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WISCONSIN STATE LEGISLATURE ... PUBLIC HEARING - COMMITTEE RECORDS

2003-04

(session year)

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INFORMATION COLLECTED BY COMMITTEE FOR AND AGAINST PROPOSAL

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- Hearing Records ... bills and resolutions (w/Record of Comm. Proceedings)
 - (**ab** = Assembly Bill) (**ar** = Assembly Resolution) (**ajr** = Assembly Joint Resolution)
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* Contents organized for archiving by: Stefanie Rose (LRB) (August 2012)



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Help

Alternative to MTBE

MTBE has been used in higher concentrations in the US since 1992 in reformulated gasoline, oxygenated fuel and premium grades of unleaded gasoline to fulfill the US Congress oxygenate requirements set out in the 1990 Clean Air Act (CAA) amendments. More details of the CAA can be found here.

Oxygen helps gasoline burn more completely, reducing harmful vehicle emissions. It also displaces gasoline components such as aromatics and sulfur. Most refiners use MTBE over other oxygenates primarily for its blending characteristics as well as for economic reasons. Used as a substitute for leaded additives in gasoline, MTBE increases the octane level for gasoline, measured by the Research Octane Number (RON). RON measures the ability of gasoline to avoid engine "knock".

However, the US Environmental Protection Agency (EPA) in 1999 recommended the amount of MTBE in gasoline be reduced because of the hazards the additive poses to drinking water supplies nationwide. Research reports were also claiming the chemical was carcinogenic, although this was widely debated.

Similar to MTBE, aromatics such as toluene serve to boost octane levels but can only be used to replace MTBE in limited amounts as they increase toxic emissions, for example benzene. There are a few other non-aromatic octane boosters such as alkylates, isomerates and ethanol, but they are very limited in terms of both octane contribution and supply availability. Each of the various alternatives has several advantages and disadvantages. Click here for a comparison of the key properties of the most commonly used oxygenates and gasoline.

While the debate about whether MTBE is the best additive for cleaner gasoline continues, ethanol has emerged as a strong contender. Some lobbyists have stated that the two most viable alternatives to MTBE are ethanol and no oxygen requirement in gasoline. However, no oxygenates would require a change in the CAA or a waiver from the oxygen requirement in the CAA.

Ethanol or Ethyl Alcohol is produced chemically from ethylene or biologically from the fermentation of corn and other agricultural products. Ethanol, used as a gasoline octane enhancer and oxygenate, increases octane numbers by 2.5 to 3.0 at 10% concentration. Ethanol can also be used in higher concentration as E85 (85% ethanol and 15% gasoline) in vehicles optimized for its use.

Below is a detailed comparison between the key characteristics of MTBE and ethanol:

More Info

[MTBE ban: Latest](#)
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[MTBE alternative](#)
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Characteristic	MTBE	Ethanol
Average current volume used	290,000 b/d	110,000 b/d
Octane index	110	113
Volume needed for RFG at 2 weight % O2	11 % volume	5.7 % volume
Share of RFG program ¹	85-90 %	10-15 %
Volume of US gasoline pool	About 4 %	About 1 %
Vapor pressure (psi)	7.8 (neat) 8.0 (blending)	2.3 (neat) 18 (blending)
Blending properties	Can blend at refinery (gasoline production site); Can ship via pipeline systems	Cannot pre-blend at refinery; Cannot ship via pipeline, requires separate storage
Emission impacts at 2 weight % O2 blending in gasoline (-) adverse impact (o) no impact (+) favorable impact (++) highly favorable impact	NOx : (o) VOC : (+) CO : (++) PM : (+) Toxics : (++)	NOx : (-) VOC : (o)/(-)** CO : (++) PM : (+) Toxics : (++) ** - adverse impact with 1 psi waiver
Water solubility	4 % maximum	100 % (infinitely soluble)
Benzene, Toluene, Ethylbenzene, Xylene (BTEX) plume impacts	Can move ahead of plume Use as indicator of gasoline release	Can extend BTEX plumes by up to 75 % Difficult to analyze in water at low concentrations
Remediation/cleanup	Numerous technologies available for remediation; Varying cost impact based on plume length	Cannot readily be removed from water media; Impact on BTEX removal unknown
Biodegradation potential	Readily degrades in presence of dissolved oxygen (DO); Uncertain rate of degradation in absence of DO	Readily biodegradable under most conditions; High concentrations could kill off microorganisms
Health Classification ^{2,3}	Not labeled by IARC, NTP, IPCS, Prop 65, EC/EU	Known carcinogenic to humans
Other health effects	None confirmed	Causes birth defects and nervous system dysfunction

Aquatic species effects	Low toxicity to most fish and other aquatic species	Moderately to highly toxic to some fish/aquatic species
Highway Trust Fund	No impact	Reduces HTF by between \$600-mil and \$1.2-bil per year
Material compatibility	Compatible w/approved UST and auto components	Can degrade fiberglass UST; Corrosive to some auto metal parts
Environmental	Low taste & odor properties can impact water quality	Herbicides & pesticides in corn production - significant pollution impact
Federal tax subsidy ⁴	No subsidy provided	\$0.54/gallon blended

Notes:

1. Reformulated Gasoline (RFG) program is 32-33% of the total US gasoline consumption.
2. Alcoholic beverages are classified worldwide as known human carcinogens; ethanol is the primary and (single) common ingredient in these beverages.
3. IARC - International Agency for Research on Cancer; NTP - (US federal) National Toxicology Program; IPCS - International Programme on Chemical Safety; Prop 65 - California Proposition 65 Carcinogen Identification Committee; EC - European Commission Working Group on Classification of Dangerous Substances.
4. Federal fuel tax credit given to each gallon ethanol blended; various state tax credits may also apply.

Source: Asian Clean Fuels Association



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McGINLEY ASSOCIATES, P.A.

26 August 2003

Mr. Steve Neitzel
Chairperson
City Council of Horicon
Horicon, WI 53032

RE: Proposed United Ethanol Facility in Horicon, WI

Dear Mr. Neitzel:

I have been retained as an expert consultant and witness by Garvey & Stoddard, S.C. and the Citizen's Committee for the Preservation of Horicon. I am submitting this letter to address air emissions and odor at the proposed United Ethanol facility. In preparation of these statements, I have reviewed the Delta-T process overview submitted by United Ethanol to the City of Horicon and other closely related ethanol industry information.

I have prepared these comments in the context of my direct experience with the grain processing industry and, specifically, the corn processing, ethanol production, and fuel refining industries. In 1974, I was a permit and enforcement engineer at the Minnesota Pollution Control Agency assigned to the grain and oil processing industries including corn processing and fuel refining. As an independent environmental consultant since 1980, I have worked for grain processing, oil refining, and ethanol production facilities. Specifically, in 1999 I worked for the AgriEnergy cooperative of Luverne, Minnesota, directing the investigation of air emissions that were causing health effects in the community of Luverne. Since 2001 I have worked for the City of St. Paul assisting with the investigation of air emissions from the Gopher State Ethanol facility. A copy of my CV is attached to this document as Exhibit A.

Since 1999 the ethanol industry has discovered that a 40-million gallon per year ethanol production facility, without air emission controls, emits over 200-tons per year of volatile organic compounds (VOC's) and over 300 tons per year of carbon monoxide. The following air pollutants are known to be part of the air emissions of ethanol production facilities:

1. Carbon Monoxide
2. Ethanol
3. Methanol
4. Formaldehyde
5. Acetaldehyde
6. Furfuraldehyde
7. Acetic Acid
8. Lactic Acid
9. Acrolein

PAGE 2 of 2 Proposed United Ethanol Facility in Horicon, WI

It is important to point out that the US-EPA does not regulate odors and is not concerned with odors. The control technology of thermal oxidation of VOC's, which the EPA has accepted for the DDGS dryer, has not undergone a rigorous technical review. Furthermore, carbon monoxide air emissions from existing thermal oxidizers at ethanol production facilities are a continuing concern of the US-EPA. In this case, the proposed United Ethanol facility for Horicon will have over 100-tons per year of carbon monoxide air emissions from the proposed DDGS thermal oxidizer alone.

The proposed United Ethanol facility for Horicon will have six categories of air emissions that will contain the above-mentioned noxious pollutants.

1. DDGS processing (drying or wet cake handling)
2. Fermentation process vents (a.k.a. fermentation scrubber/CO2 scrubber)
3. Distillation process vents (a.k.a. distillation scrubber/process scrubber)
4. Ethanol storage and load out units
5. Miscellaneous process vents (i.e. methonator, centrifuge, stillage)
6. Fugitive emissions (i.e. building vents, pump seals, storage tanks)

The air emissions of the proposed United Ethanol production facility in Horicon, WI, will include pollutants, hazardous air contaminants, irritants, and odorants sufficient to affect the quality of life and cause health effects to citizens and visitors of the Horicon area. The non-specific symptoms that will be experienced by Horicon citizens will be consistent with non-specific health effects and symptoms reported by citizens of the City of St. Paul related to the Gopher State Ethanol facility.

Some citizens of Horicon will experience the following symptoms from the proposed United Ethanol facility air emissions: headaches, nausea, and eye and throat irritations.

In my professional opinion, there will be frequent odors within ¼ mile of the proposed United Ethanol facility and there will be occasional odors up to and beyond ½ mile of the proposed United Ethanol facility.

Thus, approval of the United Ethanol plant will surely result in a new irritating and annoying odor in your community.

Respectfully submitted,

Charles M. McGinley, P.E.



CAMBRIA FACILITY EXPANSION PLAN

PROJECT SUMMARY

December 19, 2002

Project Summary- Didion Milling Expansion Plan

Didion Milling has been asked to provide additional information regarding the proposed expansion plan. The following pages contain information about the production of ethanol. This information is preliminary and based on information from existing ethanol facilities and engineering firms. The final data will be determined as systems are engineered, processes are designed and modeled, and permits are applied for. After approval of the site plan, the ethanol facility will require the following permits and plans prior to construction and operation.

