State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

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March 17, 2010

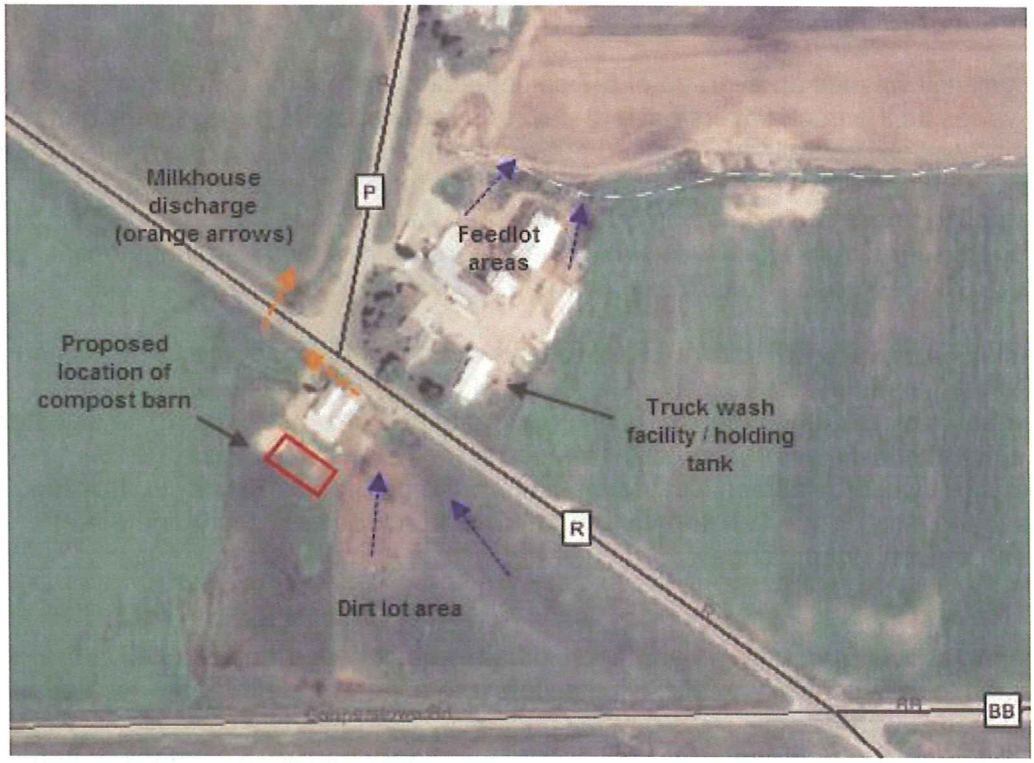
Brian Bradley
Bradley Farms
6701 County Rd R
Denmark, WI 54208

**SUBJECT: Site Inspection Summary for Bradley Farms, Town of New Denmark, Brown County, WI**

Dear Mr. Bradley:

On March 9, 2010 the Department of Natural Resources (DNR) and Brown County Land Conservation Department (LCD) met with you to discuss options for resolving discharge concerns from Bradley Farms and the truck wash facility. Present at the meeting were farm/truck wash owners, Brian and Dick Bradley; Jon Bechle and Brent Petersen (LCD); and Nick Peltier and Casey Jones (DNR). This letter summarizes the site inspection and meeting.

Site Overview




Truck Wash Facility

The truck wash facility currently washes an average of 5-7 cattle hauling trailers daily. According to Brian Bradley business varies as the truck drivers have to pay for this service and the economy has not been favorable for shipping cattle. The trailers are rinsed out within the building where drains collect the liquid wash water into a 12,000 gallon underground storage tank. The tank is pumped every 2-3 days when needed and land applied to acreage owned by Bradley Farms. According to Brent Petersen, Brown County LCD agronomist, the truck wash wastewater has been sampled and had a nutrient content of 2-1-4 pounds (Nitrogen-Phosphorus-Potassium, "N-P-K") per 1,000 gallons.

