15. EXISTING ENVIRONMENT

As part of its express obligation under the U.S. Constitution the federal government provides for the common defense, and to do so has appropriated property where its armed forces can learn the skills necessary for warfare. In the early days of World War II American forces under the command of General George S. Patton prepared to engage German and Italian forces commanded by Field Marshall Erwin Rommel in the deserts of north Africa. Patton selected the eastern Mojave Desert as the training theater, the Department of Defense (then the War Department) assumed control of numerous locations to be used as training camps, and solders learned the ways of combat in deserts. Camp Ibis was a divisional camp associated with the Desert Training Center/California-Arizona Maneuver Area activities conducted from 1942 to 1944. Camp Ibis was also used to conduct a two sided Army-Air Force military exercise code named Desert Strike in May 1964. Many desert training bases were established eventually throughout eastern California and western Arizona. After their usefulness as military training areas ended the Department of Defense relinquished control of these camps and they became formally used defense sites. The BLM administers most of this formerly used defense site today. Portions of Camp Ibis also extend onto privately owned land, or lands administered by the State of California.

Camp Ibis was established in the Piute Valley to the west of the Dead Mountains, in the northeastern part of San Bernardino County (Fig. 1). Most of the cantonment lay to the east of U.S. Highway 95, shaped as rectangle about 4,500 feet wide and parallel to the highway. Vestiges remain of the original dirt roads within the camp. Although nearly all have partially reverted to the native desert landscape, their tracery still reveals a methodical organization for moving within the cantonment. An airstrip was scraped from the desert vegetation at the western edge of the cantonment.

Military records from Camp Ibis note armored units being trained at the site, driving the various models of tanks then being deployed across the desert and firing at selected targets. Rounds fired from those tank guns (37 mm, 75 mm, 76 mm, and 90 mm on different models) followed very flat trajectories, as is characteristic of high velocity, direct fire weapons. Artillery units also learned at Camp Ibis. These projectiles (76 mm and 90 mm primarily, 105 mm and 155mm infrequently) were aimed upward in an arcing trajectory. Soldiers also practiced launching mortars, throwing hand grenades, and shooting small arms weapons. The Dead Mountains, across Piute Wash to the east, worked as impact berm for munitions of all caliber.

The land form where Camp Ibis was sited consists of two bajadas typical of the Mojave Desert. One originates from Homer Mountain and the southern end of the Piute Range and slopes toward the east and southeast. Materials shed from the western side of the Dead Mountains form the second. They converge at

Piute Wash. The alluvium on both sides of Piute Wash created the types of soils, mostly argillaceous sands thoroughly mixed with gravels and small rocks with all the soil horizons compacted by settlement, which form vast expanses of the Mojave. Small basaltic clinkers are scattered rather widely over much of the surface. The Homer Mountain bajada extends far enough from its source that relatively little rock has eroded this far downslope in this arid climate, producing an admixture of clayey sands and gravelly flats (Fig. 3). In contrast, once past the margins of Piute Wash, a solid desert pavement covers the lower slopes of the Dead Mountains. Secondary erosion has sculpted numerous small washes through each bajada. These tend to run eastward or westward and end in Piute Wash. Caliche hardpans have precipitated below the surface, probably in many places given this climate. These caliche layers resist erosion more than adjacent unconsolidated alluvium, and so runoff has cut down into the bajada surface through alluvium while leaving exposed ridges stabilized by caliche. The contact between caliche layers and underlying alluvium is fairly easy to dig and many animals have dug burrows beneath the harder evaporitic layer.

Two principal plant associations dominate the project area. Piute Wash and many of the smaller washes which feed it are in essence a paloverde woodland. Catclaw acacia (*Acacia greggii*), blue paloverde (*Cercidium*), smoke tree (*Psorothamnus spinosus*), and an occasional desert willow (*Chilopsis linearis*) are the most conspicuous elements along washes. Cheesebush (*Hymenoclea salsola*) and a desert broom (*Baccharis* cf. *sergiloides*) are also quite abundant in the washes. A saltbush (*Atriplex* sp.) often grows at edges of washes. Stepping up out of the washes leads into a classic creosote scrub community. Creosote (*Larrea tridentata*) and white bursage (*Ambrosia dumosa*) are easily the most dominant species. They do not exclude others however, which include white rhatany (*Krameria grayi*), spiny senna (*Senna armata*), a buckwheat (*Eriogonum* cf. *fasciculatum*), cheesebush, probably the same saltbush, brittlebush (*Encelia farinosa*), scattered Mojave yucca (*Yucca schidigera*), some cholla (*Opuntia* sp.), and a few barrel cactus (*Ferrocactus acanthodes*). A small stand of ocotillo (*Fouqueria splendens*) persists at the western most edge of the project area. They appear isolated from any other nearby population and may have been planted by soldiers as landscaping during the years the camp was in service. Big galleta grass (*Hilaria rigida*) grows in small and isolated stands here and there. One of the more insidious weeds, schismus (*Schismus* cf. *arabicus*), appears widespread but sparse on the uplands. Cheat grass (*Bromus tectorum*), another undesirable alien, is also present but very sparse and widely scattered.

