

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:

Mr. Raj Vakharia  
Printing & Coating Section  
Bureau of Air Management  
Wisconsin Department of Natural Resources

Title: Review Engineer

Address: P.O. Box 7921

Madison, WI 53707

Telephone Number

(608) 267-2015

**Applicant:** Grede Foundries, Inc.

**Address:** 700 Ash Street, Reedsburg, Wisconsin 53959

**Title of Proposal:** Disa 2071/2072 Modification Project

**Location:** 700 Ash Street

**County:** Sauk County

**City/Town/Village:** Reedsburg

**Township Range Section(s):**

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**PROJECT SUMMARY - DNR Review Information Based on:**

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

NR 406 Construction Permit Application for Disa 2071/2072 Modification Project, August 2002

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**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.)**

Grede Foundries, Inc. is proposing a Disa 2071/2072 Modification Project at its grey and ductile iron foundry in Reedsburg, Wisconsin. The company has submitted an air quality construction permit application to the Department as required under Chapter NR 406, Wis. Adm. Code. This application requests removal of current production restrictions on the Disa 2071 and 2072 iron casting production lines. These restrictions were originally established so that earlier foundry projects were not subject to the Prevention of Significant Deterioration (PSD) requirements of Chapter NR 405, Wis. Adm. Code. The PSD requirements will now retroactively apply to these operations and their original projects.

Based on the analyses contained in the permit application and the Department's technical support documents, the following conclusions can be reached:

This project will be subject to the PSD requirements for total suspended particulate matter (TSP), particulate matter under 10 microns (PM<sub>10</sub>), carbon monoxide (CO), volatile organic compounds (VOC).

Project emissions of TSP, PM<sub>10</sub>, CO and VOC will be controlled using Best Available Control Technology or BACT as required by the PSD regulations. The BACT analysis includes a review of available control technologies, related state air quality permits, prior BACT determinations for iron foundries in U.S. as reported in the USEPA clearinghouse.

A supporting air quality impact analysis was conducted using dispersion modeling. This demonstrates that project PM<sub>10</sub> emissions will exceed its significant impact level or SIL, while CO emissions are below its SIL. By exceeding the SIL, further analysis of PM<sub>10</sub> air quality impacts was required. After this project, foundry emissions were predicted to comply with acceptable air concentrations for hazardous air pollutants under Chapter NR 445, Wis. Adm. Code, the National Ambient Air Quality Standards for PM<sub>10</sub>, and the Class II area PSD increments for PM<sub>10</sub>.

Project emissions are summarized in Table 1. This shows the final approved emission from project operations, and the net increase in approved emissions resulting from this project.

**Table 1. Project Emissions Summary (tons per year)**

Air Pollutant	PM <sub>10</sub>	VOC	CO
Project Total	75.6	122	1219
Project Increase	19.6	40.9	409.4

Table 2 provides a comparison of project emissions with actual emissions from Sauk County as estimated for 1999. The actual emissions increase from the project is anticipated to result in a predicted increase in PM<sub>10</sub>, CO and VOC emissions of 0.1 to 0.4%, respectively.

**Table 2. Comparison of Project and Sauk County Emissions**

Air Pollution Source	PM Emissions (TPY)	CO Emissions (TPY)	VOC Emissions (TPY)
Existing Industrial	488	1358	339
Existing Area	4264	3327	3212
Existing Mobile	1988	17533	1952
Existing Total	6741	22219	5503
Project Actual Increase	6	81	8
Project Actual Increase (%)	0.1	0.4	0.1

**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.**

This project is subject to the PSD air quality regulations under Chapter NR 405, Wis. Adm. Code. These regulations are designed to prevent significant deterioration of air quality. They require the use of Best Available Control Technology to minimize project emissions. They require that the air quality impact of project impacts and all future projects in Sauk County comply with the PSD increments for PM<sub>10</sub>. As a result, the impact of this and all future industrial projects will be limited to the increments.

This project includes improvements to existing foundry operations to minimize their air quality impact and assure compliance of the entire foundry with the National Ambient Air Quality Standards.

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?**

Approval of this project requires an air quality impact analysis to estimate the dispersion of air pollutants from the project, the entire foundry and surrounding industries. This analysis uses computer models and historical weather data to predict downwind concentrations and verify protection of air quality standards. Computer models allow predictions to be made at any location under any operating condition or weather conditions. As improved computer models are released by the USEPA, they will be adopted by the Department for future permitting at this foundry.

- 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.**

This project is occurring at the existing Grede Foundries, Inc. facility in Reedsburg. It will remove annual production restrictions on existing manufacturing operations. No new operation problems related to malfunctions, spills, fires or other hazards will result from this project. Existing detection and emergency response programs will continue to be implemented as needed to assure the protection of the health and safety of workers and residents.

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.**

This project is occurring at the existing Grede Foundries, Inc. facility in Reedsburg. With this project, all future industrial projects in Sauk County will be required to comply with the PSD air quality increments for PM10. This may limit future industrial growth in the county unless steps are taken to minimize air quality impacts through the use of emission controls or improved dispersion of air pollutants.

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.**

This project is occurring at the existing Grede Foundries, Inc. facility in Reedsburg. It will remove annual production restrictions on existing manufacturing operations. At this time, no significant change actual annual production or employment at the foundry is anticipated. No controversial effects on the quality of the environment are anticipated.

