an extensive water conservation/reuse program. Thus, we recommend selection of Alternative 2 or 4 over Alternative 3 and 5, (preferred alternative). Water quality should also be addressed through changing land use practices, including limits to fertilizer use, which is contaminating the aquifer with nitrates.

Air Quality

General Conformity. The air at Fort Irwin does not currently meet the health-based National Ambient Air Quality Standard (NAAQS) for particulate matter less than 10 microns (PM10) and is designated as moderate nonattainment for this pollutant. The impact analysis shows that

emissions of PM10 from all project alternatives will exceed the de minimis level of 100 tons per year, triggering the need for a formal federal conformity determination under the General Conformity rule (40 CFR Parts 51 and 93). The PDEIS indicates that Fort Irwin is excluded from the Mojave Desert Air Quality Management District's (MDAQMD) Mojave Desert Planning Area PM10 attainment plan and has an exclusion agreement with conditions that require monitoring around each facility to demonstrate that that it is not causing or contributing to an exceedance of the NAAQS. It is not clear how the proposed action will affect this agreement between MDAQMD and Fort Irwin. The PDEIS indicates that the preferred alternative will contribute an additional 2,304 tons per year of PM10 (p. 4-44).

> *Recommendation:* The PFEIS should discuss how the action alternatives will affect the existing PM10 exclusion agreement between MDAQMD and Fort Irwin or how this agreement applies to the current project. EPA notes that, per 40 CFR 93.155, the Army is required to provide EPA Region 9, in addition to other agencies, a 30-day notice which describes the proposed action and the Army's draft conformity determination on the action. This conformity determination for PM10 should be completed before the Federal action begins. EPA is available to consult with the Army, as needed, on this determination. Please indicate the approximate timeframe for this determination. While it is not required, we find it helpful to have this determination as part of the NEPA documentation.

PM10 mitigation. The PDEIS indicates that the fugitive dust requirements of the Mojave Desert Air Quality Management District do not apply to the installation, and that due to the nature of the military mission, operational restraints, and national security, there are limits on the feasibility of control measures (p. 4-46). It is not clear how military mission/national security bears at all on fugitive dust mitigation during construction activity in the cantonment area. Additionally, it is not clear how these issues bear on routine training exercises, especially since implementation of dust control measures would ultimately protect soldiers from the detrimental health impacts of inhalable particulate matter, which can include increased respiratory symptoms, such as irritation of the airways, coughing, or difficulty breathing, decreased lung function; aggravated asthma; development of chronic bronchitis; irregular heartbeat; nonfatal heart attacks; and premature death in people with heart or lung disease.

> *Recommendation:* EPA recommends standard mitigation measures be implemented for all construction sites. In our scoping comments (dated Sept 6, 2006), EPA recommended including a Construction Emissions Mitigation Plan (CEMP) for fugitive dust and Diesel particulate matter in the PDEIS. We continue to recommend this be included and implemented to reduce impacts associated with emissions of particulate matter and other toxics from construction-related activities. Such a plan should include:
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> <u>Fugitive Dust Source Controls:</u>
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> - Stabilize open storage piles and disturbed areas by covering and/or applying water or chemical/organic dust palliative where appropriate. This applies to both inactive and active sites, during workdays, weekends, holidays, and windy conditions.

- Install wind fencing and phase grading operations where appropriate, and operate water trucks for stabilization of surfaces under windy conditions.
- When hauling material and operating non-earthmoving equipment, prevent spillage and limit speeds to 15 miles per hour (mph). Limit speed of earth-moving equipment to 10 mph.

Mobile and Stationary Source Controls:

- Reduce use, trips, and unnecessary idling from heavy equipment.
- Maintain and tune engines per manufacturer's specifications to perform at California Air Resources Board (CARB) and or EPA certification, where applicable, levels and to perform at verified standards applicable to retrofit technologies. Employ periodic, unscheduled inspections to limit unnecessary idling and to ensure that construction equipment is properly maintained, tuned, and modified consistent with established specifications. CARB has a number of mobile source anti-idling requirements. See their website at: http://www.arb.ca.gov/msprog/truck-idling/truck-idling.htm
- Prohibit any tampering with engines and require continuing adherence to manufacturer's recommendations
- If practicable, lease new, clean equipment meeting the most stringent of applicable Federal or State Standards. In general, only Tier 2 or newer engines should be employed in the construction phase.
- Utilize EPA-registered particulate traps and other appropriate controls where suitable to reduce emissions of diesel particulate matter and other pollutants at the construction site.