Species common throughout the area include blacktail jackrabbits (*Lepus californicus*), whitetail antelope ground squirrels (*Ammospermophilus leucurus*), little pocket mice (*Perognathus longimembris*), Merriams kangaroo rats (*Dipodomys merriami*), desert woodrats (*Neotoma lepida*), kit foxes (*Vulpes velox*), coyotes (*Canis latrans*), western whiptail lizards (Cnemidophorus tigris), desert iguanas (*Dipsosaurus dorsalis*), coachwhip snakes (*Masticophis taeniatus*), gofer snakes (*Pituophis melanoleucus*), Mohave green rattlesnakes

(*Crotalus scutulatus*), western rattlesnake (*Crotalus viridis*), black-throated sparrows (*Amphispiza bilineata*), brewers sparrows (*Spizella breweri*), ash-throated flycatchers (*Myiarchus cinerascens*), gnatcatchers (*Polioptila spp.*), Gamble's quail (*Cillipepla californica*), lesser nighthawks (*Chordeiles acutipennis*) and common ravens (*Corvus corax*).

The proposed action would be conducted within desert tortoise (Gopherus agassizii) critical habitat. The desert tortoise was listed as threatened (55 *Fed. Register* 12178-12191) in 1990. In 1994 the U.S. Fish and Wildlife Service designated critical habitat for the Mojave population of the desert tortoise (59 *Fed. Register* 5820-5866). Experts regard this area as the locus of an important and robust population (Berry, 2001) with quantitative estimates ranging between 10 and 350 desert tortoises/mi^2 where local resources are abundant (U.S. Fish & Wildlife Service, 1994b).

BLM sensitive species found near the area include the desert bighorn sheep (*Ovis Canadensis nelsoni*) and Bendire's and LeConte's thrashers (*Toxostoma spp.*). BLM species of concern includes the golden eagle (*Aquila chrysaetos*). The golden eagle and bighorn sheep may on occasion cross through the camp Ibis area. Activity during the proposed project operations would most likely necessitate in these species avoiding the area at that time. Thrashers may be found throughout the proposed project site.

16. ENVIRONMENTAL CONSEQUENCES: Proposed Action

The following elements of the human environment, subject to review specified in statute, regulation or executive order, are not located within the project area: Floodplains, Prime or Unique Farm Lands, Wetlands and Riparian Zones, and Wild and Scenic Rivers.

16.1 Air Quality

The Mojave Desert Air Quality Management District (MDAQMD) has state air quality jurisdiction over the project area. The MDAQMD has rules that apply to this project along with permitting requirements. Much of the time, air quality throughout the project area is generally good. There are, however, times that the area does not meet air quality standards due to locally generated and/or wind transported pollutants. The vicinity in which the proposed project is located is currently classified as a federal non-attainment area for ozone and PM-10 under national standards. The proposed project area is within the Mojave Desert PM-10 Planning Area and the South East Desert Ozone non-attainment area. The State Implementation Plan (SIP) identifies sources of PM-10 emissions and control measures to reduce emissions. The SIP emphasizes controls and management. As a minimum, the Environmental Protection Act requires the application of reasonable available control technology (RACT) to stationary emission sources and reasonable available control measures (RACM) to mobile sources and new source review and permitting.

Hand digging of up to 3,000 holes would not appreciably add to PM-10 emissions, however, the 3,300 ft^2 of surface disturbance would act as a source of PM-10 emissions during high wind events until the surface re-stabilizes. Detonation of up to 50 UXO sites would produce temporary noticeable dust plumes with low levels of PM-10 and other emissions that would quickly dissipate. Vehicle use on the access routes would generate low levels of PM-10 emissions throughout the project. The operation of vehicle engines would generate low levels of particulate and other emissions. However, due to the short period of activities the quantity of PM-10 and other emissions would be minimal. Control measures beyond those described in the proposed action are not necessary to reduce emissions. The proposed action would not exceed deminimus levels and thus no further conformity determination is necessary. Minimal impacts to air quality are anticipated in association with the proposed action.

