EXHIBIT
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Tule Wind Project

21 Jan. 2010

I reviewed the 2005-2006, fall 2007, winter 2007-2008, 2007-2008, and spring 2008 avian surveys, as well as the weather and flight path data reports for the Tule Wind Resource Area. I found during my review that the technique(s) used to locate raptor use (nesting and flying) were inadequate to provide the level of detail which will assist action and regulatory agencies in determining short and long-term effects to raptors, including golden eagles.

The technique used by the contractors was a modified point count system with 30 minutes of observation time at each of the 16 points. Each point had an 800 meter radius, and birds (raptor and non-raptor) were counted as they flew through this 1600 meter diameter circle, raptor routes and flight directions were documented, and flight height AGL were estimated. The surveys were conducted every other week for much of the duration of the survey reports. Nesting surveys for raptors consisted of locating large nests in trees in the winter, and then during the raptor nesting season re-locating those nests to ascertain occupancy.

During the surveys, nine diurnal and one nocturnal raptor were observed, including golden eagle, American kestrel, prairie falcon, sharp-shinned hawk, Cooper's hawk, red-tailed hawk, northern harrier, osprey, turkey vulture and great horned owl. RTHA and TUVU were the most common raptor observed.

The survey effort expended was insufficient to detect nesting raptors. While raptors will re-use stick nests, some species will build a series of alternate nests which they will use sequentially. Replacement females may also choose to nest in different locations as territory boundaries shift due to food resources and loss or changing of proximal territories. Further, the surveys did not appear to be comprehensive or stratified in any way. There did not appear to be a comprehensive search of all available habitat to find tree nesting raptors, nor were presence of cliff habitat discussed. Surveys for GOEA nests were also not detailed; GOEA range significant distances from their nest sites in search of food, and disperse often great distances when an appropriate age, or when food resources dictate movements. Finally for GOEA, surveys of habitat adjacent to the project area were not reported to have been conducted.

Surveys for raptors occurrence require different techniques than was detailed in the reports. Please refer to Anderson (2007) for a compendium of acceptable techniques. While the point count method works well for passerine avifauna, it does not, using the method described in the reports, provide defensible and rigorous results for raptor occupancy and density. The timing during the day and weather conditions, observation point, and other factors regarding surveys for raptors is important; timing of the 30 minute survey periods per plot, weather conditions and a description of each observation point to best locate raptor presence was not listed.

Only one great-horned owl was detected; it appears that no searching for owls occurred during any survey. Further, incorrect information was listed for northern harrier, e.g. that an incidental

observation on 22 March 2008 was too early for breeding. During this time, northern harriers could be in courtship, or, in some locations in San Diego County, on eggs.

GOEA are known to be nesting in San Diego County, and as shown in the reports, use the Tule Wind Facility habitat. While the survey techniques employed were not adequate, they did discern golden eagles on three different occasions. More rigorous survey and analysis is necessary, however from these three sightings, and also recognizing the dispersal directions and distances from nests within San Diego County and ostensibly from northern Mexico, it is reasonable to conclude that golden eagles, and other raptors, have a high potential to be disturbed, and incur lethal take by wind generation turbines at the planned Tule wind facility.

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Anderson, D.E. 2007. Survey techniques. IN D.M. Bird and K.L. Bildstein (eds.). Raptor research and management techniques. Hancock House, Surrey, BC, Canada.