Administrative controls:

- Identify all commitments to reduce construction emissions and update the air quality analysis to reflect additional air quality improvements that would result from adopting specific air quality measures.
- Identify where implementation of mitigation measures is rejected based on economic infeasibility.
- Prepare an inventory of all equipment prior to construction and identify the suitability of add-on emission controls for each piece of equipment before groundbreaking. (Suitability of control devices is based on: whether there is reduced normal availability of the construction equipment due to increased downtime and/or power output, whether there may be significant damage caused to the construction equipment engine, or whether there may be a significant risk to nearby workers or the public.) Meet CARB diesel fuel requirement for off-road and on-highway (i.e., 15 ppm), and where appropriate use alternative fuels such as natural gas and electric.
- Develop a construction traffic and parking management plan that minimizes traffic interference and maintains traffic flow.
- Identify sensitive receptors in the project area, such as children, elderly, and infirm, and specify the means by which you will minimize impacts to these populations. For example, locate construction equipment and staging zones away from sensitive receptors and fresh air intakes to buildings and air conditioners.

In relation to training exercises, EPA recommends the following mitigation measures:

- Stabilize heavily traveled unpaved roads to reduce fugitive dust entrainment and wind erosion
- Avoid maneuvers in all playas, which have dust problems associated with their use. The PDEIS indicates that Red Pass Lake, Bicycle Lake Airstrip, and Langford Lake are not off-limits to maneuvers (p. 3-5).

Air Toxics. Hazardous air pollutants (air toxics) were not specifically addressed in the PDEIS. In our scoping comments (dated Sept 6, 2006), EPA recommended that diesel particulate matter (DPM) be discussed in the PDEIS. DPM are tiny particles found in trucks and construction equipment diesel engine emissions which can create serious health problems for adults and have extremely harmful effects on children and the elderly. Children are especially adversely affected by diesel emissions because their respiratory systems are still developing and they have a faster breathing rate. Diesel exhaust also contains ozone-forming nitrogen oxides and toxic air pollutants. Diesel exhaust is classified by EPA as a "likely" human carcinogen at environmental exposure levels (Health Assessment Document for Diesel Engine Exhaust, EPA 2002). Exposure to diesel exhaust may contribute to respiratory irritation and lung damage.

> *Recommendation:* EPA recommends that emissions and effects of hazardous air pollutants (air toxics) associated with construction equipment be discussed in the Programmatic Final EIS (PFEIS). Information about the health risks associated with vehicle emissions and mobile source air toxics can be found at http://www.epa.gov/otaq/toxics.htm.

Mitigation

Programmatic analyses provide an opportunity to incorporate sustainability, including comprehensive monitoring and mitigation strategies, into decision-making, and this should occur here, especially since significant impacts have been identified. The Council on Environmental Quality (CEQ) has instructed Federal agencies to identify *"all relevant, reasonable mitigation measures that could improve the project"* (40 questions #19b[1]), and that *"mitigation measures discussed in an EIS must cover the range of impacts of the proposal"* and *"must be considered even for impacts that by themselves would not be considered "significant"* (40 Questions #19a).

The PDEIS does reference mitigation measures, programs, and plans within some of the impact discussions, however they are not clearly identified as project mitigation measures nor are they discussed as to effectiveness or adoptability. The PDEIS also references Section 2.1.1 Environmental Management (p. 2-17 – 2-21), which includes a discussion of Fort Irwin's natural and cultural resource conservation and rehabilitation programs. The PDEIS indicates that these programs are implemented on an "as funding is available" basis. There is no indication whether mitigation of impacts identified in the PDEIS will occur. CEQ has also advised that *"to ensure that environmental effects of a proposed action are fairly assessed, the probability of the*

[1] 40 Most Asked Questions Concerning CEQ's NEPA Regulations, 40 CFR Parts 1500-1508, Federal Register, Vol. 46, No. 55, March 23, 1981, Available: http://ceq.eh.doe.gov/nepa/regs/40/40P1.HTM

mitigation measures being implemented must also be discussed. Thus the EIS and the Record of Decision should indicate the likelihood that such measures will be adopted or enforced by the responsible agencies (40 CFR 1502.16(h), 1505.2). If there is a history of nonenforcement or opposition to such measures, the EIS and Record of Decision should acknowledge such opposition or nonenforcement" (40 questions #19b).