WDNR Air Quality Permit

WPDES Permit (Wisconsin Pollutant Discharge Elimination System)

High Capacity Well Permit

Industrial Storm Water Discharge Permit

Storage Tank Registration

American Society of Testing Materials Spill Plan

Village of Cambria Sewer Discharge Permit

State of Wisconsin Building Permits

Columbia County Haz-Mat Plan

The Cambria Community will have the opportunity to view and comment on the various permits as they are applied for. We hope that this additional information answers any questions you may have on the project. Please contact John or Dow Didion at 920-348-5868 if you require additional information.

For purposes of this document, "DMI" means Didion Milling, Inc.; "Village" means the Village of Cambria; "DNR" means the Wisconsin Department of Natural Resources.

1. **General Description**

Didion Milling, Inc. (DMI) proposes to construct and operate a grain ethanol facility in the Village of Cambria. DMI intends to process 14.3 million bushels of corn annually and produce 40 million gallons per year of denatured fuel-grade ethanol, 128,574 tons/year of Dried Distillers Grain with Solubles (DDGS) and 120,000 tons/year of Carbon Dioxide. DMI will construct this facility on their current site located on the Southeast side of the Village of Cambria, Columbia County, Wisconsin.

The facility is estimated to have six main air emissions stacks, which does not include other stacks that may be for servicing insignificant emissions sources or miscellaneous ventilation equipment. It is proposed that two of the stacks rise to a height of 30 feet above grade, two are 45 feet, one is 50 feet, and the one dryer stack is 175 feet above grade to achieve greater air dispersion. The stack for the rotary kiln dryer will be approximately 175 feet tall and is the discharge point for emissions from the dryer and boilers. The nitrogen oxides come from the combustion equipment and the VOC's come from the storage tanks and process vents. The PM comes from the bag filters and dryer stack. With the addition of the thermal oxidizer, the facility will be considered a minor source by the EPA.

Sanitary wastewater discharges are proposed for conveyance to the Village wastewater treatment facility. The specific methods for handling proposed discharges of cooling tower blow down, boiler blow down and water softener blow down to Duck Creek have not yet been determined; potential scenarios include discharging via a storm water retention pond or through a dedicated outfall to Duck Creek. All discharge options are contingent upon meeting DNR effluent standards and / or monitoring requirements, which would be contained in their WPDES discharge permit.

Industrial storm water handling will be one of containment and control. Containment at DMI will occur through the use of dikes, drains and elevated roads.

It is anticipated that the DMI will begin site-grading in February 2003 (upon receiving appropriate DNR construction site permits,) with plant construction commencing in or around March 2003. Plant start-up is slated for December 2003.

A high-capacity well (400-500 gallons per minute) will be constructed to provide the requirement for utility and process water. Siting of this well will be determined through the analysis of test wells and DNR permitting. Initial water usage at start-up will be 200 GPM. At full capacity usage will be 350 GPM.

Process Description

The dry mill ethanol production process consists of the basic steps described as follows:

1) Existing Grain Handling & Milling

Whole corn would be delivered to or shipped from the facility either by rail or over the road transportation systems.

The whole corn and DDGS enter and exit the facility through the grain handling section of the plant, which consists of receiving bins, material transfer equipment, conveyors, elevators, conditioning bins, weigh scales and associated buildings and equipment.

2) Starch Conversion

This process breaks down all starch available in the corn, converting it to sugar. Milled corn is blended with water

backset (re-used process water) and alpha-amylase enzyme to form a mash, which is transferred to a retention vessel to allow time for the water and enzyme to soak into the grain particles. Steam is injected into the flow of mash to raise the temperature and pressure in the vessel to cook and sterilize the mash. The mash is then diluted and cooled for fermentation. Starch conversion is a continuous flow process.

3) Batch Fermentation.

Fermentation involves the conversion of sugars (dextrin) in the mash to ethanol. The process begins by adding yeast and gluco-amylase enzyme to the mash and transferring it to a fermentation tank. The enzyme breaks the dextrin down into glucose, a simple sugar, which is converted by the yeast to ethanol and carbon dioxide (CO₂). The ethanol goes into solution with the mash to make beer. The CO₂ flows to a scrubber that captures the ethanol vapor and is recovered. After approximately 48 hours, all sugars are consumed and the entire contents of the fermenter are pumped to the beer well. The ethanol concentration at this stage is about 12 percent by volume. The empty fermentation tank is then rinsed and cleaned for the next batch.

4) Distillation/Dehydration.

In this process, the ethanol is separated from the beer and purified to 200 proof (anhydrous ethanol). Beer is pumped continuously from the beer well to the top of the stripper column. Steam is injected at the bottom of the stripper and ethanol travels up the column as a vapor. Water and remaining corn solids travel down and out of the stripper as a liquid. The ethanol vaporizes and reaches 186 proof at the top of the stripper. The water from the stripper with the ethanol works its way down and out the bottom. The 186 proof ethanol is pumped through a vaporizer/super heater and the resulting vapor flows through one of three molecular sieve beds. The sieve material in the bed adsorbs the remainder of the water and 200 proof ethanol vapor flows out of the bottom. The 200 proof ethanol is condensed and pumped through a cooler to a storage tank. The flow of 186 proof periodically alternates from one bed to the other. The bed not in use is regenerated by vacuum. The product from regeneration is 130 proof ethanol that is condensed and pumped back to the rectifying section of the stripper column.

5) By-product Processing.

Stillage, a by-product of distillation, consists of the remaining solids and water coming off the bottom of the stripper column. The stillage is dried for storage and shipped primarily to cattle feeders. Processing begins with the whole stillage being centrifuged to yield thin stillage and solid fractions. The thin stillage becomes backset water for the cook (starch conversion) system and fed to the evaporator. The evaporator removes the water from the thin stillage to create 38 percent dry matter syrup. Syrup is pumped to the mixing auger to be combined with the wet distillers grains (solids coming off the centrifuge). The mixture is conveyed into drum dryers where it is dried. Discharge air from the dryer is vented through the thermal oxidizer.

2. Purpose and Need

The purpose of this project is to produce ethanol for blending into Wisconsin and United States motor fuel supplies.

The agriculture sector will be the primary economic beneficiary of this project because low-value starch in corn will be extracted and sold as ethanol and carbon dioxide. Value added to corn at the local levels is one of the driving factors of this project. The fat and protein from the corn kernel remaining after ethanol production will be sold as a high-value animal feed, primarily to Wisconsin's dairy industry.

Currently, Wisconsin dairies pay transportation costs for similar products to be shipped from other states. Local production of distillers grains will reduce the cost to local users and the net amount of fuel required for that transportation. Over 350 million bushels of corn are produced annually in the state, 200 million of which are within a 100-mile radius of Columbia. This corn is currently fed to livestock, processed into corn flour or exported out of state. According to the Wisconsin Energy Bureau, approximately 140 million bushels of corn is exported from Wisconsin

annually. DMI anticipates that the majority of its corn will be purchased from Wisconsin producers. The corn used by DMI could potentially reduce the export quantity, keeping both the corn and jobs associated with its processing in the state, specifically the Columbia County region.

It is expected that the production of the high-protein co-product DDGS will have an impact on the local livestock sector. DMI estimates that the market potential for DDGS in Wisconsin is 2.2 million tons per year. Hogs, turkeys and chickens are potential consumers of DDGS although it has been more readily accepted in beef and dairy cattle feed rations of late. The direct competitors to DDGS in the high protein supplement market are corn gluten feed (CGF), dry brewer's grain and mill feeds.

This blending of ethanol is expected to result in a number of environmental benefits. The production of ethanol reduces greenhouse gases by producing energy from field crops instead of hydrocarbons extracted beneath the earth's surface. Energy grown, processed and recycled above the earth's surface does not provide a net increase in greenhouse gas emissions.

The Clean Air Act Amendments of 1990 ("The Act") created the reformulated gasoline program (RFG) to improve air quality by reducing emissions from automobiles in cities across the country that exceed public health standards for smog, also known as ground-level ozone. The Act requires refiners distributing gasoline in the nine severe ozone non-attainment areas to reduce volatile organic compounds (VOC) and toxic emissions by 15% (27% and 20%, respectively, in phase 2 RFG which began January 1, 2000). A key component of this program is the addition of oxygenates such as ethanol and MTBE, which provide clean octane and replace cancer-causing aromatics. Refiners have chosen to use MTBE in approximately 85% of RFG, while ethanol is used in about 11% of RFG, primarily in the greater Chicago/Milwaukee RFG area.

Ethanol provides an alternative to MTBE or Methyl Tertiary Butyl Ether, which has a contaminating effect on water. As a consequence of the growing concerns regarding MTBE water contamination, there is interest in moving to prohibit or significantly reduce MTBE use. A Blue Ribbon Panel formed by the EPA concluded that MTBE use should be "reduced or eliminated." California, Iowa, South Dakota, Arizona and Minnesota have enacted MTBE controls. Many other states and the U.S. Congress are considering legislation to impose MTBE controls.

The advantage of MTBE over ethanol is in controlling the final product's volatility. Neat ethanol has a very low vapor pressure (a measure of the propensity to evaporate). When ethanol is blended into gasoline at usual ratios (five to ten percent), the resulting blend will have an increase in its vapor pressure. In conventional gasoline, this may result in increased evaporative VOC emissions. In the RFG, the increased volatility must be controlled. Controlling ethanol-blended RFG's volatility increases the cost of production slightly.

Ethanol blending is expected to reduce price pressure at the consumer gas pump while reducing carbon monoxide and other tail pipe emissions statewide and in the non-attainment areas of Milwaukee and Chicago.

Benefits to Cambria and Columbia County

The new 40 million gallon per year Didion ethanol expansion would have the following benefits on the Cambria community based on studies of comparable facilities:

It will cost approximately \$35 million to build and equip the 40 MGY dry mill ethanol plant. This cost represents expenditures for goods and services, most of which will be made in the local economy. Construction of the facility typically takes a year and the spending it pumps into the economy will generate a onetime boost of \$142 million in final demand as each dollar of spending circulates throughout the local economy.