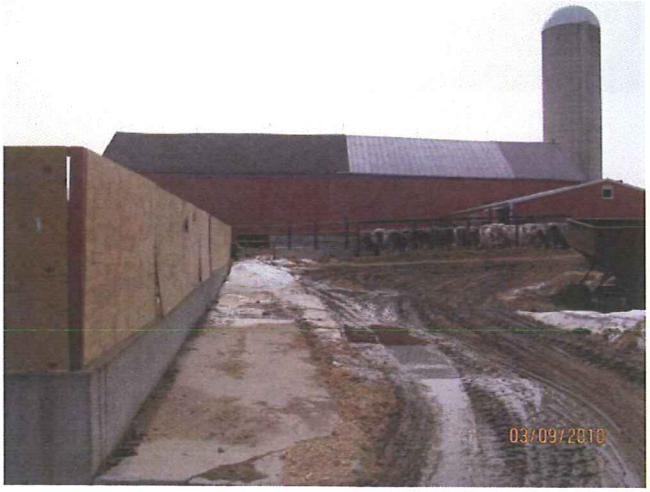
The DNR, LCD and Bradley Farms agreed that the best available option for disposal of the truck wash wastewater is to take it to the Larsen digester located just west of Bradley Farms. The DNR advised Bradley to get an agreement in place with Larsen for taking the waste and also verify that if the digester is down for maintenance that the truck wash wastewater may be placed directly into the NR 213 designed wastewater storage owned by Larsen located on land owned by Bradley Farms. By utilizing this option modifications to the existing wastewater storage tank would not be necessary and winter spreading of these materials would not continue.

Bradley Farms

Bradley Farms currently has about 150 milk cows and approximately 60 heifers. Brian Bradley indicated they may eventually expand to 180 to 200 milk cows. The heifers and dry cows are currently located on the north side of County Road R with the milk cows on the south side. There are two concrete feedlots on the north side of the road; manure from these lots are scraped and daily hauled. Runoff water from the lots discharge to a low area to the north that Brian Bradley indicated had drain tile inlets within it.



View toward heifer feedlot runoff discharge; flows off lot into low ditch area that is tiled.

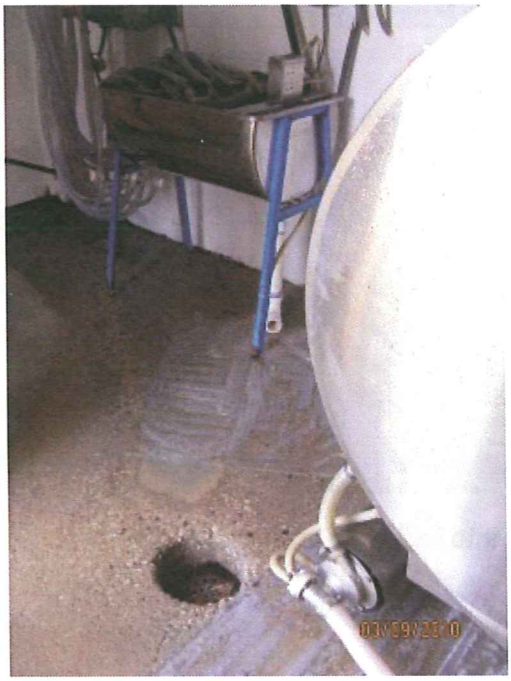


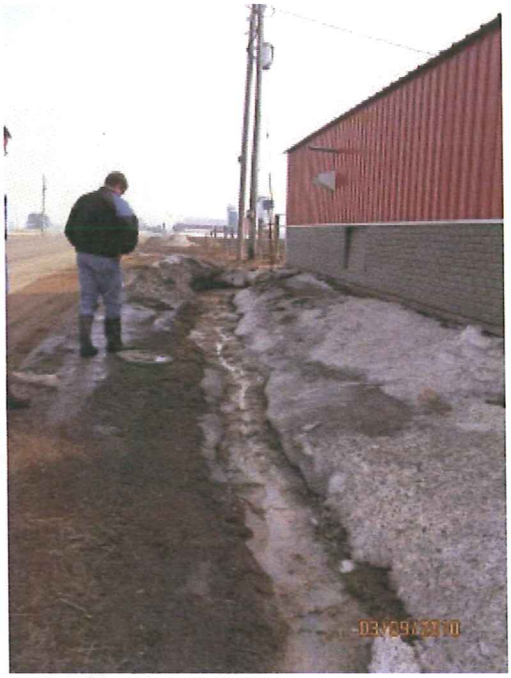


Right: Looking south toward dry cow lot.
Left: Looking east at lots, all runoff from lots and barn roofs flows toward north.

