

May 31, 2005

(AR-18J)

Dan Stinnett, Field Supervisor
Twin Cities Field Office
U.S. Fish and Wildlife Service
4101 American Blvd. East
Bloomington, Minnesota 55425-1665

Dear Mr. Stinnett:

Pursuant to Section 7 of the Endangered Species Act (ESA), (16 U.S.C. §§ 1531 et seq.), the United States Environmental Protection Agency (USEPA), Region 5 has reviewed the biological information and analysis related to a Prevention of Significant Deterioration (PSD) permit for Grand Casino Resort and Hotel in Mille Lacs County (Grand Casino Mille Lacs), to determine what impact there may be to any threatened or endangered species in the area around the proposed facility. The purpose of this letter is to seek concurrence from the U.S. Fish and Wildlife Service (FWS) on our determination that the proposed project is not likely to adversely affect any federally listed species in relation to the proposed air quality permit for Grand Casino Mille Lacs.

Project Description

Grand Casino Mille Lacs proposes to operate a peak electricity generation facility within the exterior boundaries of the Mille Lacs Band of Ojibwe Indian Reservation, Mille Lacs County, Minnesota. This facility currently consists of three diesel-fired internal combustion engines which are only used to generate emergency power. This PSD permit will change the method of operation and allow the three engines to be put on the peaking program offered by the local utility as well as to provide emergency power. The project is located at 777 Grand Avenue, Highway 169, Onamia, Mille Lacs County, Minnesota, 56359. This site is near the southwestern shore of Mille Lacs Lake off of Highway 169 approximately 13.5 kilometers north-northwest of the town of Onamia,

Minnesota. The Universal Transverse Mercator (UTM) east and north coordinates of the facility are 441,393 and 5,114,148 meters, respectively. The project is located in an area that is currently compliant with all National Ambient Air Quality Standards, and there is nothing to suggest any adverse effects on local species.

The permit application specifies a maximum diesel fuel flow rate of 382.2 gallons per hour throughput for all three engines resulting in 5.4 megawatts of electricity generation per year. The three engines will be limited to 300 hours per year and a maximum allowable 28.02 tons of NOx emissions per year.

Action Area

An action area of 850 meter radius around the proposed facility was based on air quality modeling performed for the PSD permit and represents the significant impact area for criteria pollutants. More information on this modeling is provided in the ESA Effects Analysis section below.

List of Species

Two federally listed threatened or endangered (T&E) species were identified as possibly located within Mille Lacs County in an April 13, 2004 e-mail from Nick Rowse of FWS. The species are the bald eagle (*Haliaeetus leucocephalus*) and the gray wolf (*Canis lupus*). The following brief descriptions of the species are taken from facts sheets available on the FWS website, unless otherwise indicated.

Bald eagle: The bald eagle has been protected as a threatened species in Minnesota since its listing under the ESA. Bald eagles are large birds of prey that nest and forage along fish-bearing waters. They primarily consume fish, but will also feed on waterfowl and carrion. Bald eagles build large stick nests in conifer trees and occasionally deciduous trees or on cliffs. Nesting activity usually occurs in January and February with hatching occurring in April and May.

In an April 13, 2005 e-mail, Nick Rowse of FWS noted the presence of two active bald eagle nests located near the facility. In an April 15, 2005 e-mail, Kevin Woizeschke of the Minnesota Department of Natural Resources (DNR) noted

that a recent survey found that one of the nests is 0.53 miles southwest of the facility, while the other nest is 0.87 miles northwest of the facility.

Gray wolf Wolf packs usually live within specific territories, ranging in size from 50 square miles to more than 1,000 square miles depending on prey availability and seasonal prey movements.

ESA Effects Analysis

The existence of the gray wolf in the action area is unclear. To the extent individuals of this species may be present at a given time within the action area, they would be considered transient and able to move away from the site if the construction activity or operation noise was disturbing.

The bald eagle's possible presence is evidenced by the two nests identified by Minnesota DNR located about 0.53 miles (2,800 feet) and also 0.87 miles (4,600 feet) away from the project site. According to the Northern States Bald Eagle Recovery Plan (FWS, 1983), a two-zone management system around nest sites is suggested as a practical way to protect bald eagles and the habitats they require. The primary zone is the area directly surrounding an eagle nest, and the secondary zone is the area directly surrounding the primary zone. The recommended primary buffer zone is a minimum of 330 feet from the nest, to be extended up to $\frac{1}{4}$ - $\frac{1}{2}$ mile where there is extremely sparse timber or other unique situations. Surrounding this, the recommended secondary buffer zone should extend an additional 330 feet from the edge of the primary zone, to be expanded up to $\frac{1}{2}$ mile when nesting occurs in sparse stands of timber, treeless areas, or where activities would occur within view of the nest.

Seeing that the source is beyond the 660 foot secondary buffer zone for both nests, and that an April 15, 2005, e-mail from Kevin Woizeschke of the Minnesota DNR stated that since each of the two nests are more than $\frac{1}{4}$ mile from the source, and buffered by forest, that the operation of the engines falls within the recommended guidelines and should have little or no impact on the nesting bald eagles, we would conclude that the bald eagle would not likely be

adversely affected by the construction/noise activity related to the project.

Air Quality Impacts

To assess the air quality impacts of the proposed project on the individual species that may be present in the action area, the following PSD modeling analysis is provided. USEPA conducted a Yahoo search of each of the listed species, using the species name and "air pollution" as the key words. No information related to these two species and air pollution impacts was found. Lacking information identifying species-specific effects associated with specific air pollutants, USEPA is relying upon the general protectiveness of the PSD thresholds and the relative size of emissions as compared to background levels in completing its analysis.

