

September 14, 2000

(AR-18J)

Philip Kairis, Operations Manager
Energy Alternatives, Inc.
4300 220th Street West
Farmington, Minnesota 55024

Dear Mr. Kairis:

The United States Environmental Protection Agency (EPA) has reviewed Energy Alternative's Prevention of Significant Deterioration (PSD) permit application for the installation of four (4) diesel generator sets. The purpose of this letter is to request additional facts and information that are not provided in the permit application and are necessary for a complete review of the application before the initial permit is drafted. The following information pertaining to the Best Available Control Technology (BACT) analysis for nitrogen oxides (NOx), the additional impact analysis, and the relationship between the Treasure Island Resort and Casino is required in order for our office to complete its review of the permit application.

Operating Limits and Control Technology Review

The BACT analysis includes operating limits (hours of operation or gallons of fuel used) as a control option. A limitation on hours of operation alone is **not** considered BACT. 40 CFR 52.21(b)(12) defines BACT as:

"an emissions limitation (including a visible emission standard) based on the maximum degree of reduction for each pollutant subject to regulation under the Clean Air Act which would be emitted from any proposed major stationary source or major modification which the Administrator, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such source or modification through application of production processes or available methods, systems, and techniques, including fuel cleaning or treatment or innovative fuel combustion techniques for control of such pollutant."

A limitation on hours of operation, or other similar limits, is normally used to avoid PSD by reducing a source's PTE to make it a "synthetic minor" source. The EPA does not currently have a Federal program to directly limit the source's PTE to less than PSD size to avoid PSD permitting. Although EPA is considering development of a minor New Source Review program for Tribal lands, such a program is currently not available.

The expected hours of operation can be considered in the cost effectiveness analysis. Chapter B of the NSR Workshop Manual (draft, October 1990) provides guidance on how operating hours may be included in the cost effectiveness analysis of the BACT analysis. According to Chapter B:

"although permit conditions are normally used to make operating assumptions enforceable, the use of "standard industry practice" parameters for cost effectiveness calculations (but **not** applicability determinations) can be acceptable without permit conditions. However, when a source projects operating parameters (e.g., limited hours of operation or capacity utilization, type of fuel, raw materials or product mix or type) that are lower than standard industry practice or which have a deciding role in the BACT determination, then these parameters or assumptions must be made enforceable with permit conditions. If the applicant will not accept enforceable permit conditions, then the reviewing agency should use the absolute worst case uncontrolled emissions in calculating baseline emissions. This is necessary to ensure that the permit reflects the conditions under which the source intends to operate."

Therefore, the BACT analysis must be revised to correctly show the top-down process which includes a comparison of available control technologies, taking into account energy, environmental, and economic impacts and other costs. The top-down process provides that all available control technologies be ranked in descending order of control effectiveness. First, the most stringent, or "top" alternative is examined. That alternative is established as BACT unless technical considerations, or energy, environmental, or economic impacts justify a conclusion that the most stringent technology is not "achievable". If the most stringent technology is eliminated in this fashion, then the next most stringent alternative is considered, and so on.

In addition, to expedite development and issuance of the permit, we strongly recommend that information regarding any operating and maintenance procedures and monitoring of the operational limits for the low NO_x strategy proposed for BACT be sent to us along with the revised BACT analysis. These elements are essential to assure continuous compliance for all permits issued by the our agency.

Operational limits. The permit has to specify the BACT emissions control requirements for each pollutant for each emissions unit. For example, if timing retard is proposed as BACT as part of the low NO_x strategy, and the EPA also agrees with this BACT proposal, then the permit must include the parameters for timing retard in the permit that will be used to show that each applicable emissions unit is operating within the established low NO_x strategy. The operational limits are also used to show compliance with the low NO_x strategy.

Maintenance procedures. In order to show that the facility remains in compliance it must follow and document that certain operating and maintenance procedures are followed. In order for our agency to have a reasonable

expectation that the facility is in compliance in the intervals between agency inspections, the operation and maintenance procedures need to be spelled out in the permit and documented so that our agency can review the records to establish the compliance status of the facility. Information on maintenance practices may include periodic checks on the unit or calibration of specific parameters that show that the emissions units will remain functioning properly.

Monitoring. In order for our agency to know if a control strategy is in place, we need to be able to monitor whatever data or equipment Energy Alternatives is using to ensure that its low NOx control system is, in fact, working. This data can include, but is not limited to, an on-site monitoring system which may include digital readouts, gauges, or meters. These monitoring systems and equipment need to be identified in the permit.

