

ENVIRONMENTAL ANALYSIS AND DECISION ON THE NEED  
FOR AN ENVIRONMENTAL IMPACT STATEMENT (EIS)

Form 1600-8

Rev. 6-90

Department of Natural Resources (DNR)

Region or Bureau Air Management
Type List Designation Type II

NOTE TO REVIEWERS: This document is a DNR environmental analysis that evaluates probable environmental effects and decides on the need for an EIS. The attached analysis includes a description of the proposal and the affected environment. The DNR has reviewed the attachments and, upon certification, accepts responsibility for their scope and content to fulfill requirements in s. NR 150.22, Wis. Adm. Code. Your comments should address completeness, accuracy or the EIS decision. For your comments to be considered, they must be received by the contact person before 4:30 p.m., \_\_\_\_\_ (date)

Contact Person: Jeffrey C. Hanson
Title: Construction Permit Team Leader
Address: PO Box 7921
Madison, WI 53707-7921
Telephone Number (608) 266-6876

Applicant: Alliant Energy Corporation/Berlin Landfill Generation \_\_\_\_\_

Address: W694 Whiteridge Road \_\_\_\_\_

Title of Proposal: Construction of landfill gas fired generators \_\_\_\_\_

Location: County Green Lake\_ City/Town/Village Berlin \_\_\_\_\_

Township Range Section(s) Township 17 North Range 13 East \_\_\_\_\_

PROJECT SUMMARY - DNR Review Information Based on:

List documents, plans, studies or memos referred to and provide a brief overview

Air pollution control permit application received December 20, 2000. Supplemental information submitted on January 6 and 22, 2001.

Alliant Energy proposes to construct and operate three landfill-gas fired engines which will power three electrical generators at a Berlin, Wisconsin site. The engines/generators will be located on property owned by National By Products and will use landfill gas generated by the Valley Trail landfill. The engines will be owned and operated by Alliant Energy. Electrical Power produced by the proposed units will be sold on the local electrical power grid. Landfill gas is now (and will continue to be) sold by the Valley Trail landfill to National By-Products who utilizes it in its boilers. National By Products will sell excess landfill gas to Alliant Energy. Currently, excess landfill gas is flared off by Valley Trail landfill.

DNR EVALUATION OF PROJECT SIGNIFICANCE (complete each item)

1. Environmental Effects and Their Significance

Discuss the short-term and long-term environmental effects of the proposed project, including secondary effects, particularly to geographically scarce resources such as historic or cultural resources, scenic and recreational resources, prime agricultural lands, threatened or endangered species or ecologically sensitive areas, and the significance of these effects. (The reversibility of an action affects the extent or degree of impact.)

The proposed project is not anticipated to have short-term, long-term, or secondary effects on geographically scarce resources, scenic and recreational resources, prime agricultural lands, threatened or endangered species, or

ecologically sensitive areas.

The proposed action will add stack-vented air emissions, thereby resulting in the following potential emission rates:

Pollutant	Potential to Emit (TPY)
Particulate Matter (PM)	12.8
PM-10	12.8
Nitrogen Oxides (NO <sub>x</sub> )	165.3
Carbon Monoxide (CO)	100.1
Sulfur Dioxide (SO <sub>2</sub> )	0.07
Volatile Organic Compounds (VOC)	12.9
Lead	negligible

These emission increases have been analyzed for their ambient air quality impacts and the impacts have been found to be within applicable air quality standards.

In addition, the proposed project will result in small emissions of a limited number of hazardous air pollutants (HAP), including the following:

- 1,2 dichloroethane
- toluene
- vinyl chloride
- benzene

The emissions of the HAPs are less than the threshold values contained in NR 445, Wisconsin Administrative Code. Also, individual HAP emissions are less than 10 TPY and combined HAP emissions are less than 25 TPY. Therefore, the facility is considered a minor source of HAPs.

## 2. Significance of Cumulative Effects.

Discuss the significance of reasonably anticipated cumulative effects on the environment (and energy usage, if applicable). Consider cumulative effects from repeated projects of the same type. Would the cumulative effects be more severe or substantially change the quality of the environment? Include other activities planned or proposed in the area that would compound effects on the environment.

The area surrounding the National By Products site (where the proposed engines/generators will be housed) is currently considered in "attainment" of all criteria air pollutants. It would be expected that if a large number of new sources (having emissions equivalent to those potential emissions associated with the proposed engines) were to locate in the immediate surrounding area, air quality in the Berlin area would eventually decline. However, the required air quality analyses for this project and for any additional projects of other facilities in the area would serve to prevent the degradation of air quality to levels below the applicable air quality standards.

State and federal regulations require the control of volatile organic compound emissions from municipal solid waste landfills. Methods of control of volatile organic compounds (VOC) associated with landfill gas include the use of a flare or other flame technology, such combustion within an internal combustion (IC) engine as the ones proposed under this project. While the use of a flare may provide a somewhat greater level of VOC control (99.2% for a flare vs. 97.2% for an IC engine, based upon USEPA emission factors), the energy associated with the combustion of the landfill gas by a flare is generally wasted since a flare is used only for emission control. Combustion of the landfill gas by the proposed IC engines will generate approximately 2.5 megawatts of electrical energy. The use of the landfill gas in this manner offsets the need to install IC engines that would be fired on alternative fuels, generating similar or greater levels of air emissions and resulting in a cumulative increase in discharges in the area. Thus the project as proposed generates a cumulative net benefit towards potential air quality impacts when alternatives are considered. It should be noted that the IC engines have proposed to be utilized in place of a flare, so there is not a cumulative impact associated with the use of both technologies concurrently.