The most significant value of building a new ethanol plant comes from the impact of spending for operations. A 40 MGY ethanol plant will spend more than \$56 million annually on goods and services ranging from corn or other grains to labor and utilities such as water, electricity, and natural gas. Most of these purchases will be made from local suppliers and every dollar spent on annual operations will circulate several times throughout the entire local economy. On an annual basis, a 40 MGY ethanol plant will generate the following economic benefits to the community in which it is located:

- Expand the economic base of the local economy by \$110.2 million

- Generate an additional \$19.6 million of household income
- Support the creation of as many as 694 permanent new jobs throughout the entire economy
- Generate at least \$1.2 million in new tax revenue for the state and local governments
- Generate additional revenue for local grain farmers by increasing demand for corn, in most circumstances results in an increase to the average local basis of an estimated 5 to 10 cents per bushel

3. Authorities and Approvals

Construction and operating environmental permits and approvals needed by DMI from the DNR include: An air quality permit; a WPDES (Wisconsin Pollutant Discharge Elimination System) permit for cooling tower bleed-off, boiler blow-down and water softener discharges to Duck Creek (unless these wastewater streams are instead sent to a publicly owned treatment works); a high-capacity well permit; an industrial storm water discharge permit, and storage tank registrations.

The discharge of cooling tower blowdown, boiler blowdown and water softener waters either directly to Duck Creek through a dedicated outfall or indirectly to Duck Creek through the DMI-owned storm water pond would require a WPDES permit(s) with appropriate limits to protect Duck Creek water quality and groundwater. A specific WPDES permit issued for discharges to Duck Creek and or the storm water retention pond will require a 30-day public notice period for public input and opportunity for submittal of informational hearing requests.

Any discharge to the Village of Cambria Wastewater Treatment Plant would require an industrial permit from the Village. Process waste waters will be treated through a "methanator", an anaerobic treatment system and effluent recycled back through the production plant with an intended zero discharge. During times of "methanator" upsets, performance problems or malfunctions that preclude recycling effluent, several days storage tankage for the effluent is planned and if full, the production facility will shut-down. Sludge from the "methanator" will be sold as seed sludge to other facilities. Any sludge intended to be land-spread would require a WPDES permit from the DNR. Sanitary wastes will be sewerred and go to the Village of Cambria Wastewater Treatment facility.

4. Estimated Cost and Funding Source

The estimated cost of this project is approximately \$35 million dollars. Financing is from private sources. DMI is participating with the Village of Cambria to determine the scope of a TIF District for road and utility improvements.

PROPOSED PHYSICAL CHANGES

5. Manipulation of Terrestrial Resources

The DMI site will be graded and reworked to allow plant construction. Soil from the site will be used. No soil will be exported.

6. Manipulation of Aquatic Resources

Wastewater

Approximately 600 gallons per day (GPD) of domestic sanitary wastewater will be generated and discharged to the sanitary sewer system. At full capacity an estimated 7200 GPD Boiler and softener blow-down along with 92,000 GPD of cooling tower bleed-off is proposed for discharge either directly to Duck Creek through a dedicated outfall or indirectly through the on-site storm water detention basin. An emergency connection to the Village sewer system is an option that can be considered but would require the Village's approval and an industrial discharge permit from the Village. As stated earlier, these are preliminary numbers. A high efficiency reverse osmosis system can have a positive effect on water usage. Actual numbers require water quantity testing and water and process system design.

Any discharge to the storm water detention basin or to Duck Creek directly will be monitored for flow (GPD) and any water quality testing parameters. It would need to meet appropriate effluent limitations in order to receive the required WPDES permit or permits. The industrial process design is intended for a "zero discharge" of process wastewater (water used for washing and cleaning facility production equipment and areas). No process water will be discharged from the facility to Duck Creek, and the facility will shut down if necessary (see Section 3).

Storm water

Storm water runoff quality and quantity are typically affected whenever property is developed. Soil erosion during construction and storm water runoff from buildings, streets, parking lots and other structures after construction have a negative impact on receiving waters by increasing the introduction of pollutants. Additionally, increased impervious areas, such as buildings, streets, and parking lots, increases runoff rates and the quantity of storm water runoff reaching receiving waters. To address these concerns and lessen the impacts, storm water runoff will be controlled during and after construction.

During site preparation by DMI, all land disturbing construction activities will be managed in conformance with the erosion control plan prepared in consultation with the DNR. DMI will remain in compliance with the construction site storm water discharge permit. During construction of the DMI plant, all disturbed soil will be managed properly through the use and maintenance of appropriate erosion control measures, including silt fence, stone ditch checks, aggregate construction entrance of vehicles, and sediment traps. Permanent storm water control measures will be installed and maintained by DMI, including stone weepers within drainage ways, vegetated drainage ways, an on-site "wet bottom" storm water retention basin, and permanent vegetation or other stabilization of all disturbed areas. Temporary and permanent erosion control and storm water management measures will minimize the discharge of sediment to adjacent properties, public streets, and waterways. The retention basin is designed to provide long-term water quality benefits by intercepting storm water runoff from the industrial park, allowing the capture of sediment and other pollutants before storm water release to Duck Creek. The DMI site will drain to the retention basin and the basin will safely convey the 100-year statistical storm event for Columbia County.

The DMI plant requires coverage under an industrial storm water discharge permit. The DNR's conferring of coverage under an industrial storm water discharge permit will be contingent upon DMI conforming to Subchapter II of NR 216,

Industrial Storm Water Discharge Permits, and adequately addressing potential contamination of storm water runoff from the facility during operation. Storm water contact with manufacturing processes and equipment, raw materials, waste products and by-products, and final products is expected to be minimal. Most activity, equipment, and materials will be contained within enclosed structures and, therefore, not in contact with storm water. All tank farms will be within a dike designed to contain storm water runoff or a spill volume of 1.25 times the largest tank capacity. Additionally, all tank farms have welded-in-place steel roofs and will lie within a protective berm designed to handle spilled product per standards set by the American Society of Testing Materials (ASTM). The bottom of the bermed area will be lined with stone and an impermeable plastic liner. Discharges from the dike area will be regulated via a manually operated valve.

Groundwater

DMI plans to construct a high-capacity well. The well and reservoir will be constructed and located in accordance with Chapter NR 812, Wisconsin Administrative Code. Chapter NR 812 is the regulatory standard for private and high-capacity wells. Chapter NR 812 contains well construction and pump installation requirements and well setback requirements. Chapter NR 812 requires that a high-capacity well approval be obtained for all wells with a production capacity of 70 gallons per minute (GPM). The approval process assesses the potential impacts to municipal wells and the approval may limit pumping or place other limitations on a high capacity well to prevent adverse impacts to nearby municipal wells.

If cooling tower and blow down discharge waters (described above) are conveyed to Duck Creek via the retention pond, there is potential for groundwater contamination. It may be necessary to determine to what extent the storm water retention pond is naturally lined. Construction of the pond in natural clay at the site could meet the NR 213 code requirements and be defined as a sealed lagoon. If there is not enough clay it will be determined because of additives whether or not the lagoon will have to be lined to protect groundwater in the area.

7. Buildings, Treatment Units, Roads and Other Structure

Site development will include the following:

- An approximately 175-foot high dryer stack.
- Approximately 50,000 square feet of enclosed structures; 25,000 square feet of above ground storage tanks.
- One 30,000-gallon horizontal ammonia storage vessel.
- Supporting structural steel for distillation columns.
- Miscellaneous pipe racks
- Cooling tower.
- Ethanol loading facilities for truck and rail shipments.
- Miscellaneous grain handling equipment including legs, screeners, conveyors and dust control equipment.

8. Emissions and Discharges

The proposed project will result in air emissions. The grain handling and milling, and ethanol manufacturing activities will generate particulate matter (PM) emissions, which can have respiratory effects on humans if not controlled. The particulate matter emissions from the grain handling and milling operations will be controlled using fabric filter bag-houses. The particulate matter emissions generated in the ethanol manufacturing processes will be controlled using a Thermal Oxidizer.

The ethanol production and processing will generate volatile organic compounds (VOC), which are precursors in photochemical reactions to form ozone in the lower atmosphere. High levels of ozone can be an irritant to the lungs, especially for the young and old. VOC emissions generated from the ethanol production and processing will be controlled using a Thermal Oxidizer.

9. Safety Systems

Chemical Leaks and Spills

Fifty percent (50%) caustic soda solutions will be received by bulk truck. The caustic is diluted for use in plant clean-in-place (CIP) systems. Three tanks within the Process Building store the various caustic solutions.

The buildings are connected via an underground wet well system. Therefore, any spill of chemical, wash down water and associated floor drop is centrally collected in an underground wet well in the process building. Contents of the wet well are pumped to the beer well for reprocessing via the distillation column.

Ethanol load-out facilities also use a separate collection system where product that could be spilled by accident or equipment failure drains by gravity to a sump located within the bermed area of the tank farm, is recovered and returned to beer well for reprocessing into the distillation column. Additionally, the loading facilities will include features typically used by the gasoline transport industry to reduce the risk of spill or leakage.

The SPCC plan will include a list of emergency phone numbers for reporting, response and general assistance. This will include local emergency responders, trained DMI staff and private contractors who may be used to contain or clean up a spill. Also, the SPCC plan will list equipment and personnel on-site that can be used to contain and clean up a spill. State law requires that spills be reported to local authorities and the DNR.

Spills of base materials while in transit to the DMI facility, whether by truck or by rail will be reported immediately and responded to by local responders. Because of the potential volume of materials lost, DNR wardens or other state spill response personnel are likely to respond to evaluate threats to surface water. Spills of finished product or other liquid products shipped off-site by truck or rail will also be reported immediately and responded to by local police and fire personnel. DNR conservation wardens and environmental staff will respond to evaluate threats to soil, surface water and groundwater. Clean-up activities, if necessary, will be overseen by DNR field personnel. In a major release of ethanol or other petroleum product to surface water, US EPA would supplement state and local response actions with federal support and resources in the emergency response and containment phase.