16.2 Cultural Resources, Ecologically Critical Area, and Native American Religious Values

Cultural Resources

Former Camp Ibis is considered to be eligible for inclusion in the National Register of Historic Places and other historic or prehistoric cultural resources may occur in the project area. All historic properties within the project area, previously recorded and newly identified cultural resources, will be avoided by project design with the exception of UXO that must be detonated. No impacts to cultural resources associated with the proposed action other than actual UXO requiring detonation are foreseen. Demolition of WWII UXO qualifies as an Exempt Undertaking pursuant to the State Protocol Agreement (1988) between the BLM – California and the California State Historic Preservation Officer, Appendix C: General Program Exemption 9 (hazards abatement).

A qualified field archaeologist will accompany the geophysical data acquisition team recording the specific location of buried metal objects, or anomalies that may be explosive ordnance, with a Global Positioning System (GPS) recorder, within the project area. The archaeologist will survey the ground surface 15 meters on each side of the linear transect(s) made by the geophysical data acquisition team, recording the specific location of any identified cultural resource. The specific location of each cultural resource, be it an archaeological site, or an isolated find, will be recorded with a GPS recorded. The GPS recorders to be used by the geophysical data acquisition team, and the GPS recorders used by the archaeologist to record the specific location of cultural resources, will be interfaced. When the geophysical data, identifying the anomalies, is mapped, the locations of potentially sensitive cultural resources can be overlaid onto the mapped anomaly locations.

No anomalies, or buried munitions, will be allowed to be excavated, and/or detonated if the anomaly is located within 40 feet, or approximately 15 meters, of any identified cultural resource. Forty feet is a sufficient distance to prevent damage to a subsurface, or surface cultural resource by movement of ground and material ejected by a projectile round. By utilizing this procedure of avoidance, any cultural resources identified within the project area will avoid being effected by any potential adverse impacts.

After completion of the field survey, archaeologists will relocate all identified recorded archaeological resources and isolates utilizing the GPS locational data. Newly recorded sites, and/or isolated finds, will be mapped and recorded on the appropriate Office of Historic Preservation (OHP) site record forms. Previously recorded archaeological sites located within the study area will be reevaluated to determine if the existing site conditions have changed between when the resource was originally recorded and its condition today. If necessary an updated OHP site record form(s) will be prepared to accurately record the condition of the previously recorded site. If the existing site record forms are accurate, then the condition of the site, and the fact that the site does not need to

be re-recorded will be noted in the archaeological survey report.

A technical report that records the nature of the cultural resources identified within the boundaries of the project area, and all completed OHP site and isolate record forms, with site numbers issued from the San Bernardino County Archaeological Information Center, will be forwarded to the Bureau of Land Management's Needles Field Office. A copy of the technical report and all archaeological record forms, will be filed with the Needles Field Office and San Bernardino County Archaeological Information Center in Redlands, California.

Ecologically Critical Area and Native American Religious Values

The Dead Mountains Area of Critical Environmental Concern (ACEC), comprising 21,853 acres, was designated to protect Native American cultural values. The ACEC contains areas of sacred and ritual association that are important to the Mojave and Chemehuevi peoples. The areas include eagle feather collection sites, trails and rock art sites. Consultation with the Fort Mojave Indian Tribe, Chemehuevi Indian Tribe and Colorado River Indian Tribes revealed no known Native American sacred or traditional values located within the boundaries of the proposed study area.

16.3 Environmental Justice

No minority communities or low income communities are located within or adjacent to the proposed project areas.

16.4 Hazardous Materials

Knowledge of WWII-era chemical constituents of soil resulting from ordnance detonations is limited. The EE/CA study includes soil sampling and analysis of chemical constituents to establish existing conditions and to establish the extent of chemicals released to the environment following any UXO detonations. The quantity of residual chemicals released from any required UXO detonations are expected to be minimal.

16.5 Health and Safety

The remote location, difficult access, and potential for UXO detonation, both intended as well as unintended, may lead to possible injuries and difficulty in securing prompt medical aid. Protocols for project safety are comprehensively addressed in the EE/CA Final Work Plan. These provisions include responsibilities of on-site personnel, site description and contamination characterization, hazard analysis and risk assessment, training, personal protective equipment, site and traffic control, heat and cold stress monitoring, emergency response and contingency procedures and, standard operating procedures, engineering controls and work practices. However, the public's

safety can not be ensured unless a limited closure is established during the phase 3 intrusive investigation to allow implementation of the required minimum separation distance.

