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August 3, 2006

Randy Nagel
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6010 Hidden Valley Road
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Subject: Clarification of Effects on Stephens' Kangaroo Rat from Characterization Activities at Beaumont Site 1 (Potrero Creek) and Site 2 (Laborde Canyon)

Mr. Nagel:

On March 6, 2006 representatives from the U.S. Fish and Wildlife Service's (USFWS), the Lockheed Martin Corporation (LMC), and the California Department of Fish and Game (CDFG) met to clarify issues of temporary effects at the Lockheed Martin Corporation (LMC) and the California Department of Fish and Game (CDFG) Beaumont Site 1 (Potrero Creek) and Site 2 (Laborde Canyon) properties. This letter summarizes the discussions held at that meeting.

LMC has been and continues to conduct groundwater and soil investigations on these Sites in response to a California Department of Toxic Substances Control (DTSC) Consent Order (No. 88/89-034). A Low-Effect Habitat Conservation Plan HCP) was signed on October 14, 2005 by the United States Fish and Wildlife Service (USFWS) and a consistency determination was granted on November 18, 2005 by CDFG for the activities associated with these investigations. Potential effects, such as incidental take of Stephens' Kangaroo Rat (SKR) by injury or death or modification of SKR habitat, from investigation activities are minimized through implementation of mitigation measures described in the Low-Effect HCP.

The Low-Effect HCP provides for permanent and temporarily affected habitats. Permanent effects include those that would prevent SKR from burrowing in an area, such as effects due to the installation of wells or other structures. These effects are defined in the Low-Effect HCP and are measurable impacts.

Temporary effects were defined in the Low-Effect HCP as those temporarily altering habitat, primarily from the flattening of grasses or soil compression due to off-road vehicle traffic. However, when attempting to measure these temporary adverse effects in the field, it was determined that several points required clarification. Since SKR prefers habitats with sparse shrub and herb cover and abundant bare mineral soil (Montgomery 2005), flattening of grasses or careful mowing enhances rather than diminishes the quality of habitat for SKR. In addition, field observations have confirmed that SKR will readily move and forage along narrow pathways of flattened grasses and/or bare ground.

Such pathways may be game trails, dirt roads, tire tracks, or other cleared areas (Montgomery 2005). Thus, careful driving using vehicles that do not compress soils (with tire pressures under about 60 pounds per square inch [psi]) would not adversely effect habitat for the SKR, but enhance it. Habitat restoration and/or management for SKR typically includes recommendations, such as careful mowing, to reduce and/or remove shrubs and grasses to increase the amount of available bare mineral soil generally preferred by SKR (Montgomery 2005).

Therefore, this letter clarifies that the definition and measurements of temporary impacts will not include those activities that enhance SKR habitat. Only adverse effects would be considered temporary impacts, and measured as specified in the Low-Effect HCP. An analysis was made of various activities and associated equipment that might be used on the Sites as further guidance for defining impacts. Table 1 lists vehicles and equipment that LMC might use on the Sites and an evaluation of potential effect on SKR habitat by Stephen J. Montgomery through field observations. These effects are all considered temporary and have been classified as either having a "beneficial," "adverse," or "no effect" (neither beneficial nor adverse) on SKR habitats at these Sites. Table 2 lists the general responsibilities of both operators and biological monitors at the Sites. These tables, and other activity-specific tables (such as the one made for mowing activities – see the attached Table 3), will be used to implement the provisions of the Low-Effect HCP.

LMC requests concurrence from your agency with the assessment of effects provided in this letter. LMC looks forward to your response and appreciates the opportunity to clarify the definition of temporary effects to SKR at Beaumont Site 1 and 2. If you have any questions or require additional information please feel free to contact Chris Ingalls at (818) 847-9901.