The Grand Casino Mille Lacs project is considered to be a minor source based on USEPA thresholds, however, because the project is being sited on Tribal lands, the permit must be issued by EPA under PSD regulations as there is no federal minor source permit program. Based on potential to emit, Grand Casino Mille Lacs would emit over 250 tons per year (tpy) of nitrogen oxides (NO_x). NO_x includes both nitrogen oxide (NO) and nitrogen dioxide (NO₂). However, the source is choosing to take limits on emissions for all regulated pollutants to below major source thresholds, per the following table:

Emissions (tons per year)						
NO _x	CO	VOC	SO ₂	PM	PM ₁₀	HAPs
28.02	3.24	0.50	0.40	0.29	0.24	0.01

Grand Casino Mille Lacs will meet these limits by accepting limits on hours of operations as well as addressing Best Available Control Technology (BACT) requirements. Air pollution controls that will be required in the permit include turbocharged engines with aftercoolers, fuel injection timing retard, and electronic controls for lean burn combustion. USEPA has identified these as the appropriate BACT controls for this source.

Pursuant to PSD requirements, the source was required to conduct air quality modeling for nitrogen dioxide (NO₂); no

other pollutant levels met the threshold to require modeling. The NO_x emissions from Grand Casino Mille Lacs were evaluated with the Industrial Source Complex Short-Term Model (ISC-PRIME). This model uses measured meteorological data to calculate the breathable concentrations of pollutants at varying distances from the source. The first step in the PSD modeling process is to evaluate the source's impact on the surrounding area. In the PSD program, USEPA has set a minimum ambient air concentration level for each criteria pollutant, called the Significant Impact Level (SIL). While SILs are specifically designed to protect human health, we are using SILs as a surrogate, lacking specific information related to these animal species. This comparison is likely most valid for the gray wolf which is a large mammal.

If a facility's emissions for an individual pollutant are shown with modeling to be below the SIL, then the source's air quality impact is considered insignificant for that pollutant, and no further modeling is necessary to support the approval of the PSD permit application. Grand Casino Mille Lacs NO_x ambient air impacts from NO_x exceeded the NO₂ SIL, which is 1 ug/m³ on an annual average. At 850 meters from the source, the modeled concentrations of NO_x fell below the SIL. This 850 meter distance becomes the radius of Grand Casino Mille Lacs' circular Significant Impact Area for NO_x.

The next step in the PSD modeling process is to evaluate whether the PSD increments are consumed. The PSD program allows pollutant concentrations to increase only up to the pollutant-specific PSD increments. For NO₂, this increment is 25 ug/m³ on an annual average. The increment modeling must include not only the NO_x emissions from the proposed source, but also the NO_x emissions from other new or modified sources located within or having an air quality effect in the Significant Impact Area. In Grand Casino Mille Lacs' case, there were no additional sources to include. Modeling showed that Grand Casino Mille Lacs' NO_x impacts (9.41 ug/m³) were below the NO₂ increments (25 ug/m³).

The final step in the PSD modeling process is to verify that the National Ambient Air Quality Standards (NAAQS) are protected. In some cases, even though the PSD increments are not exceeded within a proposed source's Significant Impact Area, the NAAQS could still be violated in the area.

The NAAQS for NO₂ is 100 ug/m³ on an annual average. Modeling for the NO₂ NAAQS includes the NO_x emissions from the proposed source and from all nearby NO_x sources, new or existing, which might have an air quality impact in the area. Background NO₂ concentrations, obtained from local air quality monitors, are also added to the modeled totals, to account for distant NO_x sources which were not explicitly included in the modeling. The background concentration for the Grand Casino Mille Lacs site was 17 ug/m³ on an annual average. The modeling showed that the area's total breathable NO₂ concentrations (26.41 ug/m³) would be well below the NO₂ NAAQS—less than thirty percent of the NAAQS level. Grand Casino Mille Lacs meets the air quality modeling requirements necessary for approval of its PSD permit.

Conclusion/Determination

The gray wolf, should it occur in the action area, would be transient individuals capable of moving away from the site should they be disturbed by the activities. In addition, the location of the known bald eagle nests is beyond the maximum primary and secondary buffer zones recommended for even extreme habitat conditions, based on the FWS Northern States Bald Eagle Recovery Plan. Therefore, the physical activities related to the construction and operation of the proposed project are not likely to adversely effect the listed species.

In addition, USEPA has provided data regarding the air quality modeling conducted as part of the PSD permit application. The permitted emissions levels for Grand Casino Mille Lacs, will be consistent with a minor source, with limits below significance thresholds for each of the pollutants.

Based on an Internet search and the information made available by FWS on the causes of the species decline and recovery plan strategies, there is no information suggesting sensitivities to air pollutants. For the pollutants whose potential to emit was above the major source threshold (thus triggering air quality modeling), the results demonstrate that the impacts of this project would be insignificant, discountable or not measurable against the background levels. Considering this analysis in its entirety, USEPA concludes that the proposed

construction and operation of this facility may affect, but is not likely to adversely affect, any of the T&E species. USEPA respectfully requests FWS concurrence on this determination.

Sincerely yours,

/s/

Pamela Blakley, Chief
Air Permits Section

cc: Curt Kalk, Commissioner of Natural Resources, Mille
Lacs Band of Ojibwe Indians