Recommendation: The scope of the document, articulated at the bottom of p. 1-6, should include identification of mitigation measures. We recommend a section discussing mitigation measures be included in each resource section to addresses project impacts identified with regard to those resources and/or that a comprehensive mitigation/sustainability plan be included in the PFEIS. Effectiveness of mitigation measures should also be discussed.

The PDEIS states that the California Area Joint Land Use Study will be utilized to assess cumulative issues and work will occur with Non-governmental Organizations such as the Nature Conservancy and other federal agencies such as the Bureau of Land Management to identify potential mitigation strategies (p. 4-47). We recommend that the Army Adopt and commit to these larger scale approaches as part of the mitigation/sustainability plan. The PDEIS also identifies the need for comprehensive environmental monitoring – "more detailed and regular data collection is required to assess change and the impacts of training" (p. 4-18). A programmatic document is the appropriate vehicle for establishing long-term monitoring commitments.

The mitigation/sustainability plan should document the Army's plans for green building (p. 4-39). The Army should also pursue renewable energy and document energy development plans. Solar energy projects, such as that underway at Nellis Air Force Base, might be feasible for this desert environment. Photovoltaics on structures in the cantonment area would be even more favorable. Executive Order 13423, Section 2(b) requires that agencies ensure that at least half of the statutorily required renewable energy consumed by the agency in a fiscal year comes from new renewable sources, and to the extent feasible, that the agency implements renewable energy generation projects on agency property for agency use.

Increased actions for reducing contamination from munitions should be included in a mitigation/sustainability plan. The PDEIS indicates that impact areas are not sanitized on a regular basis and may contain ordnance or explosive hazards (p. 3-109), and that metals contamination of soil usually increases over time in impact areas and must be remediated (p. 4-7). Increased post-training recovery cleanups should occur for each rotation.

The PFEIS should also discuss the history of funding for the Environmental Management programs at Fort Irwin. The Army should ensure funding for the environmental management programs is budgeted for this project, that funding amounts are increased commensurate with the increases in impacts identified for the action alternatives, and that mitigation programs are included as essential components of the project description.

Cumulative Effects

We appreciate the cumulative effects discussions in the PDEIS, and their placement at the end of each resource section is effective. The content of some of these discussions, however, has missed a critical principle of cumulative effects analysis. This principle is that, unlike direct and indirect impact analyses which evaluate impacts from the perspective of the proposed action, cumulative effects analyses require evaluating environmental effects from the perspective of the resource, ecosystem, and human community that may be affected, and developing an adequate understanding of how the resources are susceptible to effects[1]. This error is apparent when the PDEIS concludes that cumulative impacts to water and biological resources are negligible because of the damage that has already occurred to these resources since the Army initiated Fort Irwin (p. 4-16, 4-27).

Additionally, the cumulative effects analysis does not discuss the effects of climate change on the resources also affected by the project. One study identifies the potential for a 3.5 to 4.0° C (6.3 to 7.2° F) increase in annual mean temperature, with the greatest increases occurring in summer (June-July-August mean up to 5° C (9° F) increase)[2]. Precipitation will likely decrease by 5 to 15 percent annually in the region, with winter precipitation decreasing in the range of 5 to 20 percent for this geographic area[3]. Warmer temperatures and different patterns of precipitation and run-off will affect aquifer recharge and storage, which will also affect biological resources.

> *Recommendation:* EPA suggests that the cumulative impacts discussions be revised to include evaluations of impacts from the standpoint of the resource, understanding that "the magnitude and extent of the effect on a resource depends on whether the cumulative effects exceed the capacity of the resource to sustain itself and remain productive"[4]. Based on the impact assessment, it appears that cumulative impacts to water resources are significant for the action alternatives, especially for the preferred alternative. We note that the general decline in groundwater levels in the Mojave Desert region described in Chapter 3 offers information appropriate for a cumulative impacts discussion for this resource (p. 3-8), as does the identification of groundwater contamination on the installation (p. 3-101).
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> We also recommend including the potential cumulative impacts to water and biological resources from climate change in the cumulative effects analysis. While many of these effects are uncertain, available information can be presented and the uncertainty acknowledged (40 CFR 1502.22).