Central Alarming

The plant will use a central computer or distributed control system (DCS) with battery backup. Nearly four hundred (400) different points are monitored or controlled within the plants and its ancillary systems. Alarms alert plant operations to a condition that needs attention. The same computer system programmed by the same people has been successfully used in other ethanol plants.

Power Failure

In the event of a power failure, an emergency shutdown would occur resulting in no energy for control or transfer of material. Only minor power backup systems are planned to keep the plant heated and lights on in the event of a power failure. The DCS system has a battery backup to allow for the orderly shutdown of programs.

Product moving throughout the plant either stops moving or by gravity is sent to the lowest point. Valves default to the safe position to avoid pressure build-up. Start-up procedures are outlined in the standard operating procedures.

Pump Seal Failure

Discharges are contained and forwarded to the process recycle systems (beerwell and caustic tank) or, if organic, routed back to the bio-methanator for recycling.

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HORICON CITY COUNCIL MEETING
August 26, 2003
City Hall, Activity Room

* * * * *

Transcript of Proceedings

Date: August 26, 2003

Time: 7:30 o'clock p.m.

Reported By: Brenda J. Young

Dodge County Computerized Reporting
Catherine Thimm-Braunschweig
W11578 Minnema Road
Randolph, Wisconsin 53956
(920) 326-6116

1 records from the past 12 months of water pumpage.

2 If there's any additional demands on the
3 water system, with Well Number 4 out of service,
4 the other pumps would not be able to meet even
5 the average day's use. That's pumping 24 hours a
6 day.

7 So the city should consider adding an
8 additional well even before any additional
9 demands are placed on the system. Currently it
10 is my opinion that the city lacks sufficient
11 water capacity to supply their water system.

12 ATTORNEY STODDARD: Thank you,
13 Mr. Barkhahn. Is JoAnn Czajka here? JoAnn?
14 Maybe you could introduce yourself, where you're
15 from. Thanks.

16 JOANNE CZAJKA: Hi. My name is JoAnn
17 Czajka and I have the ethanol plant in my
18 backyard in Monroe. I just kind of want to
19 address just a few things of having it in my
20 backyard.

21 September 30th of this year it'll be a
22 year. Our downtown is dying down, too. It's
23 been a year. Has it brought new business? No,
24 not at all. So I'd like to see where it helped.
25 It didn't.

1 Property taxes decrease? No. Have I
2 lost good neighbors? Yes.

3 My nephew who's five refers to it as the
4 "iron giant" in my backyard. He calls before he
5 comes to visit. Jo-Jo, what's it like there?
6 Can I get out of the car?

7 The smell is horrendous. It kind of
8 goes in cycles. Kind of has a yeasty smell which
9 is tolerable, but the grain alcohol is awful.
10 It's not a pleasant smell. You can easily dry
11 heave from the car to my door 30 feet.

12 I enjoy gardening. Can I garden? Some
13 days. Depends on the wind. Right now in the
14 summer when the wind's from the south, I can
15 tolerate it a little bit more.

16 The other day I was out there ten
17 minutes. The wind changed directions. Shucks, I
18 had to go in the house. The wintertime and the
19 fall when the wind comes from the north, because
20 I'm on the south side, oh, the smell is awful.

21 I really plead that you guys consider
22 this. If you have to do an ethanol plant, five
23 miles out of town, ten miles out of town. Not on
24 the city limits. I'm in the last house in the
25 city limits in Monroe. It's not pleasant. Do I

1 consider moving? Not right at this point. Maybe
2 down the line I might. Would I be able to sell?
3 Doubtful.

4 I really invite Mr. Gardner, Mr. CEO of
5 the United Co-op to come to my house, spend a
6 week. I'll feed you all three meals on the deck.
7 We can't enjoy the deck. The smell is just
8 awful.

9 (Audience applause)

10 STEVE NEITZEL: Order.

11 JOANNE CZAJKA: Any of you guys, please
12 come down. Then you can get a real true sense of
13 what it smells like.

14 You know, I think about the fumes and
15 the horrible stench, but it really worries me
16 what I can't smell. What am I not smelling? I
17 have to admit, the Lena plant has had problems.
18 Their smell is much worse than Monroe's and
19 they're working on it.

20 You know, I'm kind of stuck with the
21 Monroe plant. There's politics in Monroe.
22 Citizens didn't have this chance to fight it.
23 Palms were greased. I was there. I tried.

24 So if Mr. Gardner's so willing to help
25 these farmers, don't build the ethanol plant.

1 I'm stuck with it in Monroe. Have him give the
2 discount to the farmers and ship that corn to
3 Monroe. Don't build the plant here. Don't
4 rezone. Don't open the door for that plant.
5 You'll regret it. I think that's about it.
6 Thanks.

7 ATTORNEY STODDARD: Thank you. Tom
8 Cheeseman. How much time have we got left? I
9 know we're getting --

10 STEVE NEITZEL: Steve, where are we on
11 time?

12 STEVE BOGENSCHNEIDER: You've got less
13 than three minutes.

14 ATTORNEY STODDARD: Three minutes?

15 THOMAS CHEESEMAN: Mine's really short,
16 no more than three minutes.

17 STEVE NEITZEL: Three minutes.

18 ATTORNEY STODDARD: Can we use some of
19 the time of some of our members that would
20 otherwise testify?

21 STEVE NEITZEL: No, your time has been
22 set. You're running on your time.

23 ATTORNEY STODDARD: Mr. Chairman, that's
24 unreasonable, I'm sorry.

25 STEVE NEITZEL: No, it isn't. You're

1 running on your time right now.

2 ATTORNEY STODDARD: If there are members
3 and they would be testifying, it's not going to
4 take any more time tonight.

5 STEVE NEITZEL: You were in the
6 structure and it was laid out ahead of time and
7 your time frame was given.

8 ATTORNEY STODDARD: I would respectfully
9 request another 15 minutes in order to be
10 meaningfully heard tonight.

11 STEVE NEITZEL: Your time and how you
12 have chosen to use it is up to you and this is
13 using it right now.

14 ATTORNEY STODDARD: Why don't you go
15 ahead, Tom.

16 THOMAS CHEESEMAN: Thank you. My name
17 is Thomas Cheeseman. I live at 139 West Lake
18 Street in the City of Horicon. This map is
19 United Co-op's vision of Horicon. This map is
20 Bill Gardner's vision of Horicon. This map is
21 United Ethanol's vision of Horicon. Their vision
22 is to wedge a petrochemical plant right into the
23 community of Horicon.

24 Respectfully I ask the Council, what is
25 your vision? What do you want for Horicon? More

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HORICON CITY COUNCIL MEETING

August 26, 2003

City Hall, Activity Room

* * * * *

Transcript of Proceedings

Date: August 26, 2003

Time: 7:30 o'clock p.m.

Reported By: Brenda J. Young

Dodge County Computerized Reporting
Catherine Thimm-Braunschweig
W11578 Minnema Road
Randolph, Wisconsin 53956
(920) 326-6116

1 nature than they are agricultural.

2 Having said that, let me call up now
3 Mr. McGinley. Charles McGinley is our air expert
4 and he's the principal with McGinley &
5 Associates. He's from Stillwater, Minnesota.
6 He's a -- an engineer and I'll let him give a
7 little more background on his qualifications and
8 where he's worked and then tell you -- go through
9 his report. Mr. McGinley.

10 CHARLES MCGINLEY: Thank you. My name
11 is Charles McGinley. I live in Stillwater,
12 Minnesota. I am a consultant. I am consultant
13 to the ethanol industry and to the cities that
14 are considering and have ethanol facilities.

15 It's my opinion that there will be
16 frequent odors within one quarter of a mile of
17 this facility as defined and as controlled,
18 controlled as required by the Wisconsin DNR and
19 the U.S. EPA and there are going to be occasional
20 odors up to one half mile and beyond.

21 I'd recommend that if you have an
22 ethanol facility near a community, it should be
23 at least 10,000 feet from the nearest residential
24 area. That's approximately two and a half miles.

25 I base these opinions on my experience

1 with working with cities and grain oil facilities
2 and ethanol plants.

3 I was a permitting and enforcement
4 engineer with the Minnesota Pollution Control
5 Agency in the early 1970s. I am currently a
6 consultant to the Minnesota Attorney General and
7 the Minnesota Pollution Control Agency regarding
8 odors of large animal confinement facilities and
9 ethanol plants.

10 I am currently designated as one of the
11 specializing experts designated by the Ramsey
12 County District Court to mitigate -- or mediate
13 that is, the disagreement between the City of St.
14 Paul and Gopher State Ethanol.

15 Two and a half years ago the ethanol
16 industry and the U.S. EPA and all of the state
17 agencies who were permitting ethanol plants came
18 to an epiphany. A light bulb came on in their
19 head after they were struck with new information
20 that all of the ethanol plants prior to --
21 permitted and installed prior to 2000 were
22 improperly permitted because they were permitted
23 as minor facilities and they were major
24 facilities.

25 All of the existing ethanol plants,

1 including those in Minnesota, over 15, have been
2 asked or forced to enter into consent agreements
3 with the U.S. EPA to install control equipment.

4 What does this have to do with odors?
5 If it was only odors, it would just be a
6 nuisance, but odors and compounds that cause
7 odors are not always just odors.

8 In the case of ethanol facilities, the
9 emissions include compounds that are more than
10 odors and some of them are designated by the
11 State of California as carcinogens.

12 Now what does this have to do with our
13 lack of trust with the U.S. EPA and the Wisconsin
14 DNR? Only in that they have only a limited
15 regulatory authority to limit these emissions.

16 If this facility was built and operated
17 without the thermaloxidizer, it would have over
18 300 tons of carbon monoxide emissions. It
19 doesn't smell and you can't see it and you know
20 what carbon monoxide is. But this facility is
21 only required to reduce the carbon monoxide to
22 less than 100 tons.