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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.)**

This project will remove annual production restrictions from existing equipment. Simultaneously, the foundry will implement improvements to existing foundry operations to assure compliance with the National Ambient Air Quality Standards. These improvements are currently scheduled for completion in November 2003. As a result of this project, these improvements will occur sooner than anticipated. If this project does not proceed, the improvements will be delayed under the original completion date.

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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>
August 14, 2002 - October 18, 2002	Mike Sloat, Compliance Engineer, SCR	Information on the permit
August 14, 2002 - October 18, 2002	Steve Klafka, Wingra Engineering	Information on the application

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

Project Name: County: Sauk

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

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.

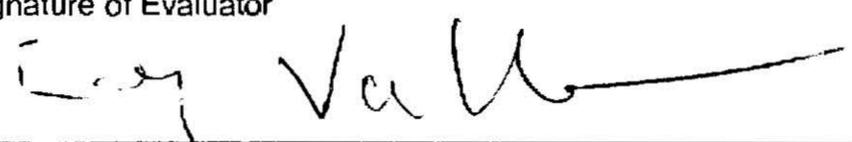
Complete either A or B below:

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.

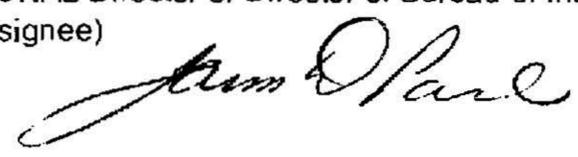
B. Major Action Requiring the Full EIS Process

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 12/18/02
Noted: Regional Waste Supervisor	Date Signed

Number of responses to news release or other notice: 4

Add Discussion of Any Comments Received.

Certified to be in compliance with WEPA	
REGIONAL Director or Director of Bureau of Integrated Science Services (or designee) 	Date Signed 12/10/2002

**NOTICE OF APPEAL RIGHTS**

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.

## BEFORE THE DEPARTMENT OF NATURAL RESOURCES AIR MANAGEMENT PROGRAM

Wisconsin Department of Natural Resources, Air Management Program, Preliminary Determination on an Air Pollution Control Permit to Construct and Permit to Operate an Air Contaminant Source at Reedsburg, Sauk County, Wisconsin.

Air Pollution Construction and Operation Permit Nos. 02-RV-116 and 02-RV-116-OP

Grede Foundries Inc., 700 Ash Street, Reedsburg, Wisconsin has submitted to the Department of Natural Resources (DNR) permit applications including plans and specifications to modify the operation of the existing Disa lines, 2071/2072 at its grey and ductile iron foundry in Reedsburg, Wisconsin.

The Bureau of Air Management of the DNR has analyzed these materials and has preliminarily determined that the project should meet applicable criteria for permit approval as stated in s. 285.63, Wis. Stats., including both the emission limits and the ambient air standards and should, therefore, be approved.

The issuance of a construction permit allows the construction or modification and initial operation of a source. An operation permit allows continued operation of a source. An operation permit may be issued after the permittee demonstrates compliance with the applicable requirements.

The permit application is reviewed under the Prevention of Significant Deterioration (PSD) Program (ch. NR 405, Wis. Adm. Code) for TSP/PM<sub>10</sub>, ozone and carbon monoxide. This project will set the PSD baseline for PM<sub>10</sub> in Sauk County. Modeling predicted that the PM<sub>10</sub> concentrations would exceed the Significant Impact Level (SIL) over a 24 hour period. The peak PM<sub>10</sub> controlling receptor for PSD increment consumption reached 25.1  $\mu\text{g}/\text{m}^3$ , 83.7% of its consumption limit for a 24 hour period. Annually, the predicted PSD peak was 4.2  $\mu\text{g}/\text{m}^3$  or 24.7% of its limit. NAAQS peaks for a 24 hour period were found to reach 128.5  $\mu\text{g}/\text{m}^3$  or 85.7%, while the annual peak subject to NAAQS topped at 28.8  $\mu\text{g}/\text{m}^3$  or 57.6%.

In addition, the Department has prepared an Environmental Assessment and has made a preliminary determination that an Environmental Impact Statement will not be required before approving this proposal. The Department has determined that this project will not cause significant adverse environmental effects. This preliminary determination does not constitute approval from the Air Management Program or any other DNR sections which may also require a review of the project.

The DNR hereby solicits written comments from the public regarding the preliminary determination and the Environmental Assessment to approve the construction and operation permit application. These comments will be considered in the DNR's final decision regarding this proposal. Information, including plans and the DNR's preliminary analysis and the Environmental Assessment, is available for public inspection at the Department of Natural Resources Bureau of Air Management Headquarters, Seventh Floor, 101 South Webster Street, Madison, Wisconsin, at the SCR Air Program, P.O. Box 281, 344 South Willow, Reedsburg, WI 53959 and at Reedsburg Public Library, 345 Vine Street, Reedsburg, WI 53959-1917. This information is also available for downloading from the internet using a world wide web browser at: <http://www.dnr.state.wi.us/org/aw/air/regs.htm>.

NOTICE IS HEREBY GIVEN that, pursuant to secs. 285.13(a), 285.61(7) and 285.62(5), Stats., DNR will hold a public hearing to receive public comments on the air pollution construction permit application of Grede Foundries Inc., and the request for a variance from Lowest Achievable Emission rate (LAER) limit for benzene emissions for the modification of the operation of Disa Lines 2071/2072.

NOTICE IS FURTHER GIVEN that the public hearing will be held:

Wednesday, December 4, 2002 at 1:00 pm

FOR  
INFORMATION ONLY