



June 23, 2009

Kenneth Denow  
Wisconsin Dept. of Natural Resources  
N7725 Hwy 28  
Horicon, WI 53032

Dear Mr. Denow,

This is a written report regarding the unfortunate spill of corn mash that occurred on the morning of June 4, 2009 at Didion Ethanol located in the Town of Courtland, WI.

Early on the morning of June 4, 2009, liquefied corn mash started leaking out of Fermentation Tank #2 as it was being filled. Corn mash ran out of this tank for about two hours onto a cement pad where it flowed into a stormwater drainage basin. The corn mash in the stormwater basin flowed through an underground stormwater pipe. This pipe discharged the corn mash into an open air stormwater drainage ditch that travels along the southwest and west sides of the facility. Corn mash flowed down this ditch into a drainage basin pool located at the southeast corner of Hwy. 146 and Cabbage Road. Corn mash in this pool flowed off site into the culvert that passes under Hwy. 146 and into a wetland located to the west of this highway. Natural spring water and storm water normally flows into and through this wetland via an un-named tributary stream into the north branch of Duck Creek.

Shortly after this spill was detected the leak was stopped. The total volume of corn mash spilled was 43,500 gallons. This spill was caused as a result of the man way hatch (located near the bottom of Fermentation Tank #2) being improperly re-installed after a scheduled maintenance activity. Corn mash was then transferred into this tank with the hatch not properly sealed.

The corn mash that was spilled consisted of the following materials and estimated volumes.

Corn Mash Ingredient Name	Est. Amount Released
Corn	108,901 (lbs)
Process Condensate (reused condensed water)	25,800 (gals.)
Backset (recycled water from the end of the ethanol distillation process)	4,640 (gals.)
Yeast	150.0 (lbs.)
Urea	134 (gals.)
Gluc Amylase (enzyme)	18.4 (gals)
Alpha Amylase (enzyme)	5.1 (gals.)

Enclosed for your review, please find the material safety data sheets for the yeast, urea, gluco amylase and alpha amylase as listed in the table above.

Didion Management was informed of this spill at around 7:00 a.m. on the morning of June 4, 2009. Upon arrival on site and after seeing the extent of the spill, Management determined the DNR needed to be notified of this spill. The Department of Natural Resources was notified of this spill via the DNR 24 hour spill hotline and the following DNR staff members were also notified: Ken Denow, Sue Kinney, Eric Rordtvedt, Mike Sloat and Pam Kober. Below, please find a summary of the times each person was contacted.

7:40 AM – Ken Denow, Wastewater specialist, left message  
7:43 AM – Mike Sloat, Air compliance, spoke to  
7:49 AM – Lois Frank, Village of Cambria Clerk, spoke to  
8:38 AM – Ken Denow, Wastewater specialist, left 2<sup>nd</sup> message  
8:41 AM – Joann Wingers, Town of Courtland, spoke to  
9:00 AM – Sue Kinney, Storm Water, left message  
9:40 AM – Eric Rordtvedt, Storm Water, left message  
11:00 AM – DNR 24 hour spill hotline, I was the third call on the spill and they had notified Heather and Pam Kober  
1:00 PM – Pam Kober, DNR enforcement, left message

Didion also immediately contacted Northern Environmental/Bonestroo and requested their assistance to come to the site of the spill to advise and oversee the cleanup efforts.

Containment efforts then commenced. A silt fence was stretched across this wetland to stop the downstream flow of the spilled corn mash. This was all completed on the afternoon of June 4<sup>th</sup>, 2009. Metal plates were installed on the east side of Hwy. 146 to block the spilled corn mash from continuing to flow under the highway into the wetland on the west side of Hwy. 146. This was completed on the morning of June 5<sup>th</sup>, 2009.

Clean up efforts were then initiated. Residual corn mash in the stormwater drainage ditch was dug out with earth moving equipment to prevent more of the spilled mash from entering the waterway.. Erosion control techniques were implemented (i.e. installing hay bails and silt fences) in the areas where vegetation was removed during the clean up. This was all completed on June 4<sup>th</sup> and 5<sup>th</sup>, 2009.

Vacuum trucks were utilized to remove as much of the spilled corn mash and water mixture from the waterway as could reasonably be removed without disturbing a larger area of the wetland vegetation. The heaviest pockets of spilled corn mash were all removed. This commenced on June 4<sup>th</sup> and was completed on June 6<sup>th</sup>, 2009.

A water quality monitoring plan was discussed with the department on June 5, 2009 and agreed to. Water monitoring was then initiated and remains on going.

Due to the spill emergency, the department approved the temporary discharge of fresh well water from the facility into the waterway to maintain flow and to keep the dissolved

oxygen level in the water from dropping to an undesirable level. Well water has been discharged sparingly on an as needed basis since the spill first occurred.

Once the majority of the spilled mash was removed from the waterway, three silt fences were installed downstream just to the west of Hwy. 146. These were installed on Saturday 6/6/09. The metal plates on the east side of Hwy. 146 blocking the flow of water under the highway were removed on the morning of 6/17/09.

Aerators were installed in the stream on both the east side (on 6/8/09) and west side of Hwy. 146 (on 6/10/09) to help maintain the level of dissolved oxygen in the waterway.

With the exception of the aerators and the well water piping that will eventually need to be removed from the waterway (once it is determined they are no longer needed) all aggressive clean up activities have already been completed. As previously mentioned, water quality monitoring is still ongoing until such time the department concurs it is no longer needed.

Erosion control matting has been installed on areas of disturbed soil and those areas have been re-seeded. Grass has already sprouted in several of the re-seeded areas.

Didion Ethanol has identified the following steps to prevent a re-occurrence of this type of spill in the future.

1. A Safe/Hot Work Permit system has been implemented. Before any non-routine work is performed at the facility (i.e. opening a man way hatch on a fermentation tank), it is now mandatory that a permit must be issued to assure the work is conducted in a safe manner and completed.
2. Fail safe position switches are going to be installed on the man way hatches on all three fermentation tanks. If a hatch is open, the pump used to fill these tanks cannot be energized. This will be completed by July 24<sup>th</sup>, 2009.
3. The digital control system logic is being revised to add a continuous check to monitor for a prescribed fermentation tank level increase rate over a prescribed time interval. Whenever the pump used to fill the fermentation tanks is running, if the tank is not filling at the prescribed rate over time, the pump will automatically be shut down. In addition once the tank has been filled, it will be monitored for burst detection (a sudden drop in the tank level) during fermentation and the subsequent transfer to the beer well. An alarm will be activated if a burst is detected. This will be completed by June 26, 2009. While this by itself will not prevent a future spill it will greatly limit the extent of any spill that may occur from these tanks.
4. Didion is exploring the installation of additional diking that would provide containment for all three fermentation tanks and the beer well. A decision whether this will be pursued will be made no later than July 31<sup>st</sup>, 2009.

If you require a more detailed accounting of the spill and/or our post spill activities, I would be happy to provide you with additional information. Just let me know what additional details you would like to receive and I will send that information to you.

If you have any questions, concerns or comments in regard to this report, please contact me. I can be reached by e-mail at [dketter@didionmilling.com](mailto:dketter@didionmilling.com) or by telephone at (920)-348-5868, ext. \*866.

Thank you for your assistance in regard to this matter.

Sincerely,  
DIDION MILLING, INC.



Daniel R. Ketter  
Environmental Manager

Cc: Dale Drachenberg – V.P. of Operations  
Adam Lemmenes – Production Manager Didion Ethanol  
Dow Didion – President of Didion Milling  
Dino Tsoris – WDNR Hydrogeologist

Enclosure: MSDS sheets (4)