



**Environmental
Protection Agency**

John R. Kasich, Governor
Mary Taylor, Lt. Governor
Scott J. Nally, Director

September 19, 2012

RE: HOLMES COUNTY
ALPINE DAIRY
NPDES PERMIT NO. 3IH00100
FFY 2013 CEI

Mr. Brian Barbie
P.O. Box 181
Winesburg, OH 44690

Mr. Barbie:

On September 5, 2012, this writer and Dean Stoll conducted an unannounced inspection of the wastewater treatment plant for Alpine Dairy. The intent of the inspection was to evaluate the condition of the wastewater plant, discuss operator oversight, and to review the compliance record dating back to the previous inspection. The May, 2012 bioassay results were also reviewed and are discussed below.

Observations

Following are observations made during the inspection:

1. The western vertical loop reactors appeared to have good color and good mixing. You had stated that the blower for the eastern VLR reactor was turned off due to foaming issues. You also stated that sludge and foam was being removed from the tank for hauling to the Canton publicly owned treatment works (POTW) in an attempt to reduce foaming in the system. The mixer in the small vertical loop reactor system was operating even though the blower was shut down. You indicated that the mixer provided the necessary oxygen to maintain microbial activity in the system.
2. There was a small amount of sludge floating on the surface of the clarifier. The sludge was being retained behind the effluent baffle and was being removed with the rotating skimmer. The wastewater from the clarifier looked clear despite the floating sludge. The wastewater from the clarifier is further treated for phosphorus in the air floatation system prior to discharge.
3. The SAF system used to remove phosphorus was operating at the time of the inspection. The two SAFs were being operated in series. Following the SAFs, the wastewater was being filtered prior to discharge.
4. The Ultraviolet disinfection system appeared to be operational at the time of the inspection.
5. We have discussed the issue of the effluent flume being surcharged during previous inspections. The problem was not observed during this most recent inspection.
6. The effluent appeared clear at the time of the inspection. The receiving stream did not have the extensive amount of florescent green algae identified in past inspections. Only a small amount of algae was apparent approximately 10 feet downstream of the discharge pipe. There was evidence of some nutrient enrichment, but not like in previous years.
7. You indicated that the system was being operated by a Class II operator and that a second person also has operational responsibilities. Because of the complexity of the system, it is recommended that the wastewater treatment plant continue to be under the control of a Class II certified operator, and that the second individual continue to conduct daily operations.

8. It was understood that the underground tank is no longer used for COW water. Only well water is pumped into the tank. The well water is used for make-up water and wash-down activities at the wastewater plant. It was understood that COW water is now discharged directly from the RO system through outfall 001 along with treated wastewater.

Compliance Review

The compliance record for Alpine Dairy was reviewed as part of this inspection. The period of review was January 2011 through July 2012. Following are National Pollutant Discharge Elimination System (NPDES) Permit limit violations reported during the review period.