16.6 Invasive, Nonnative Species, and Vegetation

Effects of Survey Technique

Previous soil compaction from off-road military activities at Camp Ibis has affected the re-establishment of vegetation such as creosote bush. Additional disturbance from activities such as pushing carts over the soil surface, personnel walking, and potential excavation and detonation of anomalies could further affect recovery, but potential impacts of the data acquisition technique on desert vegetation would be minimal, because of the design of the technique.

Effects of Blasting

As all blasting would be shielded by sand bags, disturbance to surrounding vegetation, including cacti and yucca would be minimal, with few, if any losses, primary due to root damage to plants within close (within 10 feet) proximity of the blasts. However, the effects of removing these plants and replanting elsewhere are felt to be greater than that of the blast itself, so no removal of cactus and yucca is suggested. The method of survey is designed to avoid cactus and yucca, so the probability of direct proximity to the blast, in any case would be almost non-existent.

The explosive forces could cause soil disturbance that would be favorable to establishment of vegetation, including invasive non-native plants that have already established themselves within the desert. The amount of this disturbance would be expected to be low.

16.7 Noise

Perception of UXO Personnel

When final connections have been made, the demolition personnel retire to a safe distance beyond which shrapnel will not carry, between 200 to 400 feet depending on local topography. They are not required under Occupational Safety and Health Administration regulations to wear hearing conservation protection, because sound intensities at this safety location do not exceed 85 dBA, even if the refuge is only a few hundred feet away. The consequences of pushing the button vary somewhat. Some shells go off with an audible report that does not cause any hearing discomfort to demolition personnel. Others are barely audible at the safe refuge. In some instances, the UXO personnel are unable to be certain that the round exploded because no sound at all reached them at the safety refuge. Noise intensity ranges from perceptible and easily tolerated to not even audible.

Perception of Non-UXO Project Personnel and General Public

Should UXO be discovered during the course of field studies, the item would receive full and proper tamping. Its explosive destruction might very easily pass completely unheard by a person half a mile away. Implementation of the required minimum separation distance would mean members of the public would not be any closer than 2,577 feet to UXO detonations. Such explosive noises as would arise would be fleeting and faint, barely discernible or not at all from the minimum separation distance.

16.8 Paleontological Resources

No impacts associated with alternative one are anticipated regarding paleontological resources.

16.9 Soils

The surface soils would be disturbed on less that 0.1 acre from hand digging up to 3,000 holes and detonation of UXO. This disturbance would allow the very fine textured soils to be more susceptible to wind erosion during high wind events until re-stabilized. Soil contamination by motor oil could occur, however the proposed action provides methods to control this type of event. No additional mitigation measures are necessary.

16.10 Surface and Ground Water Quality

Surface Water

No perennial streams occur in the project area. Stream runoff occurs only during periods of precipitation.

Groundwater

Depth to ground water at the proposed sites is unknown. No existing human uses of groundwater occur in close proximity to the project area. Recharge to ground water occurs during periods of precipitation from runoff along stream courses and washes.

16.11 Threatened and Endangered Species Habitat, and Wildlife

The primary magnetic field induced by the metal detecting apparatus would bathe any wildlife including the desert tortoise unseen below ground at a strength roughly 200 to 400 milligauss above natural background. No reports of any physiological or behavioral effects on any animal species due to this level of magnetic field strength have come to light at FUDS projects elsewhere (Bosnar,

2001; Yaire, 2001). UXO personnel frequently use a shoulder harness arrangement for exactly the same instrument and in doing so they actually stand within the rectangles, where they experience far stronger magnetic fields (4000 milligauss) over a period of many hours and over the course of many days. The apparatus has no demonstrable effect on humans. Pushing the cart at a steady pace over the surface at Camp Ibis would mean a maximum exposure to the primary magnetic field of a few seconds at the most for any one desert tortoise. Furthermore, only if a burrow happens to go unobserved would the cart even pass above any desert tortoise. Thus possible effects of the data acquisition technique on desert tortoises would be negligible.

In regards to the desert tortoise, the EE/CA study probably cannot be accomplished without a take, as embodied in the Endangered Species Act. For example, the need to handle desert tortoises to move them to a safe refuge away from an explosive item or to get them out of the way of vehicles may arise. Adherence to the project description as set forth here should preclude anything more than negligible and temporary direct impact to desert tortoises. Potential indirect effects may occur, but are not as amenable to overt planning and therefore are not tractable or even known.

Net disturbance of the desert's surface associated with all EE/CA activities would total somewhere between 190 m^2 (roughly 2050 ft^2, 0.05 acres), and (due to excavation of about 3000 anomalies and soil aliquots taken for chemical analysis) less than 350 m^2 (roughly 3800 ft^2, 0.09 acres). The maximum disturbance would be reached only if the total number of UXO anticipated were to be destroyed. All such disturbance would occur in designated critical habitat for desert tortoises.