South side

The facility on the south side consists of a barn that houses the milk cows, a single row headlock area where cows are milked; milk line/bulk tank washing area; and large outdoor dirt lot area. The wastewater from flushing the milk lines and bulk tank rinse cycle currently discharges through a floor drain that outlets directly into the road ditch. From the road ditch it flows toward the west into a culvert that discharges into a field north of County Road R. Brian Bradley estimated that approximately 200 gallons of wastewater discharges to the road ditch per day. According to Bradley, the challenge with addressing this discharge is there is a large water pipeline and fiber optic line buried along the road ditch.





Left: Drain in milk line/bulk tank rinsing area.

Right: Looking east at ditch where milk wastewater discharges.

Below: Looking west at ditch where milk wastewater flows; eventually flows north under County Road R to field that Bradley Farms owns.

To reduce overcrowding and to avoid winter hauling of manure, Bradley Farms is proposing to build a compost bedpack barn to the south of the existing barn to house milk cows. This type of barn would serve as solid manure storage where a rice hull material (consistency of fine saw dust) is used for bedding and the area is managed to hold up to six months of solid manure within the barn. This type of facility would reduce the need for winter spreading and keep the manure solid instead of typical liquid dairy manure consistency that has greater runoff and leaching risk when being land applied.

The outdoor dirt lots have high runoff potential as shown in the photos below. Bradley Farms are aware of the runoff issues in this area and are looking into options to prevent manure from leaving the dirt lot areas.



Photos above and below: Looking southeast/east, manure and roof water flushes through this area and discharges to road ditch.

Through the Brown County LCD feedlot permitting process, Bradley Farms should work with LCD engineers to resolve discharges from the farm feedlots and milk wastewater. Potential options include installing clean water diversions to prevent excess water from flushing manure off the feedlot areas and creating vegetated treatment areas to accept diluted manure runoff. The tile line discharge area from the low area just north of the farm should be inspected to verify manure is not being discharged offsite to surface water or area susceptible to groundwater contamination. The lots on the south side of the road could be divided and managed to maintain grass on the areas closest to channelized flow. The LCD can also provide assistance with designing the compost barn to meet NRCS 313 solid manure storage standards and provide options for collecting the milk wastewater (into existing truck wash tank?) or diverting the flow to a designated treatment area. Dave Wetenkamp, Brown County LCD Engineering Technician can be reached at (920) 391-4639 for further information regarding technical assistance.

The DNR understands that Brown County LCD has applied for and has been offered a targeted runoff management grant for your facility. This grant award can be used to fund up to 70% of the total cost for corrective measures for the farm or truck wash facility. This cost is not to exceed $63,000. It is anticipated that this grant will be used toward correcting the farm discharge issues as the truck wash wastewater can be taken to the Larsen digester. The grant award offer expires at the end of 2010; conditions of the grant include signing a cost-share agreement with Brown County LCD and submittal of the manure storage (compost barn) plans to DNR for review. Jon Bechle, LCD Program Manager, can be reached at (920) 391-4638 for further information regarding grant paperwork.

The DNR appreciates your willingness to work with the Brown County LCD to identify and install appropriate corrective measures to address the discharges at your farm. If you have any questions regarding this letter, please contact me at 920-303-5426. Thank you.

Sincerely,

Casey L. Jones

Casey L. Jones
Agricultural Runoff Management Specialist
Northeast Region

cc: Dan Helf, Tom Tewes, DNR -- Green Bay
John Pfender, DNR – Madison
Brown County Land Conservation Department