



State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Scott Walker, Governor
Cathy Stepp, Secretary

Oshkosh Service Center
625 E. County Road Y, Suite 700
Oshkosh, Wisconsin 54901-9731
FAX 920-424-4404

July 26, 2011

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Mr. Todd Parczick, President
Alliance Construction & Design
1030 Orlando Drive
De Pere, WI 54115

Dear Mr. Parczick:

The Bureau of Air Management, Department of Natural Resources, received an e-mail dated July 11, 2011, from your consultant, Mr. Daniel Guido of ERM, requesting a research and testing exemption to evaluate the operation of a portable waste-to-energy pilot plant. According to the e-mail, this facility will consist of a retort oven rated at up to 60 pounds per hour of waste material equipped with a 0.5 MMBtu per hour burner, a 47 hp Cummins spark ignition engine generator, a cooling tower and a flare. This portable pilot plant will use pyrolysis to create a synthesis gas (syngas) from municipal solid waste which will be combusted by an engine generator.

The proposed testing may be exempted from permitting requirements under s. NR 406.04(1)(i), Wis. Adm. Code, provided that the testing or research will not present a significant hazard to public health, safety, or welfare or to the environment. The Department has preliminarily determined that these tests will not present a significant hazard.

The Department will now accept public comment on this project. A final decision will be issued after any comments received are considered by the Department.

The following conditions are proposed for the exemption:

1. The permittee shall keep the following documentation during the trial period:
 - Records of all dates, times of startup and shutdown, and locations of operation. The time of startup and shutdown of the waste feed to the retort oven shall be used to define operation.
 - Record the pounds per hour of waste throughput and the type of waste processed.
2. The permittee shall restrict operation of the portable pilot plant to 350 hours per month. In addition, the permittee shall restrict operation of the portable pilot plant to between the hours of 6am and 10pm during each day of operation.
3. The permittee shall perform laboratory testing of a sample of the cleaned syngas to be combusted by the generator within 40 hours of beginning operation and repeat this testing after 500 hours of operation. The permittee shall analyze the sample for dioxin/furan/PCBs, the 17 polycyclic aromatic hydrocarbons (PAHs) listed in the Agency for Toxic Substances and Disease Registry (ATSDR) and a full metals analysis, including mercury, lead and cadmium.
4. The permittee shall provide the Department with notification of the intent to test, including a test protocol for approval, as required under s. NR 439.07, Wis. Adm. Code. The permittee shall address all

questions related to the testing to Mr. Andy Seeber of the Department at (608) 267-0563 or andrew.seeber@wisconsin.gov.

5. The permittee shall modify all exhaust stacks, excluding the flare, to be vertical and unobstructed while the portable pilot plant is operating. Exhaust stacks include the retort oven burner stack, the engine generator stack, and the cooling tower exhaust. The flare shall exhaust at a height of 13 feet above ground level, and may exhaust horizontally.

6. The permittee may not operate the portable pilot plant in such a way that any exhaust stack is within 5 times the height of the tallest nearby building. The shipping containers for the portable pilot plant are not considered buildings.

The following tentative trial plan has been established to describe progress after a Research and Testing exemption final approval has been granted. The proposed research and testing may not consume more than 12 calendar months.

August 15, 2011: Commence operation under the research and testing exemption.
August 15, 2012: Complete operational testing under the research and testing exemption. Cease operating pending regulatory approval, as applicable.

Based upon current code, Alliance may be required to submit a construction permit and operation permit revision to permanently operate the portable pilot plant when the R&TE period expires.

Under s. NR 410.03(b)1., Wis. Adm. Code, the fee associated with the issuance of a Research and Testing exemption is \$1250.

As requested, a copy of the public notice is attached so you may expedite the process. It should be published for one day in the Green Bay Press Gazette. In return, you must provide me a notarized proof of publication prior to the research and testing exemption issuance.

Please be advised that this is only a preliminary determination and that the proposed project may not commence until the Department has issued its final determination. If you have any questions regarding this matter, please feel free to contact me at (920) 303-5432.

Sincerely,

Jonathan Wright
Air Management Engineer