Reporting Period	Station	Parameter	Limit Type	Limit	Reported Value	Violation Date
January 2011	601	Fecal Coliform	1D Conc	2000	2800.	1/18/2011
February 2011	601	Nitrogen, Ammonia	30D Conc	3.0	3.0125	2/1/2011
February 2011	601	Nitrogen, Ammonia	1D Conc	4.5	4.58	2/22/2011
February 2011	601	Nitrogen, Ammonia	1D Qty	1.3647	1.38682	2/22/2011
April 2011	002	Nitrogen, Ammonia	1D Conc	4.5	4.52	4/19/2011
April 2011	002	Phosphorus, Total (P)	1D Conc	4.8	4.96	4/19/2011
April 2011	002	Phosphorus, Total (P)	1D Conc	4.8	4.96	4/19/2011
April 2011	601	Nitrogen, Ammonia	1D Conc	4.5	4.66	4/19/2011
April 2011	002	Nitrogen, Ammonia	1D Conc	4.5	5.55	4/21/2011
April 2011	002	Nitrogen, Ammonia	1D Qty	2.39	2.73088	4/21/2011
May 2011	002	Nitrogen, Ammonia	30D Conc	1.0	2.34333	5/1/2011
May 2011	002	Nitrogen, Ammonia	30D Qty	0.53	1.23803	5/1/2011
May 2011	601	Nitrogen, Ammonia	30D Conc	1.0	1.555	5/1/2011
May 2011	601	Nitrogen, Ammonia	30D Qty	0.3032	.51185	5/1/2011
May 2011	002	Nitrogen, Ammonia	1D Conc	1.5	2.18	5/3/2011
May 2011	002	Nitrogen, Ammonia	1D Qty	0.79	1.15518	5/3/2011
May 2011	601	Nitrogen, Ammonia	1D Conc	1.5	1.52	5/3/2011
May 2011	601	Nitrogen, Ammonia	1D Qty	0.4549	.51779	5/3/2011
May 2011	002	Nitrogen, Ammonia	1D Conc	1.5	1.95	5/10/2011
May 2011	002	Nitrogen, Ammonia	1D Qty	0.79	1.03331	5/10/2011
May 2011	002	Nitrogen, Ammonia	1D Conc	1.5	3.03	5/12/2011
May 2011	002	Nitrogen, Ammonia	1D Qty	0.79	1.6056	5/12/2011
May 2011	002	Nitrogen, Ammonia	1D Conc	1.5	2.18	5/19/2011
May 2011	002	Nitrogen, Ammonia	1D Qty	0.79	1.15518	5/19/2011
May 2011	002	Nitrogen, Ammonia	1D Conc	1.5	3.04	5/24/2011
May 2011	002	Nitrogen, Ammonia	1D Qty	0.79	1.49583	5/24/2011
May 2011	601	Nitrogen, Ammonia	1D Conc	1.5	1.58	5/24/2011
May 2011	601	Nitrogen, Ammonia	1D Qty	0.4549	.53823	5/24/2011
May 2011	002	Nitrogen, Ammonia	1D Conc	1.5	2.74	5/26/2011
May 2011	002	Nitrogen, Ammonia	1D Qty	0.79	1.45193	5/26/2011
May 2011	002	Nitrogen, Ammonia	1D Conc	1.5	3.45	5/31/2011
May 2011	002	Nitrogen, Ammonia	1D Qty	0.79	1.82816	5/31/2011
May 2011	601	Nitrogen, Ammonia	1D Conc	1.5	2.84	5/31/2011
May 2011	601	Nitrogen, Ammonia	1D Qty	0.4549	.96745	5/31/2011
June 2011	002	Nitrogen, Ammonia	30D Conc	1.0	4.40778	6/1/2011
June 2011	002	Nitrogen, Ammonia	30D Qty	0.53	2.31848	6/1/2011
June 2011	002	Residue, Total Dissolved	30D Qty	812.01	875.512	6/1/2011
June 2011	601	Nitrogen, Ammonia	30D Conc	1.0	1.9215	6/1/2011
June 2011	601	Nitrogen, Ammonia	30D Qty	0.3032	.67108	6/1/2011