BACT Control Options

The BACT analysis of the permit application concludes that engine gas recirculation (EGR) and intake air cooling are technically infeasible control options. The BACT analysis states that EGR is not applicable to diesel-fired reciprocating internal combustion engines and that no data was available to indicate NOx reductions for intake air cooling. This does not clearly demonstrate that EGR and intake air cooling are technically infeasible. Technical infeasibility should be clearly documented and should show, based on physical, chemical, and engineering principles, that technical difficulties would preclude the successful use of the control option under review. EGR and intake air cooling are control options that can be used to reduce NOx emissions from diesel engines. The BACT analysis should show why these options are not technically feasible for the proposed diesel engine generator sets.

Additional Impact Analysis

An additional impact analysis is required under 40 CFR 52.21(o) for any proposed new source subject to PSD permitting for each pollutant subject to regulation under the Clean Air Act. This analysis is a separate requirement from the air quality analysis required under 40 CFR 52.21(m). This requirement is necessary in the application review process in order for the application to be deemed complete. An additional impact analysis assesses the impacts of air, ground and water pollution on soils, vegetation, and visibility caused by any increase in emissions of any regulated pollutant under review from the proposed new generators, and from associated growth.

Single Source Determination

One determination that EPA must make is whether the Treasure Island Casino and Resort (Treasure Island) and Energy Alternatives (EA) is a single source. The permit application states that EA will own and operate the electric generating sets that will be located on the property of the Prairie Island Indian Community northeast of Treasure Island. The application also states that the electricity produced from the units will be used for (1) peak load management and (2) backup power for Treasure Island, and that any electricity produced by these units will not be sold for distribution. Since EA owns the units and Treasure Island will use the units, the following question must be answered: Are EA's engine generators and Treasure Island a single "source", as defined in 40 CFR Part 52. Also, according to EPA's preamble to the Final Rule for Part 52 published in the August 7, 1980, Federal Register (45 FR 52695), if the generators constitute a support facility to Treasure Island, then the generators and the Treasure Island facility may be one "stationary source" within the meaning of 40 CFR Part 52.

A "stationary source" is "any building, structure, facility or installation which emits or may emit any air pollutant subject to regulation under the Act." 40 CFR 52.21(b)(5). A "building, structure, facility, or installation" is "all of the pollutant-emitting activities which belong to the same industrial grouping, are located on one or more contiguous or adjacent properties, and are under the control of the same person (or persons under common control)." 40 CFR 52.21(b)(6). The generators EA proposes to construct will be contiguous or adjacent to the Treasure Island Resort and Casino. According to 40 CFR 52.21(6), pollutant-emitting activities shall be considered as part of the same industrial grouping if they belong to the same "Major Group", which means they have the same two-digit Standard Industrial Classification (SIC) Code. The two-digit SIC code for EA's generators is 49 which is the major group for electric services, and Treasure Island's is 70 for hotels and motels. Therefore, the generators and Treasure Island are not part of the same industrial grouping.

However, EA's generators may be considered as a support facility to Treasure Island based on control, in which case, the generators and Treasure Island would be considered one stationary source. According to 45 FR 52695, "each source is to be classified according to its primary activity, which is determined by its principal product or group of products produced or distributed, or services rendered. Thus, one source classification encompasses both primary and support facilities, even when the latter includes units with a different two-digit SIC code. Support facilities are typically those which convey, store, or otherwise assist in the production of the principal product." A source facility relationship is determined based on a number of factors, which include financial, functional, contractual, and/or other legal factors. Such relationships are usually governed by contractual, lease, or other agreements which show how the facilities interact with one another. Based on the permit application, we presume that EA's generators are a support facility, and should be treated as a single source together with the Treasure Island Resort and Casino. To overcome this presumption, you must provide information (i.e., a contract or similar agreement) explaining the relationship between Energy Alternatives and Treasure Island that shows otherwise. This information should clearly

show that, under no circumstances, will the Treasure Island Casino or the Prairie Island Indian Community control the diesel generator sets.

Our office has dealt with and responded to a similar situation in the enclosed August 25, 1999, letter addressed to William Bauman at the Wisconsin Department of Natural Resources. The EPA also responded to issues regarding support facilities and common control in the enclosed September 18, 1995, letter to Peter R. Hamlin of the Iowa Department of Natural Resources.

If you have any further questions on this letter, please contact Shaheerah Fateen, of my staff, at 312) 353-4779.

Sincerely yours,

/s/

Robert B. Miller, Chief
Permits and Grants Section

Enclosures

cc: Ed Fairbanks, EPA Environmental Liaison for Minnesota Tribes
Julie E. Miller, Labno Environmental, Inc.
Heather Westra, Prairie Island Community Council