Sincerely,

Christopher M. Ingalls
Senior Technical Project Manager

Cc: Robin Maloney-Rames, California Department of Fish and Game
Stephen J. Montgomery, SJM Biological Consultants
Thomas Villeneuve, Tetra Tech, Inc.
BUR175 Final USFWS letter for temporary effects 071806

Reference

Montgomery, Stephen J. 2005. *Discussion of the Potential for Impacts to the Federally Endangered Stephens' Kangaroo Rat from a Proposed Seismic Study at Potrero Creek Site 1*. Prepared for Tetra Tech, Inc. April 2005.

Table 1 Temporary Effects from Vehicles and Equipment on SKR Habitat

Equipment		Activities[1]	Effects		Responsibilities	
Equipment Category	**Type of Equipment**		**Potential Effects**	**Category of Effects[2]**	**Operator**	**Monitor**
Lightweight-Tire Pressure Less than 60 psi	Handheld tools and equipment (shovels, hand-held auger, hand held mowing equipment)	Soil Characterization #1-2 Other #3	Vegetation flattening/thinning and minimal soil compaction, creating movement pathways for SKR	Beneficial (short and long-term)	General Responsibilities (see Table 2)	General Responsibilities (see Table 2)
Lightweight-Tire Pressure Less than 60 psi	Pickup truck up to ¾ ton (tire pressure 30-60 psi) with or without a trailer	Groundwater Characterization #1-6 Soil Characterization #1-5 Other #1-5	Vegetation flattening and minimal soil compaction, creating movement pathways for SKR	Beneficial (short and long-term)	General Responsibilities (see Table 2)	General Responsibilities (see Table 2)
Lightweight-Tire Pressure Less than 60 psi	All terrain vehicles (ATVs) with or without a trailer	Other #4	Vegetation flattening and minimal soil compaction, creating movement pathways for SKR	Beneficial (short and long-term)	General Responsibilities (see Table 2)	General Responsibilities (see Table 2)
Lightweight-Tire Pressure Less than 60 psi	Small tractor	Other #3	Vegetation flattening/thinning and minimal soil compaction, creating movement pathways for SKR	Beneficial (short and long-term)	General Responsibilities (see Table 2)	General Responsibilities (see Table 2)

Table 1 Temporary Effects from Vehicles and Equipment on SKR Habitat (page 2 of 3)

Equipment		Activities[1]	Effects		Responsibilities	
Equipment Category	**Type of Equipment**		**Potential Effects**	**Category of Effects[2]**	**Operator**	**Monitor**
Heavy-Tire Pressure Greater than 60 psi	Hollow-stem auger drill rig	Groundwater Characterization #2,3,5 Soil Characterization #2,3	Vegetation compaction and soil compaction	No effect (short-term) Beneficial (long-term)	General Responsibilities (see Table 2) Use extreme care to avoid marked burrows, drive slowly and with gentle control, and used wide turning radius to avoid substrate "grinding" with wheels	General Responsibilities (see Table 2) Always use load-spreading measures if burrows are present
Heavy-Tire Pressure Greater than 60 psi	Water truck or tank trailer	Groundwater Characterization #2 Other #2,4	Vegetation compaction and soil compaction	No effect (short-term) Beneficial (long-term)	General Responsibilities (see Table 2) Use extreme care to avoid marked burrows, drive slowly and with gentle control, and used wide turning radius to avoid substrate "grinding" with wheels	General Responsibilities (see Table 2) Always use load-spreading measures
Heavy-Tire Pressure Greater than 60 psi	Smeal rig	Groundwater Characterization #2	Vegetation compaction and soil compaction	No effect (short-term) Beneficial (long-term)	General Responsibilities (see Table 2) Use extreme care to avoid marked burrows, drive slowly and with gentle control, and used wide turning radius to avoid substrate "grinding" with wheels	General Responsibilities (see Table 2) Always use load-spreading measures
Heavy-Tire Pressure Greater than 60 psi	Dump truck	Soil Characterization #4 Other #2	Vegetation compaction and soil compaction	No effect (short-term) Beneficial (long-term)	General Responsibilities (see Table 2) Use extreme care to avoid marked burrows, drive slowly and with gentle control, and used wide turning radius to avoid substrate "grinding" with wheels	General Responsibilities (see Table 2) Always use load-spreading measures
Heavy-Tire Pressure Greater than 60 psi	Support truck and decontamination trailer	Groundwater Characterization #2,5 Soil Characterization #2	Vegetation compaction and soil compaction	No effect (short-term) Beneficial (long-term)	General Responsibilities (see Table 2) Use extreme care to avoid marked burrows, drive slowly and with gentle control, and used wide turning radius to avoid substrate "grinding" with wheels	General Responsibilities (see Table 2) Always use load-spreading measures