Destruction of habitat, mortality and, disruption of feeding, reproduction activities, and other behaviors of the desert tortoise could occur during the operation of the proposed action. This may occur due to the following:

Possible Direct Adverse Effect:

- Injury or death related to encounters with moving vehicles.
- Handling of desert tortoises to avoid injury or death from vehicles.
- Injury or death by shrapnel or blast effects.
- UXO demolition may collapse burrows.
- Desert tortoises unseen in burrows subject to transient magnetic field stronger than background.
- Excavation of tortoises from their burrows.
- Temporary barricading of a desert tortoise in its burrow.
- Voiding of the bladder due to handling.
- Desert tortoises aroused unseasonably from hibernation or estivation by quick ground movement induced by detonation of UXOs.

Possible Indirect Adverse Effects:

- Anthropogenic promotion of upper respiratory tract disease and cutaneous dyskeratosis.
- Predators and scavengers attracted to area.
- Tourists attracted to area because of ordnance activities and finding tortoises instead.
- Digging into softer earth left where UXO was detonated and being trapped by a weaker burrow giving way.
- Chemical residues in soils after UXO demolition.

Biological Opinion of U.S. Fish and Wildlife Service

The U.S. Fish and Wildlife Service (USFWS) December 16, 2002 issued *Biological Opinion for the Camp Ibis Engineering Evaluation/Cost Analysis Project, San Bernardino County, California (1-8-02-F-26)* is herein incorporated by reference.

After reviewing the current status of the desert tortoise, the environmental baseline for the action area, the effects of the proposed project activities, and the cumulative effects, it is the USFWS's biological opinion that the action, as proposed, is not likely to jeopardize the continued existence of the desert tortoise or adversely modify designated critical habitat. The USFWS reached this conclusion for the following reasons:

1. few desert tortoises are likely to be killed or injured during project activities with implementation of the minimization measures proposed by the COE;

2. the proposed action is designed to minimize encounters with desert tortoises or their occupied burrows; and

3. the project will affect 0.1 acre of the 970,600 acre Piute-Eldorado Critical Habitat Unit.

Desert tortoises are mobile, not entirely predictable in their activity patterns, and can dig new burrows in previously inspected areas over time. Desert tortoise hatchlings and their burrows are particularly difficult to detect because of their small size. For these reasons, the USFWS is unable to anticipate precisely the number of desert tortoises that may be killed or injured.

Because of the relatively small amount of undisturbed habitat that would be affected by the UXO survey activities and the measures proposed by the COE as part of the proposed action to minimize the amount of incidental take, the USFWS anticipates that the UXO surveys are likely to result in few mortalities of or injuries to desert tortoises. Quantifying the number of incidental take would be impossible given the possibility that desert tortoises could wander into the area

being surveyed, and that small individuals or burrows may not be observed by the biological monitors or surveyors and could be taken by project activities.

Reasonable and Prudent Measures and Terms and Conditions required in the biological opinion are addressed in the environmental assessment's mitigation measures section 17.3.

Wildlife and Sensitive Species

Desert bighorn sheep occupy the Dead Mountain range. As migration of the sheep take place during the night (the proposed EE/CA study would be undertaken during daytime hours) and the project area does not serve as a major migration corridor, the proposed action is not likely to effect desert bighorn sheep. The proposed action would not affect other sensitive species such as thrashers (i.e. flushing them off their nests) due to the time of year the operation would take place (outside of breeding season).

No other candidate, Threatened or Endangered species are anticipated to be affected by the proposed project.

Small animals located in proximity to project activities would be temporarily affected. Adverse effects include temporary disruption of feeding and resting patterns, temporary loss of shelter in the form of removal of debris. Injury or death may occur under certain circumstances.

16.12 Wild and Free-Roaming Horses and Burros

Approximately 20 wild burros reside within the Dead Mountains Herd Management Area. The resident burros are generally found on the east side of the mountain range. While the burros have not been observed on the Dead Mountains' western slope, these animals could wander into the project area and be subject to potential harm. Burro behavior patterns in relation to human activity may be expected to deterring their encroachment into investigation areas.