23 So unfortunately, of course, we have the
24 tests so far that have been conducted in
25 Minnesota with projecting for this facility would

1 have over a hundred tons, but giving this
2 facility the benefit of the doubt, this facility
3 under the U.S. EPA and Wisconsin DNR regulations
4 will have approximately 95 tons per year of
5 carbon monoxide and approximately 50 tons per
6 year of what the Minnesota Pollution Control
7 Agency calls the Dirty 8. And this is from the
8 staff of the Minnesota Pollution Control Agency.

9 These Dirty 8 include ethanol, methanol,
10 formaldehyde, acetaldehyde, furfuraldehyde,
11 acetic acid, lactic acid and acrolein.

12 Now this is after the thermaloxidizer.
13 The thermaloxidizer will not be controlling all
14 of the emissions. Any ethanol plant has quite a
15 number of emissions in different categories of
16 emissions and only the dryer is planned to have
17 the thermaloxidizer.

18 What does this have to do with odor,
19 just plain old odor? The U.S. EPA does not
20 recognize odor as a pollutant. The Wisconsin DNR
21 does not regulate odor. The Wisconsin DNR does
22 not regulate odor. It is a local jurisdiction.

23 Odor is a land use planning issue and
24 it's up to local jurisdictions to decide if a
25 certain amount of odor is acceptable to the

1 community.

2 So I believe you need to consider two
3 issues parallel but separate. The air emissions
4 that you trust the EPA and the U.S. -- the
5 Wisconsin DNR will control, but you have to
6 realize that they only have a limited regulatory
7 authority to reduce those emissions only so far,
8 not to eliminate them. Any words of eliminating
9 emissions or eliminating odors is absolutely
10 false and cavalier without regard for anything
11 technical.

12 The technical experts retained by the
13 proposed ethanol facility know this. The very
14 best that has been achieved is an 80 percent odor
15 reduction with the controls that are currently
16 considered best available control technology by
17 the ethanol industry and by the EPA and by the
18 Wisconsin DNR.

19 So when people talk about health
20 affects, we have to only and we can only look at
21 what the Minnesota Health Department did in the
22 health risk assessment, an assessment that was
23 published a year ago.

24 Their final opinion was that there was
25 insufficient information to make a determination

1 of the health risks of an ethanol facility,
2 insufficient information. They did not conclude
3 that there's not a health risk. They did not
4 conclude that it was safe. They concluded that
5 there was inadequate information and even as of
6 this date, the methods that are being applied for
7 testing ethanol plants are still under
8 development, but the technology does not exist
9 for reducing odors beyond 85 percent of an
10 uncontrolled facility.

11 Air modeling, air dispersion modeling
12 conducted by the U.S. EPA and the Wisconsin DNR
13 and the consultants for the ethanol plant will be
14 conducting modeling that ignores calm conditions.
15 In this part of the world, in Wisconsin there's
16 ten percent of the time you have calm conditions.
17 You know that and you know when the calm
18 conditions occur.

19 When there are calm conditions, the
20 pollution, the air emissions don't move. They go
21 up out of the stack and they accumulate. It's
22 called a fumigating plume and then when the calm
23 conditions end, that is a slight breeze develops,
24 the fumigating plume moves off site and that is
25 when odor emissions are noticed up to a mile

1 away. That occurs in different directions
2 because of the winds that develop after calm
3 conditions, the early morning hours specifically.

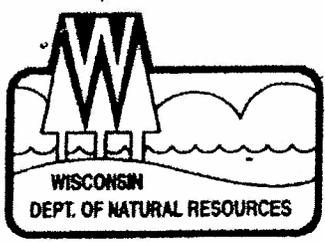
4 So you're going to have to consider and
5 trust the EPA and the Wisconsin DNR with regard
6 to the pollutants that are possible health
7 affects and hazardous air pollutants and carbon
8 monoxide and you're going to have to trust
9 yourself regarding the question of odor because
10 the odor issue starts and ends right here in
11 town.

12 Do you have any questions?

13 ATTORNEY STODDARD: Thank you,
14 Mr. McGinley. I realize we're getting short of
15 time. I'd like to call up David Barkhahn who is
16 with the DNR and I'd like to ask him to talk if
17 he can about water supply and give a little bit
18 of background about yourself. Thank you.

19 DAVID BARKHAHN: My name is Dave
20 Barkhahn. I am the municipal drinking water
21 engineer for the DNR. I have been in that
22 position for over 15 years now.

23 It is my job to oversee the municipal
24 water systems in Columbia, Dodge and Jefferson
25 Counties. As part of that -- as part of my job



State of Wisconsin | DEPARTMENT OF NATURAL RESOURCES

Jim Doyle, Governor
Scott Hassett, Secretary

101 S. Webster St.
Box 7921
Madison, Wisconsin 53707-7921
DG/2 Telephone 608-266-0821
DG/2 FAX 608-267-7650
TTY 608-267-6897

April 21, 2003

File Reference: 11-3-0025

DOW DIDION
PRESIDENT
DIDION MILLING INC
501 SOUTH WILLIAMS STREET
CAMBRIA WI 53923

SUBJECT: Application Not Approved for Two High Capacity Wells,
Request for Additional Information,
Town of Courtland, Columbia County

Dear Mr Didion:

The Division of Water, Bureau of Drinking Water and Groundwater, received an application for two high capacity wells, the application was submitted on your behalf by Jeff Kramer of Sam's Rotary Well Drillers. The application was received by the private water systems section on February 24, 2003. On March 5, 2003, the department requested additional information, that information was partially provided to the department on March 31, 2003 by e-mail, however the provided information was incomplete. On April 18, 2003, the department requested additional information by e-mail, a copy of the e-mail is attached.

The attached e-mail also asked if you would like the department to proceed on the high capacity well review without us waiting for the non-pressurized storage vessel information. I did not get a response. Almost everyone, when asked that question wants the department to continue the review, so I assumed that would be your answer. Thus, I have continued the high capacity well review when I did not receive a response to the April 18, 2003 e-mail.

Section NR 812.09(4)(a)1., Wisconsin Administrative Code, states the following:

"The department may deny approval, grant a limited approval or modify an approval under which the location, depth, pumping capacity or rate of flow and ultimate use is restricted so that the supply of water for any public utility, as defined by s. 196.01, Stats., will not be impaired. Reduced availability of groundwater to a public utility well may be indicated when calculations using estimated values for aquifer characteristics result in 10 or more feet of water level drawdown in the public utility well based on 30 days of continuous pumping from the proposed high capacity well or well system. . . ."



April 21, 2003

Page 2

Thus, the department has to review each high capacity well application to determine if it may impair a well operated by a public utility.

For this analysis for your site, the department identified the nearby wells operated by a public utility and reviewed aquifer characteristics from the area. The wells with Wisconsin Unique Numbers BF359 and OU123 are the nearest wells operated by a public utility, specifically the Village of Cambria. There was another public utility well with a Wisconsin Unique Number of BF358, however that well has been abandoned and is not applicable for this analysis. As noted in the attached e-mail, the department received conflicting information on proposed well locations. For this analysis, it is assumed that the location of the proposed wells is slightly east of Highway 146 and slightly north of Cabbage Road, which would mean that the proposed well locations are approximately one mile from each of the public utility wells operated by the Village of Cambria.

There is pumping test data from OU123, however the department files do not have any analysis of that pumping test data. The department performed both Cooper-Jacob and Theis curve matching analyses from that data and estimated that aquifer transmissivity is in the range of 5,500 to 5,900 feet squared per day.

Based on an inspection of drill cuttings from OU123 and from another test well nearby, the Wisconsin Geological and Natural History Survey is of the opinion that OU123 draws water from a single aquifer. The ground surface elevation of that well is approximately 995 feet above mean sea level (MSL) based on an inspection of the topographic map, and it appears that your proposed well location is approximately 860 to 870 feet above MSL. The department believes that the proposed ethanol plant wells would also draw water from this same aquifer. Therefore, the aquifer data from the pumping test from OU123 is applicable for this analysis.

Generically, pumping test data from pumped wells does not provide reliable aquifer storage coefficient data, the best data is from observation wells located at a distance from the pumped well. Such data is not available in department records for the test at OU123. Therefore, the pumping test data from OU123 was not used to estimate the aquifer storage coefficient. The department frequently uses a storage coefficient estimate of 0.0002 as a generic rule of thumb for confined aquifers. Another rule of thumb based on an aquifer thickness of 300 feet results in a storage coefficient estimate of 0.000274. For the analyses at your site, the department used storage coefficients from both rules of thumb.

Based on an aquifer transmissivity of 5,500 to 5,900 feet squared per day and based on storage coefficient estimates of 0.0002 to 0.000274, and assuming that both proposed wells are operating at a total capacity of 1,000 gpm, the estimated drawdown that would occur in the aquifer one mile from the proposed wells after 30 days of operation ranges from 10.25 to 11.71 feet.

As noted above, the department may restrict the operation of a high capacity well if it determines that the estimated drawdown at the location of a well operated by a public utility may exceed 10 feet. Due to the anticipated

drawdown of over 10 feet at the public utility wells, the department has determined that your proposed two wells, each of which have a proposed pumping capacity of 500 gpm will not be approved.

Based on the above, the department has determined that the following are your options:

1. The department will only approve a combination of wells that does not exceed a total of 850 gpm. Therefore, the department would be willing to approve two wells of 425 gpm capacity. If this is the option that you select, please provide the manufacturer and model number of the proposed pump and calculate total dynamic head during pumping. The approval would specify brand and model pump.
2. If however you conclude that you need more total capacity than 850 gpm, another option is to perform a high quality pumping test after one or more wells are installed. Then perform a pumping test to determine if a more accurate transmissivity and storage coefficient can be determined that would allow you to pump more water. If you perform a pumping test, the department would be willing to re-evaluate the data to determine a revised total pumping capacity for the property. The department would also have to review the raw data from the test. If you choose this option, the department strongly recommends that you submit a workplan for the pumping test to the department first for review, as we may have suggestions and recommendations.
3. If the Village of Cambria would not mind if you operate the proposed wells at a total capacity of 1,000 gpm, the department would be willing to approve of the proposed wells without any additional testing. Under this option, the department must receive a signed statement from the Village that states that the Village of Cambria will not object if the department issues an approval for two wells on your property that each have 500 gpm capacity. The signed statement should be on Village letterhead and would have to be from a responsible official, such as the mayor, director of public works, etc. Please note that if the Village later retracted such a statement, the department would then retract the high capacity well approval.