Table 1 Temporary Effects from Vehicles and Equipment on SKR Habitat (page 3 of 3)

Equipment		Activities[1]	Effects		Responsibilities	
Equipment Category	**Type of Equipment**		**Potential Effects**	**Category of Effects[2]**	**Operator**	**Monitor**
Excavation-Tire Pressure Greater than 60 psi	Backhoe	Groundwater Characterization #3, 5 Soil Characterization #4	Vegetation and soil removal and compaction	Temporary adverse effect (short-term) Beneficial (long-term)	General Responsibilities (see Table 2) Use extreme care to avoid marked burrows, drive slowly and with gentle control, and used wide turning radius to avoid substrate "grinding" with wheels	General Responsibilities (see Table 2) Always use load-spreading measures and consider needs for SKR trapping
Excavation-Tire Pressure Greater than 60 psi	Excavator	Groundwater Characterization #3, 5 Soil Characterization #4	Vegetation and soil removal and compaction	Temporary adverse effect (short-term) Beneficial (long-term)	General Responsibilities (see Table 2) Use extreme care to avoid marked burrows, drive slowly and with gentle control, and used wide turning radius to avoid substrate "grinding" with wheels	General Responsibilities (see Table 2) Always use load-spreading measures and consider needs for SKR trapping
Excavation_-Tire Pressure Greater than 60 psi	Front-end loader	Groundwater Characterization #1-6 Soil Characterization #1-5 Other #1-4	Vegetation and soil removal and compaction	Temporary adverse effect (short-term) Beneficial (long-term)	General Responsibilities (see Table 2) Use extreme care to avoid marked burrows, drive slowly and with gentle control, and used wide turning radius to avoid substrate "grinding" with wheels	General Responsibilities (see Table 2) Always use load-spreading measures and consider needs for SKR trapping

[1]Activities Legend

Groundwater Characterization

1. Groundwater sampling and measurements.
2. Well installation and repair, pilot studies at new wells, well development.
3. Well abandonment.
4. Groundwater treatment systems and routine maintenance.
5. Installation of extraction and injection wells and associated piping.
6. Influent and effluent sampling of systems.

Soil Characterization

1. Assessment of recognized areas of concern.
2. Mark, survey, and drill soil assessment boreholes.
3. Well abandonment.
4. Trenching and excavation.
5. Installation of soil gas probes.

Other

1. Road maintenance.
2. Deposit non-hazardous soils and broken concrete on-site.
3. Mowing.
4. MEC and UXO surveys and exposure.
5. Seismic surveys.

[2]Category of Effects

Beneficial effects are those related to compaction of vegetation and minimal surface soil disturbance, thus creating habitat for the SKR. These will only be beneficial in the long-term if the disturbance happens regularly, or results in a long-term lessening of vegetation in the disturbance area.

Effects listed as "no effect" or "temporary adverse effects" are for equipment and activities that may cause these types of effects in areas occupied by SKR. If the activity area is not occupied by SKR, these effects could instead be beneficial by creating habitat areas for this species. However, because of the overall potential for temporary effects to SKR from the use of these types of equipment, they have been included as having the potential for "no effect" or "temporary adverse effects."