16.13 Wilderness:

A portion of the area for the proposed action would take place within the boundary of the Dead Mountains Wilderness Area. This wilderness area is 48,850 acres in size and the dominant feature is the Dead Mountains Range. This rust-colored mountain range runs north to south and is jagged and steep. Mount Manchester crowns the range at 4,000 feet. The Dead Mountains Wilderness is currently being managed consistent with the definition of wilderness in Section 2c of the Wilderness Act (generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable; has outstanding opportunities for solitude or a primitive and unconfined type of recreation; and contains ecological, geological,

or other features of scientific, educational, scenic or historical value). There are some pre-designation vehicle tracks (the area is now closed to motorized vehicles) within this wilderness. The Dead Mountains Wilderness has been difficult to close to illegal vehicle use. The BLM is taking steps to eliminate illegal vehicle use through the use of way restoration, public education, boundary signing, gates/barriers, and patrolling by Law Enforcement Officers. Pre-designation mining impacts are also found in the Dead Mountain Wilderness. These impacts are associated with adits or shafts located in the southern and western portions of the wilderness. The proposed action would take place in the western portion of this wilderness to the west of the Dead Mountains.

Impacts to wilderness values are as follows:

Size:

The size of the Dead Mountains Wilderness would not be affected.

Naturalness:

The use of the detection device in phase one would take away from the primitive nature of the wilderness area to any visitors who might observe phase 1 activities. After the proposed action is complete, evidence of human activity would be substantially unnoticeable. The survey device would leave light tracks (2 to 4cm in width) in alluvial soils not covered by desert pavement and field workers would leave numerous footprints. The first heavy rain following the activity should wash away all of these tracks and footprints, but it could take a few months for a heavy rain to occur in this area.

The soil sampling, excavation activities, and UXO demolition would cause unnatural surface disturbances. Considering all of these activities, the total area of surface disturbance would be less than .1 acre even if the potential fifty UXOs where all located within wilderness. Furthermore, it is anticipated that potentially ten or fewer UXOs will be discovered rather than fifty, and it is not likely they will all be located within wilderness. When properly reclaimed, evidence of these activities will fade and even disappear with time.

Opportunities for Solitude and Primitive Recreation:

The proposed action would result in an increase in human activity within the wilderness. During all phases of the project, a team of field workers would be present within the wilderness boundaries. Their presence would decrease the opportunity for solitude.

The opportunity for primitive recreation would be compromised during phase 3 due to possible limited area closures in the safety protocol. The opportunity for solitude would also be affected during phase 3 because of the noise generated

from the demolition of UXO(s). Sand bags and plywood will be built up around the item to serve the immediate purpose of catching fragments from the steel case. However, the tamping also muffles the noise as a secondary purpose. In addition, safety procedures require citizens to be a minimum of 2,577 feet from the demolition site. The noise generated outside of this separation distance would be fleeting, faint, and barely discernible.

Special Features: No impact.

Wilderness Act, Sec. 4c Conformance:

Motorized equipment and vehicles will not be used in wilderness. The detection device used in phase 1would be considered a form of mechanical transport. Mechanical transport is prohibited (except as necessary for the administration of the area) by Sec. 4c of the Wilderness Act of 1964. The detection device is the minimum tool necessary to accomplish the proposed action. The overall geometry of the rectangles, the distance between them and the height above ground fixed by the wheels is integral to the way the instrument senses buried objects. Moreover, the lightweight design (31kg) and relatively small wheels allows for minimal impacts to the ground surface.

17. ENVIRONMENTAL CONSEQUENCES: No Action Alternative

17.1 Hazardous Materials

The Proposed Action would not be undertaken as designed and the existing environment would be unchanged. Existing management and use of the site would continue subject to applicable statutes, regulations, policy and land use plans.

Statistical characterization of the nature, location and concentration of residual ordnance and explosives that may be present within Camp Ibis, analysis of possible problems that may be caused by the presence of UXO, and an evaluation of methods to manage any risks would not be accomplished. Consequently, the measure of risk associated with casual as well as permitted uses of the area would remain unknown.

18. MITAGATION MEASURES: Proposed Action

18.1 Invasive, Nonnative Species, and Vegetation

1. Impacts to cacti and yucca species should be avoided to the greatest extent possible.

2. Desert pavement that might be damaged by anomaly investigation should be salvaged for transplanting or re-spreading purposes.

3. Shovels and any other hand tools used at a site should be brushed clean immediately after use at that site, in order to remove soils which might contain exotic seeds, before re-use at another site.

4. When blasting, all precautions should be taken to insure that no invasive seed is introduced into the area on clothes, boxes, or other items.

18.2 Cultural Resources, Ecologically Critical Area, and Native American Religious Values

1. No collection of any surface artifacts, historic or prehistoric, stone, glass, or metal, etc., should be permitted on public lands.

18.3 Health and Safety

A limited closure of the project area should be established during phase 3 of the EE/CA field activities to ensure the public's safety.

18.4 Threatened and Endangered Species and Habitat, Sensitive Species and Wildlife

Adoption of the proposed action would require conformance with all Terms and Conditions, and Reasonable and Prudent Measures associated with the USFWS issued biological opinion.