Reporting Period	Station	Parameter	Limit Type	Limit	Reported Value	Violation Date
June 2011	002	Nitrogen, Ammonia	1D Conc	1.5	6.54	6/2/2011
June 2011	002	Nitrogen, Ammonia	1D Qty	0.79	3.71309	6/2/2011
June 2011	002	Nitrogen, Ammonia	1D Conc	1.5	5.2	6/7/2011
June 2011	002	Nitrogen, Ammonia	1D Qty	0.79	2.9523	6/7/2011
June 2011	601	Nitrogen, Ammonia	1D Conc	1.5	3.75	6/7/2011
June 2011	601	Nitrogen, Ammonia	1D Qty	0.4549	1.41938	6/7/2011
June 2011	002	Nitrogen, Ammonia	1D Conc	1.5	5.25	6/9/2011
June 2011	002	Nitrogen, Ammonia	1D Qty	0.79	2.78198	6/9/2011
June 2011	002	Nitrogen, Ammonia	1D Conc	1.5	2.35	6/14/2011
June 2011	002	Nitrogen, Ammonia	1D Qty	0.79	1.33421	6/14/2011
June 2011	002	Nitrogen, Ammonia	1D Conc	1.5	3.6	6/16/2011
June 2011	002	Nitrogen, Ammonia	1D Qty	0.79	1.49886	6/16/2011
June 2011	002	Nitrogen, Ammonia	1D Conc	1.5	4.49	6/21/2011
June 2011	002	Nitrogen, Ammonia	1D Qty	0.79	2.2093	6/21/2011
June 2011	601	Nitrogen, Ammonia	1D Conc	1.5	1.73	6/21/2011
June 2011	601	Nitrogen, Ammonia	1D Qty	0.4549	.52384	6/21/2011
June 2011	002	Nitrogen, Ammonia	1D Conc	1.5	5.29	6/23/2011
June 2011	002	Nitrogen, Ammonia	1D Qty	0.79	2.80317	6/23/2011
June 2011	002	Nitrogen, Ammonia	1D Conc	1.5	2.89	6/28/2011
June 2011	002	Nitrogen, Ammonia	1D Qty	0.79	1.42202	6/28/2011
June 2011	002	Nitrogen, Ammonia	1D Conc	1.5	4.06	6/30/2011
June 2011	002	Nitrogen, Ammonia	1D Qty	0.79	2.15139	6/30/2011
July 2011	002	Nitrogen, Ammonia	30D Conc	1.0	3.1825	7/1/2011
July 2011	002	Residue, Total Dissolved	30D Conc	1785	1817.5	7/1/2011
July 2011	002	Nitrogen, Ammonia	1D Conc	1.5	4.44	7/5/2011
July 2011	002	Nitrogen, Ammonia	1D Qty	0.79	2.1847	7/5/2011
July 2011	002	Nitrogen, Ammonia	1D Conc	1.5	3.78	7/7/2011
July 2011	002	Nitrogen, Ammonia	1D Conc	1.5	2.75	7/12/2011
July 2011	002	Nitrogen, Ammonia	1D Conc	1.5	3.96	7/14/2011
July 2011	002	Nitrogen, Ammonia	1D Conc	1.5	2.2	7/19/2011
July 2011	002	Nitrogen, Ammonia	1D Conc	1.5	3.78	7/21/2011
July 2011	002	Nitrogen, Ammonia	1D Conc	1.5	3.53	7/26/2011
August 2011	601	Nitrogen, Ammonia	30D Conc	1.0	1.026	8/1/2011
August 2011	002	Nitrogen, Ammonia	30D Conc	1.0	1.59078	8/1/2011
August 2011	002	Residue, Total Dissolved	30D Conc	1785	2034.44	8/1/2011
August 2011	601	Nitrogen, Ammonia	1D Conc	1.5	1.77	8/9/2011
August 2011	601	Nitrogen, Ammonia	1D Qty	0.4549	.60295	8/9/2011
August 2011	002	Nitrogen, Ammonia	1D Conc	1.5	2.24	8/9/2011
August 2011	002	Nitrogen, Ammonia	1D Qty	0.79	1.18698	8/9/2011
August 2011	002	Nitrogen, Ammonia	1D Conc	1.5	3.06	8/11/2011
August 2011	002	Nitrogen, Ammonia	1D Qty	0.79	1.62149	8/11/2011
August 2011	002	Nitrogen, Ammonia	1D Conc	1.5	2.61	8/16/2011
August 2011	002	Nitrogen, Ammonia	1D Conc	1.5	2.08	8/23/2011
August 2011	002	Nitrogen, Ammonia	1D Qty	0.79	1.02346	8/23/2011
September 2011	002	Nitrogen, Ammonia	30D Conc	1.0	1.122	9/1/2011
September 2011	002	Residue, Total Dissolved	30D Conc	1785	1901.	9/1/2011
September 2011	601	Total Suspended Solids	30D Conc	12	19.	9/1/2011
September 2011	601	Total Suspended Solids	30D Qty	3.6392	4.77856	9/1/2011
September 2011	002	Nitrogen, Ammonia	1D Conc	1.5	1.97	9/6/2011
September 2011	601	Total Suspended Solids	1D Conc	18	23.	9/6/2011