Since almost all of your property is equidistant from the location of the public utility well with a Wisconsin Unique Number of OUI23, simply shifting the proposed location of your wells is not a viable option. Another option that is not viable is to propose different well construction because there does not appear to be another prolific aquifer that is not intersected by a public utility well.

The department cannot complete the approval until additional information is provided, as follows:

- As noted in the attached e-mail, the application included inconsistent locations for the proposed well. Please clarify exactly where the proposed well locations are.

April 21, 2003

Page 4

- As noted in the attached e-mail, the submitted information is insufficient to perform a review on the non-pressurized storage vessel. Please provide additional information.
- The department anticipates that the water system would be classified as a public water supply, thus we need to know how many people will use the well on a daily basis. Therefore, how many employees do you anticipate for the ethanol plant?
- The department needs to know which of the above options you wish to select regarding our inability to approve two wells with a combined capacity of 1,000 gpm.

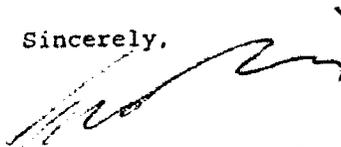
Once I receive the above information, I should be able to complete the review. When you or your contractor submit that information, please include the file number 11-3-0025 and submit it to:

George Mickelson
WDNR Mail Code DG/2
P.O. Box 7921
Madison, WI 53707-7921

I will keep the file at my desk for approximately a month. If I receive the information during that time, I should be able to process the approval faster than the turnaround time for a new application.

If you have any questions about this letter, please do not hesitate to call.

Sincerely,



George Mickelson, P.E., P.G.
Private Water Systems Section
Bureau of Drinking Water and Groundwater
(608) 267-7652 FAX (608) 267-7650

enclosures:

E-mail dated April 18, 2003

cc with enclosures:

Jeff Kramer, P.G. - Sam's Rotary Well Drillers
Del Maag - SCR
Dave Barkhahn, P.E. - SCR, Horicon
Roger Peters, P.G. - WGNHS

Cambria Village Board

Zoning Board of Appeals - Monday, June 2, 2003 - 6:00 p.m.

The Cambria Zoning Board of Appeals convened in regular session on Monday, June 2, 2003 at 6:00p.m. in the Cambria Village Office Board Room at 111 West Edgewater Street, Cambria, Wisconsin. Roll Call: Trustees Ron Kohn, Chris Jones, Marilyn Cutsforth and Ann Smedema. Members Absent: Jim Ebert. Also present: Jim Pharo.

Motion by Marilyn/Ann to nominate Ron Kohn as chairperson.

Motion by Ann/Chris to close nominations and cast a unanimous vote for Ron Kohn as Chairperson. Carried.

No one is present to speak regarding Christopher Schneider's fence variance request, therefore, while the Clerk is trying to reach someone, the committee moved on to the next variance request.

Ron presented Jim and Susan Pharo's variance request to build a 12' x 27' attached garage extension that will be six feet from their west lot line. Due to their lot size they do not have enough room for the 10' set back required. A letter from Alma Koopmans, who lives west of the Pharos, was passed around to board members. She states reasons why she is against approving this variance. The size of the two garages was discussed, it appears they will exceed the village ordinance limit of 800 square feet.

Motion by Ann/Marilyn to approve a variance for Jim and Susan Pharo of 102 Hillcrest Drive to build an extension of their attached garage, not to exceed a total garage size of 800 square feet, and to allow them to go up to six feet from their west lot line. Carried.

The Clerk was unable to contact anyone to speak for Christopher Schneider's variance request.

Motion by Marilyn/Chris to approve a variance for Christopher Schneider of 335 West Florence Street to build a fence closer to his east lot line than the 2' required by ordinance. Carried.

Motion by Ann/Marilyn to adjourn at 6:40 p.m. Carried.

Lois Frank, CMC
Clerk/Treasurer

Monday, June 2, 2003 - 6:30 p.m.

The Cambria Village Board convened in regular session on Monday, June 2, 2003 at 6:30 p.m. in the Cambria Community Room at 115 West Edgewater Street, Cambria, Wisconsin. Village President Gary Nehring called the meeting to order. Roll Call: Village President Gary Nehring, Trustees Jim Ebert, Marilyn Cutsforth, Ron Kohn, Chris Jones, Tim Perry and Ann Smedema. Others present: Chief Rick Nelson, Neighbors Reporter Amanda Lutey, Christa Westerberg, Sarah Lloyd and Citizens: John Mueller, Bob Lindert, Bonnie Smith, Eugene Kidd, Ryan Perkins, Ken Merwin and Dallas, Adam and Jessica Buchholz.

Motion by Tim/Ann to approve the agenda as presented. Carried.

Motion by Ann/Chris to deny Didion Millings request for a Zoning Permit and reject their Site Plan, since they have not completed, nor are they willing to pay for, requirements of their Site Plan, which would address major concerns of Cambria's municipal wells, and to follow the unanimous recommendation of the Cambria Plan Commission to deny Didion's requests. Roll call vote: Ron - yes, Chris - yes, Marilyn - no, Gary - yes, Ann - yes, Jim - yes and Tim - no. Carried.

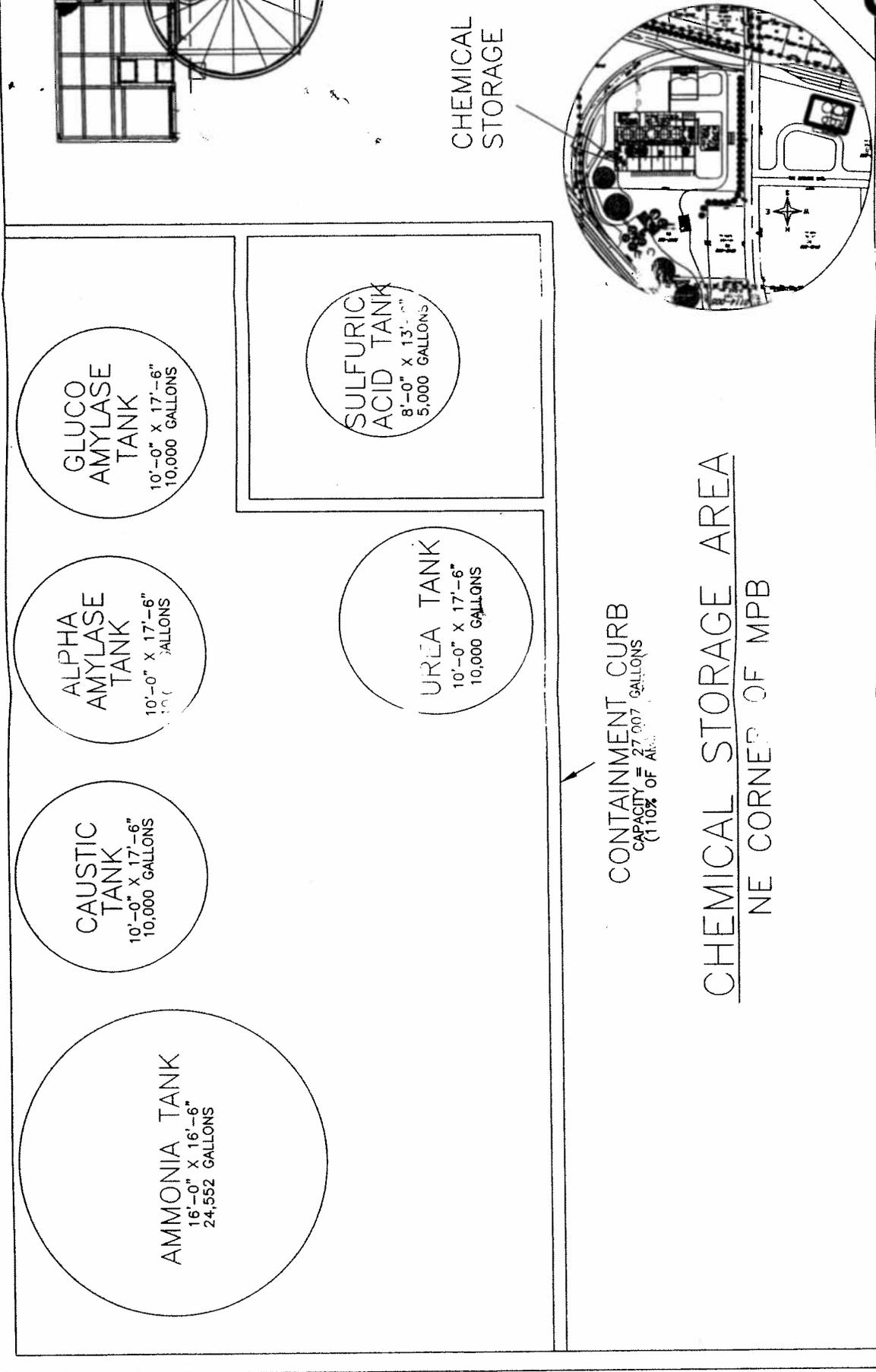
Citizen Speak Out: Ken Merwin spoke stating that Didion was aware of all meetings and have open communication via the Village Office and have not made any contact with the Village regarding their requests. He also complained about the lack of lawn maintenance and property clean up at Didion. Ken also complained about a sign that somehow got knocked down along Highway 146 on the south side of the Village (this will be pointed out to the Street Dept). Eugene Kidd asked about the farm machinery ordinance and he hopes it is now a dead issue. Ann responded that the Administration Committee has tabled the issue for now.

UNITED ETHANOL LP
40,000,000 GAL ETHANOL PLANT
CHEMICAL STORAGE AREA

DATE 03-16-05
PROJECT NO. A101006
SHEET NO. CS1
FILE NO.