If the COE or its agent fails to assume and implement the terms and conditions, the protective coverage of section 7(o)(2) may lapse. To monitor the impact of incidental take, the COE must report the progress of the action and its impact on the species to the USFWS as specified in the incidental take statement [50 CFR §402.14(i)(3)].

To ensure the measures proposed by the COE are effective and are being properly implemented, the COE shall contact the Service immediately if a desert tortoise is killed or injured. At that time, the USFWS, the BLM, and the COE shall review the circumstances surrounding the incident to determine whether the

protective measures should be modified. Project activities may continue pending the outcome of the review if the project has been and continues to be in compliance with the terms and conditions of this biological opinion, unless the COE or the USFWS determine that a work stoppage is warranted. This biological opinion provides an exemption to the prohibitions against take only for those activities occurring as the described actions of the project at Camp Ibis.

REASONABLE AND PRUDENT MEASURES

The USFWS believes the following reasonable and prudent measures are necessary and appropriate to minimize take of desert tortoises:

1. The COE shall implement well-defined operational procedures to prevent injury or mortality of desert tortoises during UXQ survey and cleanup.

2. The COE shall ensure desert tortoises are only handled according to accepted protocols and only by persons authorized by the Service to handle desert tortoises.

3. The COE shall ensure that desert tortoises are located prior to detonation of UXO and are not injured by blasting events.

The USFWS's evaluation of the effects of the proposed action includes consideration of the measures developed by the COE and repeated in the Description of the Proposed Action portion of this biological opinion, to minimize the adverse effects of UXO surveys and demolition on the desert tortoise and its critical habitat. Any subsequent changes in the minimization measures proposed by the COE may constitute a modification of the proposed action and may warrant re- initiation of formal consultation, as specified at 50 CFR 402.16. These reasonable and prudent measures are intended to clarify or supplement the protective measures that were proposed by the COE as part of the proposed action.

TERMS AND CONDITIONS

To be exempt from the prohibitions of section 9 of the Endangered Species Act, the COE must comply with the following terms and conditions, which implement the reasonable and prudent measures described above.

A qualified biologist is an individual who can demonstrate, through training and field experience, that he or she can detect the presence of desert tortoises through observations of animals, sign, scat, and burrows. A qualified biologist shall also have the ability and skill to monitor projects for compliance as described in the protective measures of the project action and the terms and conditions of this biological opinion. An authorized biologist is a biologist who can demonstrate to the USFWS that he or she has substantial field experience and training to handle and relocate desert tortoises, reconstruct burrows, and relocate eggs; an authorized biologist must also demonstrate that he or she possesses

the skills described for a qualified biologist.

1. The following terms and conditions implement reasonable and prudent measure 1:
   A. An authorized biologist shall walk in front of the survey crews when they are conducting UXO surveys to ensure desert tortoises and their burrows are avoided.
   B. All detonation sites and trenches shall be backfilled using hand tools.
   C. Trenches shall be inspected for desert tortoises prior to either detonation or covering during project inactivity.

2. The following term and conditions implement reasonable and prudent measure 2:
   A. Only biologists authorized by the USFWS shall handle desert tortoises. All handling of desert tortoises, translocation of desert tortoises, and excavation of burrows shall be conducted by an authorized biologist in accordance with the Desert Tortoise Council Guidelines. The COE shall evaluate and submit the names and credentials of proposed authorized biologists to the Service for its review and authorization prior to the onset of ground disturbing activities. No ground disturbing activities shall begin until a biologist is authorized by the USFWS and is on site.
   B. Information collected on each desert tortoise that is handled shall include the size class and sex of the animal and information on atypical behavior.

3. The following term and condition implements reasonable and prudent measure 3.

   Prior to blasting, a 200-foot area around the blasting site will be surveyed for desert tortoises using 100-percent coverage survey techniques. All desert tortoises found above ground or in pallets within the 200-foot radius of the blasting site will be moved 500 feet from the blasting site and returned when it is safe after detonation. Additionally, desert tortoises found in burrows within 75 feet of the blasting site will be placed into an artificial or unoccupied burrow 500 feet from the blasting site and returned when safe after detonation. Alternatively, the authorized biologist may decide to place the desert tortoise in a clean cardboard box in shade for a short duration and returned to the burrow after detonation activities are concluded. Desert tortoises in burrows at a distance of 75 to 200 feet from the blasting site will be left in their burrows. All desert tortoise burrow locations within 200 feet of the blasting site will be flagged and recorded using a GPS unit and burrows will be stuffed with newspapers prior to blasting. Immediately after blasting, newspaper and flagging will be removed.

