January 20, 2014

DNR – Manchester Field Office #1

909 West Main Suite 4,

Manchester, IA 52057

RE: Notice of Violation regarding Spill # 120313-BDJ-1445

Please accept my apologies for allowing this letter to be left to the end of the allotted time. After receiving the letter just after Christmas, I set it aside to be dealt with after the holidays and the extra busyness. That was followed up by extreme cold and the extra work associated with that, and I did not realize how quickly time had passed.

On December 3 we were cleaning out some feed lanes at the dairy barn. The manure we were scraping into the manure system was relatively thick. Manure was scraped into the flush flume pipe too rapidly, resulting in a blockage and backing up of flush water in the dairy barn. After the pressure build up from the accumulating flush water the blockage finally broke loose and all the backed up flush water was released at once.

At the time our sand lane has a significant amount of sand piled up with a larger amount at the lower end of the storage area and a lesser amount at the top end. Just prior to Thanksgiving we were in the process of hauling the used sand when the spreader broke. On account of the holiday, parts were slow in coming, followed by a mix-up and we did not receive the right parts until December 4, or 5th.

When the blockage finally pushed through, the thick manure of course did not flow down the settling lane very well, resulting in a rise in the water level at the top end of the lanes. As the water rose it started to flow behind the piled sand and erode a channel to allow the flush water to get between the sand pile and the earthen containment berm. The whole sand lane slopes down ward as does the earthen berm. The elevation where the water flowed behind the piled sand was actually higher than the top of the berm at the bottom end of the lanes. None of the above mentioned problems would have caused a manure release except for the fact that when the sand was piled at the lower end of the sand storage area, it was right up to the wall and piled as high or slightly higher than the concrete wall and earthen berm. There was no pathway for the

escaped liquid to enter back onto the sand lane and into the pit. Instead the flush water hit a dead end, and because of the slope and lower elevation of the bottom end of the lanes, the flush water flowed over the containment structure.

After the initial blockage in the sand lane, the solids worked their way down and the majority of the estimated1500 gallons per minute being pumped through the flume pipe continued down the sand settling lanes and into the pit. There was however a small portion that continued to flow through the breached area and on out over the containment wall. We estimate that the overflow occurred around 12:00 or 12:30 but was not discovered until shortly after 2:30 pm. Noe Mendez, the farm employee who was doing the cleaning of the barns and who discovered the overflow, estimated that 80 to 90% of the flush water continued to the storage pit while the remaining amount overflowed. Based on that information and the amount of manure cleaned up, we would estimate the amount of the overflow to be between 25,000 and 50,000 gallons.

The remedy to the overflow that occurred is to always ensure that there are no dead ends caused by piled up sand. From now on we will always ensure that the bulk of the sand is piled at the top end of the sand settling lane, not the lower end, and that there is always a channel left open between the piled sand and the containment structure to allow any flush water that inadvertently ends up behind the piled sand, an outlet to get back to the settling lane. In addition we will be more vigilant in monitoring the consequences of any blockage and backing up of flush water in the dairy barn to ensure there are no problems caused by the sudden surge of water once the blockage is cleared.

In terms of remediation of the spilled manure, at the time of the spill a dam was created at the junction of Leona lane and the affected creek in order to block any manure from flowing further downstream. A lagoon pump was placed in the creek and the water flowing through the creek was pumped out continuously for a period of over 24 hours until the water flowing down the creek appeared to be clear of any manure contamination.

The road ditch along Waubeek road was also dammed off to prevent any more manure from flowing into the creek. The larger pockets of pooled manure were pumped down with a hydraulic driven sludge pump. After things froze up on December 5th, manure that remained in the ditch bottom was removed along with the surface layer of dirt. In the spring the affected area of road ditch will be reseeded as needed.

Ralph Staal, Dairy Venture LLC, 63902