## 3. Significance of Risk

- a. Explain the significance of any unknowns which create substantial uncertainty in predicting effects on the quality of the environment. What additional studies or analysis would eliminate or reduce these unknowns?

There are always unknowns associated with environmental impact analyses, which create uncertainty in predicting the effects that a proposal has on the environment. However, as the techniques used to complete the air quality analyses are considered "state of the science," the significance of these unknowns is not believed to be substantial in the proposed project. No additional studies or analyses should be required.

- b. Explain the environmental significance of reasonably anticipated operating problems such as malfunctions, spills, fires or other hazards (particularly those relating to health or safety). Consider reasonable detection and emergency response, and discuss the potential for these hazards.

A malfunction in the engine/generator equipment could result in the shut-down of one or more of the units in which case the landfill gas would likely be flared off (as is the current practice). The flaring of the landfill gas would likely have very similar (minor) environmental impacts to burning the gas in the engines.

4. Significance of Precedent

Would a decision on this proposal influence future decisions or foreclose options that may additionally affect the quality of the environment? Describe any conflicts the proposal has with plans or policy of local, state or federal agencies. Explain the significance of each.

A decision on this proposal is not anticipated to influence future decisions or foreclose options that may additionally affect the quality of the environment.

5. Significance of Controversy Over Environmental Effects

Discuss the effects on the quality of the environment, including socio-economic effects, that are (or are likely to be) highly controversial, and summarize the controversy.

The proposed action is not anticipated to conflict with present plans or policies of local, state, or federal agencies that provide for the protection of the environment. No socio-economic effects are known to be highly controversial at this time. With any landfill there are odor issues, however, this project itself, while burning gas generated by the landfill, will not create any new odor problems. Combustion of the landfill gas by the generators should help incinerate a portion of the volatile organic compounds contained within the gas that are responsible for odor.

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ALTERNATIVES

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Briefly describe the impacts of no action and of alternatives that would decrease or eliminate adverse environmental effects. (Refer to any appropriate alternatives from the applicant or anyone else.)

Excess landfill gas is currently disposed of through the use of the existing flare system with no beneficial recovery of the heat generated. This practice could be continued. This alternative results in the generation of similar levels of air pollution emissions, but without the benefit of utilizing the energy that is released.

Alternatively the landfill gas (primarily methane but also including hazardous air pollutants such as vinyl chloride) could be released without burning it. Aside from the direct potential negative impact of the HAP emissions, the release of methane gas, which is a much more potent greenhouse gas than CO<sub>2</sub> produced from combustion, could contribute to the "greenhouse" global warming phenomena.

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SUMMARY OF ISSUE IDENTIFICATION ACTIVITIES

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List agencies, citizen groups and individuals contacted regarding the project (include DNR personnel and title) and summarize public contacts, completed or proposed.

<u>Date</u>	<u>Contact</u>	<u>Comment Summary</u>
1/01	Jeffrey C. Hanson – WDNR AM/7	WDNR Permit Review

On-site inspection or past experience with site by evaluator.

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DECISION (This decision is not final until certified by the appropriate authority)

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In accordance with s. 1.11, Stats., and Ch. NR 150, Adm. Code, the Department is authorized and required to determine whether it has complied with s. 1.11, Stats., and Ch. NR 150, Wis. Adm. Code.

Complete either A or B below:

A. EIS Process Not Required



The attached analysis of the expected impacts of this proposal is of sufficient scope and detail to conclude that this is not a major action which would significantly affect the quality of the human environment. In my opinion, therefore, an environmental impact statement is not required prior to final action by the Department on this project.

B. Major Action Requiring the Full EIS Process



The proposal is of such magnitude and complexity with such considerable and important impacts on the quality of the human environment that it constitutes a major action significantly affecting the quality of the human environment.

Signature of Evaluator 	Date Signed February 9, 2001
Noted: Regional Waste Supervisor	Date Signed

Number of responses to news release or other notice: None

Minor comments were received on behalf of the applicant regarding the draft air permit conditions. No comments were received on the environmental assessment.

Certified to be in compliance with WEPA	
REGIONAL Director or Director of Bureau of Integrated Science Services (or designee) 	Date Signed April 2, 2001

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NOTICE OF APPEAL RIGHTS

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If you believe that you have a right to challenge this decision, you should know that Wisconsin statutes and administrative rules establish time periods within which requests to review Department decisions must be filed.

For judicial review of a decision pursuant to sections 227.52 and 227.53, Stats., you have 30 days after the decision is mailed, or otherwise served by the Department, to file your petition with the appropriate circuit court and serve the petition on the Department. Such a petition for judicial review shall name the Department of Natural Resources as the respondent.

To request a contested case hearing pursuant to section 227.42, Stats., you have 30 days after the decision is mailed, or otherwise served by the Department, to serve a petition for hearing on the Secretary of the Department of Natural Resources. The filing of a request for a contested case hearing is not a prerequisite for judicial review and does not extend the 30-day period for filing a petition for judicial review.

Note: Not all Department decisions respecting environmental impact, such as those involving solid waste or hazardous waste facilities under sections 144.43 to 144.47 and 144.60 to 144.74, Stats., are subject to the contested case hearing provisions of section 227.42, Stats.

This notice is provided pursuant to section 227.48(2), Stats.