REPORTING REQUIREMENTS

The COE shall maintain a record of all observations of desert tortoises encountered during UXO surveys at Camp Ibis. The information gathered shall include the date and time of observation; whether the desert tortoise was handled and whether it voided its bladder; general health of the desert tortoise; and, if it was moved, the locations from and to which the desert tortoise was moved.

The COE shall provide a written report to the USFWS within 60 days of the conclusion of project activities that documents the numbers and locations of desert tortoises injured, killed, and handled; discusses the effectiveness of the protective measures and the terms and conditions of this biological opinion; and recommends other measures that might allow for better protection of the desert tortoise or more workable implementation.

DISPOSITION OF DEAD OR INJURED DESERT TORTOISES

Upon locating desert tortoises killed or injured by construction activities, initial notification within three days of their finding must be made in writing to the USFWS's Division of Law Enforcement (370 Amapola Avenue, Suite 114, Torrance, California 90501), by telephone and writing to the Barstow sub-office (222 East Main Street, Barstow, California 92311, 760-255- 8852). The report shall include the date, time, location of the carcass, a photograph (if possible), cause of death, if known, and any other pertinent information.

Care must be taken in handling injured animals to ensure effective treatment. and care and in handling dead specimens to preserve biological material in the best possible state. Injured animals shall be transported to a qualified veterinarian or a rehabilitator licensed by the State of California. Should any treated desert tortoises survive, the Service shall be contacted regarding the final disposition of the animals.

18.3 Wild Free-Roaming Horses and Burros

Project staff should be advised that wild burros reside in the general project area and that they are protected by Federal law. It is illegal to harass, capture, injure, or kill wild burros.

18.4 Wilderness

The use of motorized equipment and vehicles would not occur within designated wilderness. In order to further protect wilderness values, the wilderness boundaries should be clearly marked with carsonite signs to prevent accidental vehicle incursions into wilderness.

19. RESIDUAL IMPACTS: Proposed Action

No residual impacts are foreseen consequent adoption of the proposed action.

20. CUMULATIVE IMPACTS: Proposed Action

Cumulative impacts are those impacts on the environment which result "from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such other actions." (40 CFR 1508.7). In this case, past and presently on-going actions and activities in the project vicinity include: military training; operation and maintenance of U.S. Highway 95, the Burlington Northern Santa Fe Railway, and a high voltage power transmission line (approximately 4,000 feet northwest of the project boundary); abandoned pipeline; installation of a fiber optic line within the U.S. Highway 95 road shoulder; and casual use recreational activities. No new actions or activities are known to be planned for the area.

21. CONSULTATION

Threatened and Endangered Species

Section 7(a)(2) of the Endangered Species Act requires active consultation between the lead Federal agency and the Service in any circumstance in which the lead agency concludes that its proposed action could affect an endangered or a threatened species. The BLM, USACE and the USFWS staff informally consulted since December 2000. Personnel from each agency have together walked a small portion of the project area to get the lay of the land, understand the biotic community in which the EE/CA study would be carried out, and weigh the overall importance of this project site in the prospects for recovery of desert tortoises in this region of the eastern Mojave.

BLM submitted a Biological Assessment to the USFWS on January 31, 2002. The U.S. Fish and Wildlife Service (USFWS) issued its *Biological Opinion for the Camp Ibis Engineering Evaluation/Cost Analysis Project, San Bernardino County, California (1-8-02-F-26)* December 16, 2002.

Cultural Resources and Native American Religious Values

The BLM contacted the Colorado River Indian Tribes, Chemehuevi Indian Tribe and Fort Mojave Indian Tribe regarding the proposed EE/CA study through correspondence dated March 29, 2002. Consultation with the tribes identified no concerns with the proposed project. In their correspondence to the BLM dated April 17, 2002, the Fort Mojave Indian Tribe's Ahamakava Cultural Society concluded that they "…are confident that important Mojave cultural resources will not be affected by the unexploded ordnance (UXO) mitigation project."

22. PUBLIC PARTICIPATION

Notification of the proposed action and analysis has been prominently posted in the Needles Field Office public area and on the Field Office web page during its undertaking. A Notice of Proposed Action (NOPA) CA690-02-05 was mailed to 75 members of the public and other agencies who have expressed interest in proposals affecting wilderness. The NOPA was mailed on May 12, 2002 and generated one response from Desert Survivors. Desert Survivors recommended that the site be guarded, fenced and possibly permanently closed. The group also called for full disclosure of all military hazard sites and that the military fund a project protecting the public from the effects of military use.

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