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[1] Considering Cumulative Effects Under the National Environmental Policy Act, Council on Environmental Quality, January 1997, pp 7-8. Available: http://ceq.eh.doe.gov/nepa/ccenepa/ccenepa.htm

[2] Christensen, *et al.* 2007. Regional Climate Projections. Pages 847-926 *in* S.Solomon, et al (eds.), Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.. Cited in Draft Revised Recovery Plan for the Mojave Population of the Desert Tortoise, USFWS.

[3] The geographic area representing the range of the desert tortoise's listed population, within which Fort Irwin lies.

[4] Considering Cumulative Effects Under the National Environmental Policy Act, Council on Environmental Quality, January 1997, p. 7

Biological Resources

Desert Tortoise. Fort Irwin contains critical habitat for the threatened Mojave desert tortoise. Figures 3-1 and 3-5 indicate that high-intensity training occurs in this area and will increase up to 20% under the action alternatives (p. 3-4, 3-27 respectively). We understand that a biological opinion was issued for the addition of maneuver training lands in 2004 (p. 8-21) and the PDEIS identifies conservation actions that are now occurring, presumably in response to the 2004 biological opinion. It is not clear, however, what additional conservation actions or consultations will occur in association with this project. The PDEIS indicates that new ranges are proposed under this project in areas previously off-limits (p. 2-24, 3-4). These ranges would be located in Mojave Creosote Bush Scrub (p. 3-24), habitat of the desert tortoise.

The cumulative effects analysis does not specifically describe cumulative effects on the Mojave desert tortoise. The U.S. Fish and Wildlife Service indicates that the downward trend in desert tortoise populations is ongoing[1].

> *Recommendation:* In the Programmatic FEIS, provide information the status and/or timing of any new Section 7 consultations under the Endangered Species Act for the desert tortoise that will occur for this project. Include a discussion of cumulative effects on the tortoise (see also comment under cumulative effects analysis). Include a broad mitigation and conservation discussion, appropriate for a programmatic analysis.

Seeps and Springs. The PDEIS indicates that seeps and springs in the desert are centers of biodiversity and identifies the locations of the springs at Fort Irwin (p. 3-6). The PDEIS is not completely clear as to whether all springs are fenced and protected from training impacts. It states that the seeps and springs are fenced and are off-limits to training (p. 4-22), however it also says that the Leach Lake impact area, identified on p. 3-4, is not fenced, and this area appears to contain three springs. Additionally, the PDEIS does not indicate whether groundwater overdraft could affect these springs. It does indicate that overdraft in wells near Yermo and Newberry Springs resulted in drying of previously flowing and saturated riverbeds, spring seeps, and riparian ecosystems, but it is not clear whether that is a possibility here.

> *Recommendation:* In the PFEIS, confirm that Leach, Hellwind, and Two springs are fenced. If these springs are not fenced, we recommend that fencing occur and that it be identified as mitigation for this project. Describe how springs are protected from aerial bombing and artillery and mortar targets.
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> Discuss the potential impact of groundwater overdraft on springs, especially Garlic spring which is located near the Langford Well Lake Basin being utilized for groundwater and is hydrologically connected and can be affected by a reduction in the level of aquifers (p. 3-15). The Coyote Basin Water Development Project proposed for 2012, which could

[1] Draft Revised Recovery Plan for the Mojave Population of the Desert Tortoise, USFWS. Available: http://www.fws.gov/nevada/desert_tortoise/documents/recovery_plan/DraftRevRP_Mojave_Desert_Tortoise.pdf

supply up to one million gallons per day of additional water, will need to be evaluated as to its impacts on the several springs in that vicinity. The PFEIS should indicate how this project will be evaluated in a future NEPA document.

Alternatives Analysis

The PDEIS only evaluated alternatives located at Fort Irwin. The document states that it is conceivable that the Army could station the additional soldiers projected for Fort Irwin at a different installation; however, the increase in personnel is necessary to bring the 11th Armored Cavalry Regiment up to a Heavy Brigade Combat Team, and that the additional training rotations necessitated by an overall increase in the number of Army brigades can only be accomplished at Fort Irwin and that there is no other similar facility (p. 2-38).

Recommendation: The PFEIS should elaborate more as to the reasons why stationing soldiers at other installations was not evaluated in this PDEIS, especially since this site has such water and infrastructure limitations (p. 2-35). If other locations could be utilized in meeting any component of the project purpose and need, they should be included in the fully evaluated alternatives.