PROJECT NO.	DATE	BY	DESCRIPTION	CHGT

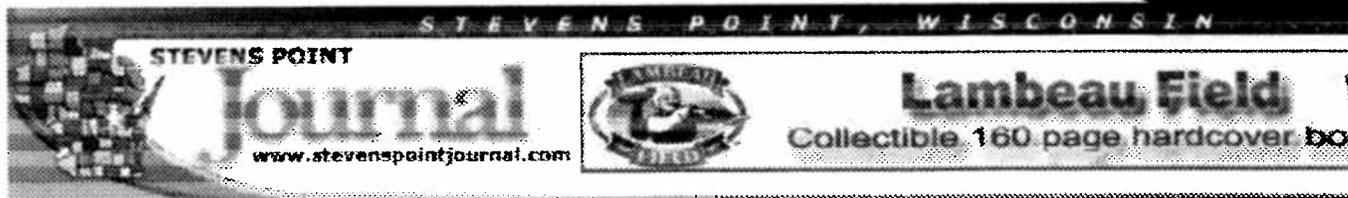
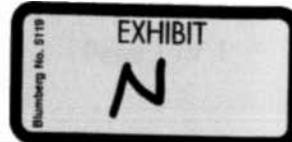
AGRA
SpectraEnergy Services
1231 East Main Street, Suite 10, Denver
Phone: 720-441-0000 and 720-441-0001



CHEMICAL STORAGE

CONTAINMENT CURB
CAPACITY = 27,007 GALLONS
(110% OF AHA)

CHEMICAL STORAGE AREA
NE CORNER OF MPB



Fri, Aug 8, 2003

Plover man hurt after ethanol plant fire

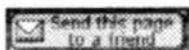
By JOURNAL STAFF

A 25-year-old Plover man suffered burns to his arms and face after a fire at Plover Ethanol Inc., 51 Highway 54 E. in the town of Plover on Wednesday morning, according to a Portage County Sheriff Department report.

Adam Bicknase, village of Plover, was transported to the Madison Burn Center by the Spirit of Man helicopter, said Plover Fire Chief Joe Radomski.

The incident still is under investigation, Radomski said. Bicknase said he was welding some alcohol-making equipment when sparks ignited some alcohol, to the report.

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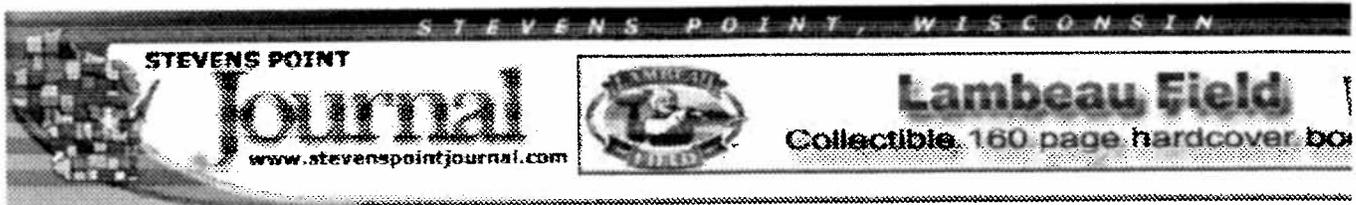


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Mon, Aug 11, 2003

Monday's letters to the editor

Thoughts, prayers appreciated for injured brother

You may recall the short article printed on Aug. 8: "Plover man hurt after ethanol plant fire." That was my brother. The article wasn't inaccurate, but at the same time it didn't tell the whole truth as my brother went, and is going through, and may have been a little misleading to the public. Adam did receive burns to his arms and face, but he also received burns on his ears, neck, hands, and legs. Nearly 50 percent of his body has second degree burns. Adam has also been sedated since the scene of his accident, because of the pain level caused by these burns. He didn't walk away with burns; in fact, Adam will be in the hospital for weeks. Adam has also been on a respirator and a few days soon after the burns took place, and now has pneumonia. Yes, he may have been walking and talking immediately after the accident happened, but in reality my brother has been suffering, and unable to walk or talk since this has happened. His arms are even in slings. Just Saturday, he awoke from the sedation and will again be sedated especially at times of treatment. He is terrified, as his family and friends, and Jenny, are, too.

We would like to thank everyone that has shown their support during this tragic event. We thank the Spirit of Marshfield helicopter, the firefighters, St. Michael's Hospital, our friends, and all others who have been there supporting our family and Jenny. We thank the Hammerstad's for all their support. It has been wonderful to my brother and we love you for it! It will take some time for Adam to heal from this unfortunate event. We appreciate everyone's thoughts and prayers, and we want to see my brother home.

Sue Strong and family
Stevens Point

Coach Bennett should be admired for work at UWSP

It's a fact that the Pointer men's basketball team has re-established itself as the pre-eminent program in the WIAC. The simplest evidence is found in the won-lost column and the several all-league players that have been pulled on the purple and gold jerseys in recent years. However, what is easily overlooked is the character of the program that coach Jack Bennett has re-instilled since his arrival back in 1996.

While he has continued to turn out winning basketball teams that fans have grown accustomed to, Coach Bennett, older brother, Dick, was coach back in the early 1980s, he has more importantly re-established the program more to a team's image and success than just wins and losses. Coach Bennett has demonstrated that hard work, discipline and, most importantly, character, should be practiced off the basketball court as well as on it. The recent rehiring of Bob Semling, a coach of similar values, as his assistant is further proof of Coach Bennett's commitment to running a program that we all can be proud of.

In this era where coaches get more media attention for what they do wrong off the playing field, it is more important to commend those that are doing it right.

Scott Zuelke

*Editorial
regarding
Fire*



Minneapolis Star-Tribune

Explosion, fire reported at ethanol plant in Benson
Associated Press

Published October 22, 2003
ETH23

BENSON, Minn. -- One person was killed this morning in an explosion and fire at the Chippewa Valley Ethanol Co. plant just outside of Benson, a plant official has confirmed.

Bill Lee, the plant's general manager, said the explosion was in the part of the plant where corn is turned into mash, which is later processed into ethanol.

The name of the person who died has not been released. Lee said the person was a contractor working at the plant and was not an employee of Chippewa Valley Ethanol.

Some other people working in the plant were injured, but none seriously, Lee said.

One person with injuries was brought to the Swift County Benson Hospital, a hospital official said. He could provide no other details.

The explosion was reported at around 8:30 a.m., said a dispatcher for the Swift County Sheriff's department.

Gary Klemm, who works at the nearby Swift & Co. plant in Benson, said the explosion occurred in a large storage tank. He said he didn't hear it as much as see it.

Area of reported explosion

"I was coming down the road and I saw the top blow right off," he said.
"It went about 30 feet above the tank."

Then, he said, a fire started.

He said truckers who were at the plant unloading corn ran from the scene. They reported that a tanker truck that was loading ethanol was on fire, he said.

The truckers said there was a large explosion followed by several

smaller ones.

Firefighters got the flames under control quickly, but tanker trucks have been coming and going steadily. "They sure keep dumping a lot of water," he said.

http://www.startribune.com/images/embed/4168745_68465.html

Arriving on the scene

Reed Anfinson

Associated Press

Ambulances also have been coming and going, he said, though he hadn't heard any reports of injuries.

Reed Anfinson, publisher of the Swift County Monitor, the local newspaper, said he saw one person taken away in an ambulance. He said he also could see a crumpled structure in the back of the building.

"We can see firetrucks with booms up spraying something," said Rick Conyers, of Pioneer Fabrication, which is about one-half mile from the plant. He said firetrucks have been going in and out of the plant area. He said he hadn't heard an explosion.

The plant is one of 13 in Minnesota that process corn into ethanol. The co-op which owns it was formed in 1993; the plant opened in 1996.

It recently began producing Shakers vodka, the only ultra-premium vodka made in the United States.

The plant employs between 30 and 40 people.

At least 10 fire departments from the region responded to the fire. Observers on the scene said the blaze appeared to be under control by about 10:15 a.m.

Benson Mayor Paul Kittelson said he went to look at the plant after he heard about the explosion. He said the damaged appeared to be confined to a loading dock and a building behind the main part of the plant.

Most of the plant's 45-million-gallon annual capacity is devoted to producing fuel-grade alcohol, or ethanol, from corn. It runs 24 hours a day, every day. It's one of 14 ethanol plants in Minnesota.

The Benson plant blends ethanol with gasoline to make a fuel called E85, which it sells to about 20 fleets and retailers, including the University of Minnesota and Bobby and Steve's Auto World in Minneapolis

and Columbia Heights.

It's also the only plant in Minnesota that makes industrial and food-grade alcohol for use in mouthwash, hairspray, vanilla and other extracts.

The plant, which employs between 30 and 40 people, recently began producing Shakers vodka, the only ultra-premium vodka made in the United States.

Benson is about 30 miles northwest of Willmar in west-central Minnesota.

--Staff Writer John McIntyre and Librarian Roberta Hovde contributed.



Minneapolis Star Tribune

Anatomy of a controversy surrounding MCP sale

By JOY POWELL

The Associated Press

Published 01/31/2003

MARSHALL, Minn. - The farmers who sold their corn-processing company cashed their checks months ago, and Archer Daniels Midland Co. managers have taken over the operation. But the dust hasn't settled in corn country.

The \$756 million sale of Minnesota Corn Processors to agribusiness giant ADM last September is stirring concerns that reverberate to the State Capitol and Washington, D.C.

Some Minnesota lawmakers are frustrated that the state provided \$33 million in ethanol-producer subsidies to a farmer-owned operation - only to see it become the biggest acquisition for Illinois-based ADM. And a federal judge has yet to review an antitrust challenge before he signs a consent decree approving the sale. ADM said Friday, Jan. 24, it is confident the deal will be approved.

Meanwhile, in Marshall, there is bitterness over the way the deal came down. Some directors of Minnesota Corn Processors, including those who voted for the sale, say negotiations and supporting documentation were pushed through quickly, without adequate information.

Dissenters say they were threatened with possible lawsuits and arrest while company executives were poised to reap millions of dollars in golden parachutes and accelerated pension plans.

