

November 18, 2002

BY CERTIFIED MAIL

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**Re:     *United States et al. v. Gopher State Ethanol, Inc.***  
***D.J. Ref. 90-5-2-1-07784/8***  
***Comments to Proposed Consent Decree***

Dear Mr. Sansonetti:

Pursuant to 28 CFR Section 50.7 and the *Federal Register* notice of October 24, 2002 (Volume 67, Number 206, Page 65365, the Minnesota Department of Health (MDH) takes this opportunity to comment on the proposed Consent Decree (CD) in the above referenced matter.

### **Introduction**

The Minnesota Department of Health's (MDH) involvement with Gopher State Ethanol (GSE) began when the Minnesota Pollution Control Agency (MPCA) requested our assistance in addressing the numerous health and odor complaints from the public regarding GSE's emissions. The health complaints included shortness of breath, difficulty breathing, skin rashes, headaches, changes in sleeping and eating patterns. MDH, in Cooperative Agreement with the U.S. Agency for Toxic Substances and Disease Registry, released a *Public Health Assessment* for public comment that categorized GSE as an indeterminate health risk for a lack of sufficient emissions data.

GSE's original permit from the MPCA only monitored ethanol and methanol in the company's Distillers, Dried Grain, Solids (DDGS) dryer stack. Given the lack of sufficient data to conduct an assessment, MDH requested additional testing for Volatile Organic Compounds (VOCs). The data from these additional tests lead state and federal regulatory agencies to re-evaluate and modify the process by which ethanol plants are permitted and regulated. The proposed CD at issue was born from that process.

### **Proposed consent decree**

The GSE CD requirements are welcomed, and will hopefully result in much needed improvements in GSE's operations. However, the location and condition of the GSE facility pose concerns not associated with other ethanol plants in Minnesota. MDH is concerned that the terms of the proposed CD do not address these issues.

GSE is located within a very densely populated area. Since GSE began operating in April 2000, local residents have lodged hundreds of complaints of foul odors, excessive noise, and negative health effects. These complaints have been logged by city and state officials.

Fugitive emissions. GSE is housed in a brewery that is over 100 years old. The brewery was retrofitted to house the ethanol (gas additive) plant. Although some portions of GSE's facility are new construction, other portions of the facility, including some production equipment, are very old. Given the age and deteriorated condition of this equipment there are extensive fugitive emissions throughout the facility. (See attached Figures 1-6 *Gopher State Ethanol Public Health Assessment, Public Comment Release*, Minnesota Department of Health Under a Cooperative Agreement with the Agency for Toxic Substances and Disease Registry. June 2002, Figures 7-10 *Gopher State Ethanol Ventilation Review*, Knutson Ventilation Consulting, Inc. March 8, 2002.) For example, Figure 5 illustrates fugitive emissions from the centrifuge and associated corrosion. The corrosion indicates the presence of caustic agents in the exhaust.

For example, many rooftop emissions have not been chemically characterized, and are not included in air modeling or permit limit calculations. When the brew kettles are filled with caustic agents and hot water for cleaning, the vapors are vented out the roof untreated. A large volume of water soluble VOCs are sent to the sanitary sewer when the corn mash is de-watered. These emissions have not been quantified, and some may evaporate to air. MDH believes these fugitives emissions could be a significant source of irritant vapors, Hazardous Air Pollutants (HAPs), and odors and could be responsible for ongoing citizen complaints.

The CD does address fugitive emissions by requiring ethanol plants to implement a Leak Detection And Repair (LDAR) program. However, given the complexity of fugitive emissions at GSE, MDH believes that the LDAR program should have a compliance schedule for all the current fugitives at the facility. Compliance with "source wide" emission caps should include all emission points from inside GSE buildings, roof top vents, and discharges into the sanitary sewer.

Control devices. The CD requires that GSE install specific control devices on certain process equipment. However, these proposed requirements will not address the inherent flaws associated with a retrofitted ethanol production system, parts of which are very old. Since GSE began operation, these systemic flaws have resulted in numerous accidents and mechanical failures, resulting in uncontrolled emissions.

For example, the St. Paul fire department has responded to at least two fires in the Thermal Oxidizer (TO), and two anhydrous ammonia releases. In one event, fire department records estimated that 8000 pounds of anhydrous ammonia were released into the air in high concentrations a short distance from resident's homes. Note that these events can occur at any given time because ethanol production is a 24-hour operation. Some of these events have been video recorded by news media, and have been reported to the Minnesota Duty Officer in the Division of Emergency Management. MDH has documented some of these events in its GSE Public Health Assessment. MDH is concerned that GSE's continued use of retrofitted plumbing and other mechanical systems will result in ongoing poor operating conditions, mechanical failures, and uncontrolled emissions that negatively impact the surrounding neighborhood.

Also of concern is the timeline by which the required control devices must be installed. The proposed Pollution Control Equipment Installation Schedule contained in the CD does not specify how long GSE may continue to operate without required control devices, specifically, the TO. Meanwhile, residents near GSE continue to be exposed to uncontrolled and uncharacterized emissions, as they have since GSE began operation in April 2000. MDH believes that it is important that the proposed time line for emission control implementation should be shortened.

Process monitoring. While the proposed CD contains provisions for monitoring required control devices, it does not contain provisions for monitoring other ethanol production systems/equipment. GSE has had endless mechanical failures resulting in upset operating conditions leading to unpredictable emissions. Currently, there is no process by which such incidents are reported to government officials. MDH believes that it is important for the CD to include regulatory provisions for mandatory monitoring and reporting of other operating conditions and processes, including mechanical failures resulting in uncontrolled emissions to appropriate government agencies.

Noise pollution. Data collected by the City of Saint Paul and the MPCA have shown consistent exceedances of both the night and daytime noise decibel limits. The proposed CD does not include any provisions regarding noise. If GSE receives any federal subsidies, perhaps the CD should include a provision regarding noise abatement as specified in the

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Clean Air Act.

Thermal oxidizer operation. The proposed CD states: "Gopher State's thermal oxidizer was installed in June, 2000 . . . and has operated since that time." In fact, the TO was not operational until June 2001. Additionally, it has operated only sporadically since that time due to mechanical failures and fires. Currently, the TO is inoperable, and has been since September 2002. Therefore, some of the emissions that were being routed through the TO are no longer being treated. Since the TO has been inoperable, GSE has also modified its operations to ship the spent corn mash off the premises wet ("wet process.") The number of health and odor complaints received by the City of Saint Paul and MDH have increased during this period. MDH is concerned that the "wet" process may result in additional emissions.

MDH is concerned that the proposed CD does not include any operating requirements or restrictions if the TO becomes inoperable for any given period of time. MDH also believes that emissions resulting from the "wet" process should be investigated and monitored for HAPs, VOCs, and odors.

VOC regulation and monitoring. The proposed CD includes regulation and monitoring of specific VOCs. Drier stack testing at GSE found glycerol to be the most common contaminant emitted. Glycerol is very irritating when inhaled. However, glycerol is not included in the proposed list of VOCs. MDH believes that it is important to include regulation and monitoring of this VOC in GSE's thermal oxidizer inlet and outlet.

Thank you for the opportunity to comment on the Consent Decree.

Sincerely,

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cc: Karen Studders, Commissioner, Minnesota Pollution Control Agency  
Cynthia A. King, USEPA Region 5