Table 2 General Responsibilities

When	Construction/Field Personnel	Monitor
Before activity begins	1. Get clearance from a monitor before starting work in the work area. 2. Survey the work area for flagged burrows and plan route to avoid flagging. Use **only** the planned route and notify other workers of this route.	Conduct a pre-activity survey of the work area to determine: 1. Is soil dry enough to conduct this activity? Is soil composition strong enough to withstand approved trucks? If not, activity will be postponed. 2. Are there a large number of kangaroo rat burrows? If so, consider using load spreading measures or other mitigation techniques where possible. Will trapping be necessary to avoid substantial impacts to SKR? If so, delay activity in this area and contact Steve Montgomery and Kathy Simon. 3. Flag burrows to help operators avoid them. 4. Determine if there are other biological issues at or near the work area that need to be addressed during the project (bird nests, streambed issues, etc.). If so, please contact the Project Biologist to discuss.
During activity	1. Use existing roads or pavement whenever possible for driving and parking equipment. 2. Keep support vehicles and equipment on roads or pavement. 3. Use the same path in and out of the work area. 4. Turn equipment in a gentle arching pattern. 5. Only conduct activities during the day. 6. Stay at least 15 feet (5 meters) away from flagged burrows.	Conduct briefing during the tailgate safety meeting each morning 1. On the first day of an activity, review the Temporary Effects and General Responsibilities tables in detail for the specific activity or activities to be conducted, or the types of vehicles and/or equipment to be used. Ensure all workers understand what they have to do and why. 2. On subsequent days, stress aspects for improvement of compliance. If necessary, notify project supervisor of repeated or serious violations. 3. Continue to assess any changing needs for load spreading measures or other mitigation techniques. 4. Add information about any other biological issues noted during the pre-activity survey and how best avoid impacts to these resources.
At night or after activity is completed	1. Park equipment on pavement overnight. 2. Make sure all vehicle and equipment are properly removed from the site, or stored. Pick up all trash at and around the site and dispose of properly.	Conduct a post-activity survey of the work area to determine: 1. Note items such as on impacts from the activity on SKR or their habitat. Were there any possible adverse effects from the activity? If so, these need to be listed as permanent or temporary impacts and each one measured to include in the HCP Annual Report. 2. Remove flagging.

Additional Comments

- If the operator needs to make any changes to their activity, discuss with the biological monitor the work requirements or mitigation measures needed as soon as possible to prevent delays.
- The biological monitor has the authority to stop all activities until they are sure that activity will not cause "take" of SKR or SKR habitat.
- If "take" occurs due to negligence of the operator or monitor, the project may be shut down pending an investigation. This investigation could result in fines of up to $50,000 to an operator or monitor (not the company), and possible jail time.

MOWING

Equipment		Impacts		Responsibilities	
Equipment Category	**Type of Equipment**	**Potential Impacts**	**Category of Impacts**	**Operator**	**Monitor**
Hand Operated	Weed whacker	Removal and flattening of vegetation	Beneficial impacts	Remove vegetation from the smallest area that's practical.	See general responsibilities
Lightweight	Pickup truck up to ¾ ton (tire pressure 30-80 psi)	Flattening of vegetation	Beneficial impacts	See general responsibilities	See general responsibilities
	Tractor mower	Removal and flattening of vegetation	Beneficial impacts	Keep mower blade 4" to 6" above the ground at all times. Remove vegetation from the smallest area that's practical.	See general responsibilities
Heavy Equipment	Water truck	Crushing burrows	Temporary negative impacts	See general responsibilities	See general responsibilities Measure impacts and list measurements as temporary or permanent impacts. These measurements are needed for the HCP Annual Report.

Comments:

- This activity is covered under the Low-Effect HCP and is subject to all requirements of the HCP.
- If equipment other than that listed above will be used for mowing, please consult with the monitor on site or the Project Biologist (Kathy Simon 909-381-1674 or 909-289-4649).