The 5,400 farmers in Minnesota and other states who sold to ADM may never know whether they got a fair price, say legal experts who reviewed the proxy and other public documents.

But there was always more than money at stake. Two decades ago, these farmers launched a venture to compete with the world's biggest agribusinesses.

They raised a quarter-billion dollars, built plants in southwestern Minnesota and Nebraska and marketed nationwide. They stepped from the fields into the world of big business to gain more control over their economic destiny.

For a while, it worked. They reaped higher corn prices and pushed annual sales to \$620 million.

But last September, after being told of dismal prospects, the shareholders voted by a landslide to sell. They had set out to eliminate the middleman by becoming processors themselves. In the end, the middleman eliminated them.

"We're just dirt farmers now," MCP director Dean Buesing said his brother told him after the vote.

The dream began 23 years ago on the fertile plains of west-central Minnesota, in high-spirited meetings from Clarkfield to Granite Falls.

In March 1980, Kim Larson, a 27-year-old farmer just starting out with cattle and grain, gathered with 20 other farmers in Willmar to hear a state expert on economic development.

Larson watched the man illustrate how the farmers could process corn themselves. They could cash in on the growing markets for ethanol, or fuel alcohol, and corn-derived sweeteners.

The dream set a fire in Larson, and he and others began selling the vision. Original shares were valued at \$2.06, and farmers had to supply at least 5,000 bushels, with a cash investment of at least \$10,300.

The farmers formed a cooperative, and Larson became a director. So did Steve Lipetzky of Springfield. He believed so strongly in the venture that when he encountered financial difficulty years later, he sold land and farm equipment to keep his stock and invest more.

From the beginning, Larson pushed to have business experts serve on the board to provide expertise.

But farmers instead relied on themselves, making mistakes along the way.

In 1983, they opened a \$55 million plant in Marshall, where the city's help included \$1.86 million in tax-increment financing. The plant would grow over the years into a sprawling complex of silos and buildings, rail cars and grain bins.

It was the state's first, and still the only, corn wet mill. The plant collected corn, cleaned and steeped it in tanks of water and sulfur dioxide. Puffed kernels were put into rollers that separated the outside fiber from the white starch inside. The rollers popped out the small germ containing the corn oil.

The dried germ was sold for other products, and the fiber became gluten livestock feed. From the remaining starch, gluten meal was extracted for pet and poultry food. The starch slurry was refined into cornstarch, corn syrup, fructose or ethanol.

At first, the plant made cornstarch and corn syrup for confectionaries, ketchup and other goods. The corn syrup was supposed to be as clear as honey but came out as dark as chocolate milk. The farmers didn't know how to steep corn.

"We just about went out of business when we started because we didn't know anything," Larson recalled. "We were just a bunch of farmers who built this. We had to learn."

By 1987, the farmers had worked out the kinks and were making money.

That year, Minnesota lawmakers approached them about producing ethanol. The cooperative agreed to add an ethanol plant. The state approved subsidies, and Minnesota soon led the nation in blending ethanol into gasoline.

In 1991, the farmers built a state-of-the-art wet-milling plant in Columbus, Neb. More expansions came in 1993 and 1995.

Jerry Jacoby, a Springfield farmer, was chairman of the 24-member board. He also served as the first president of the Minnesota Ethanol Coalition.

For Jacoby, the venture was about farmers taking their future into their own hands. They were becoming a big player in the commodity manufacturing business - a business dominated by huge competitors such as Minnetonka-based Cargill Inc. and ADM. It was, he would later say, a saga about "the ups and downs."

"We realized that we had to grow or die," he said. "We had to become hard-nosed businessmen, realistically assessing the future of our industry and the role we played in it ... forgetting all the warm, fuzzy buzzwords of 'farmer-owned,' 'value-added.' ... We were in a fight for our lives."

The fight escalated in 1996, when corn prices soared. Fructose prices crashed shortly after. The company had already incurred cost overruns in its fast-track expansions.

Corn prices more than doubled to \$5 a bushel, and the company was socked because it hadn't locked in prices paid to farmers.

The company was hit with big losses. Excess fructose glutted the U.S. market, driving down prices.

But the hardest blow came in 1995, when a consortium of mostly beet farmers in northern Minnesota and North Dakota built the \$261 million ProGold Corn Sweetener Plant in Wahpeton, N.D. ProGold, which later formed an alliance with Cargill, started a price war as it fought for fructose market share.

Prices stayed low for two years.

"So there we were, at the end of '96, with the balance sheet upside down," recalled Doug Finstrom, a director and farmer from Kerkhoven who invested heavily. "We owed \$410 million. The banks didn't like not being paid."

Local lenders had lost faith in them, and now Minnesota Corn Processors had to find a partner or close the doors. They started a bidding war.

Corporate jets carrying executives from Cargill, ADM and A.E. Staley Manufacturing soared into Marshall. MCP directors were involved in negotiations, along with Chairman Jacoby and L. Dan Thompson, president and CEO.

Cargill wanted too much control. A.E. Staley couldn't come up with enough money. ADM executives came in as the friendly saviors. Larson recalls Chairman and CEO G. Allen Andreas as a well-spoken, down-to-earth man with a calming manner. ADM did not seek voting shares or control, except to be consulted on major expenditures.

In late August 1997, ADM bought 30 percent of the company for \$120 million. Many saw ADM's investment as a rescue by a corporate angel. Others saw it as the first step in a dance with the devil.

By 1999, Minnesota Corn Processors was turning around. Both revenue and net profit increased. In 2000, the processor switched from a cooperative to a Colorado limited liability corporation, mostly for tax reasons. Everyone's shares were revalued at \$1.02.

After gains in 2000 and 2001, profits dipped in 2002. But by then, the company had reduced debt from \$410 million to \$245 million, largely through ADM's infusion of money and refinancing.

Then a regularly scheduled board of directors meeting on April 22, 2002, turned out to be anything but routine. Larson, Finstrom and other directors gathered to discuss low ethanol and fructose prices.

MCP executives told them to shut their briefcases and not take notes. CEO Thompson had an announcement. The company was for sale. Directors were stunned.

Thompson was well-liked and smart, and the directors were used to relying on him. He told them that a month earlier, Martin Andreas, ADM's assistant to the chief executive, had asked whether MCP would entertain an offer to sell, and they discussed prices. Andreas had visited the plants in 1997 and was impressed. "That was MCP's long suit - designing good low-cost plants with low emissions," Andreas recalled in an interview.

In April, MCP's attorney, Joe Bennett, and chief financial officer, Dan Stacken, joined the discussions.

Some directors said they were dismayed they had never learned of those discussions until the April 22 meeting - though they had seen Thompson in March.

To add to their surprise, high-powered attorneys, investment bankers and financial advisers from New York had flown by private jet to address them at the April 22 meeting. Board members were warned to not discuss the potential sale among themselves outside of meetings, nor with anyone else.

"It's just like the whole thing was orchestrated," Finstrom said. "And the board was kept

out of it."

Board chairman Jacoby disagrees. "The minority board members had every chance to voice their objections," he said. "They could have made motions to slow down the process."

That same day, directors voted on golden parachutes totaling \$6.5 million for eight executives, including Thompson and Bennett. A half-dozen directors said they and others never spotted a clause that accelerated existing pension plans for the executives if the company was sold.

The existing pension plan, voted on more than a year earlier, would provide about \$6.5 million more. With other compensation, the eight top MCP executives would get a maximum total of about \$20 million if the company changed hands.

Nearly a month earlier, Thompson had received a \$55,000 raise, to \$330,000, with the entire yearly salary to be paid upon the consummation of any merger.

He and Bennett have moved out of Marshall and could not be reached for comment.

On July 2, the board voted 19-5 to have shareholders vote by mail on whether they wanted to sell their shares at \$2.90 each to ADM for \$396 million. ADM would assume debt of \$240 million.

Twenty days later, directors met for the last time. After usual business, Bennett repeated warnings that directors could be sued and possibly lose their farms if they caused the deal to fall through or made slanderous remarks.

Bennett then individually questioned each director about whether he had consulted an attorney or was working against the merger. He only wanted a yes or no answer. The questioning was intimidating, directors said.

Finstrom, Buesing, Lipetzky and Ron Kirchner answered yes to at least one question and were asked to leave the boardroom. Finstrom had not retained an attorney but had spoken informally to one about the situation.

"I'm out trying to gather information; I'm not working against the merger," Kirchner recalled telling Bennett.

Lipetzky had only missed one meeting in 21 years. "I'm not going to leave," he said. "I'm elected by the stockholders to represent the stockholders."

Lipetzky recalled what Thompson told him: "If I didn't leave, he'd call police and have me arrested for trespassing."

Board chairman Jacoby said later in an interview that the dissenters had opinions with "bits and pieces" that were inaccurate. The concern, he said, was that they might derail

the sale for members who hadn't received a decent return for seven years. And, he pointed out, shares had tumbled from a high of \$4.50 per share to \$1, and now a buyer was offering to nearly triple that value.

The offer from ADM sounded decent to most shareholders. But it was the only one on the table.

Respected investment bankers hired by Minnesota Corn Processors to advise and give opinions to directors on the financial fairness of the deal were working, in large part, on contingency. Under an arrangement common in such deals, the two firms were to receive millions more above their \$150,000 fees if the sale took place.

At informational meetings on the upcoming proxy vote, Larson looked out over a sea of gray heads.

He knew many farmers were at retirement age, and their best option was to sell.

Many had been hurt by low commodity prices and had large debts. Many had borrowed to invest in the company. The sale would save some farms.

Market projections weren't favorable, according to Jacoby. More ethanol plants are starting up, for example, he said.

Shareholders voted 3,825 for the sale to 736 against. Seven abstained. Among those who voted for it were Larson and Finstrom.

"In some ways," Finstrom said, "I feel we let the membership down because we didn't feel we could tell the whole story. We were warned about what we could say or not."

Now, he and others are questioning whether they could have gotten a better price. And some wonder whether they should have hung on for better times.

Information from: Star Tribune

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