Reporting Period	Station	Parameter	Limit Type	Limit	Reported Value	Violation Date
September 2011	601	Total Suspended Solids	1D Qty	5.4589	6.09385	9/6/2011
September 2011	002	Phosphorus, Total (P)	1D Conc	4.8	5.15	9/15/2011
September 2011	002	Phosphorus, Total (P)	1D Conc	4.8	5.15	9/15/2011
September 2011	601	Total Suspended Solids	1D Conc	18	40	9/20/2011
September 2011	601	Total Suspended Solids	1D Qty	5.4589	9.084	9/20/2011
September 2011	601	Phosphorus, Total (P)	1D Conc	8.4	9.06	9/20/2011
September 2011	002	Dissolved Oxygen	1D Conc	6.0	5.5	9/29/2011
October 2011	002	Residue, Total Dissolved	30D Conc	1785	1837.5	10/1/2011
October 2011	002	Residue, Total Dissolved	30D Qty	812.01	861.040	10/1/2011
October 2011	002	Nitrogen, Ammonia	30D Conc	1.0	1.12738	10/1/2011
October 2011	601	CBOD 5 day	1D Conc	15	18.	10/11/2011
October 2011	601	CBOD 5 day	1D Qty	4.5490	6.1317	10/11/2011
October 2011	002	Fecal Coliform	1D Conc	400	1376.	10/11/2011
October 2011	002	Nitrogen, Ammonia	1D Conc	1.5	1.69	10/13/2011
March 2012	002	Residue, Total Dissolved	30D Conc	1785	2133.44	3/1/2012
March 2012	002	Residue, Total Dissolved	30D Qty	812.01	870.158	3/1/2012
March 2012	002	Residue, Total Dissolved	1D Conc	2677.5	2790.	3/15/2012
March 2012	002	Residue, Total Dissolved	1D Conc	2677.5	2680.	3/20/2012
April 2012	002	Residue, Total Dissolved	30D Qty	812.01	842.479	4/1/2012
May 2012	002	Nitrogen, Ammonia	30D Conc	1.0	1.187	5/1/2012
May 2012	002	Nitrogen, Ammonia	30D Qty	0.53	.56521	5/1/2012
May 2012	002	Residue, Total Dissolved	1D Conc	2677.5	5980.	5/1/2012
May 2012	002	Residue, Total Dissolved	30D Conc	1785	2182.	5/1/2012
May 2012	002	Residue, Total Dissolved	30D Qty	812.01	1001.62	5/1/2012
May 2012	601	Nitrogen, Ammonia	30D Conc	1.0	1.026	5/1/2012
May 2012	601	Nitrogen, Ammonia	30D Qty	0.3032	.32082	5/1/2012
May 2012	002	Nitrogen, Ammonia	1D Conc	1.5	1.63	5/22/2012
May 2012	002	Phosphorus, Total (P)	1D Conc	4.8	7.48	5/22/2012
May 2012	002	Phosphorus, Total (P)	1D Conc	4.8	7.48	5/22/2012
May 2012	002	Phosphorus, Total (P)	1D Qty	2.5	3.39742	5/22/2012
May 2012	601	Nitrogen, Ammonia	1D Conc	1.5	1.63	5/22/2012
May 2012	601	Nitrogen, Ammonia	1D Qty	0.4549	.49356	5/22/2012
May 2012	002	Nitrogen, Ammonia	1D Conc	1.5	1.77	5/24/2012
May 2012	002	Nitrogen, Ammonia	1D Qty	0.79	.80393	5/24/2012
May 2012	002	Nitrogen, Ammonia	1D Conc	1.5	2.04	5/31/2012
May 2012	002	Nitrogen, Ammonia	1D Qty	0.79	1.00378	5/31/2012
June 2012	002	Residue, Total Dissolved	30D Conc	1785	1812.5	6/1/2012
June 2012	601	Fecal Coliform	1D Conc	400	418.	6/12/2012
July 2012	002	Residue, Total Dissolved	30D Conc	1785	1846.66	7/1/2012
July 2012	002	Residue, Total Dissolved	30D Qty	812.01	827.443	7/1/2012
July 2012	002	Fecal Coliform	1D Conc	400	792.	7/17/2012

In addition to the limit violations noted above, the following reporting violations were identified in the Ohio EPA compliance tracking system. Reporting violations result when the frequency of reporting is not in accordance with the frequency identified in the NPDES Permit.

Reporting Period	Station	Parameter	Sample Frequency	Expected	Reported	Violation Date
April 2011	581	Nitrogen Kjeldahl, Tot	1/Month	1	0	04/01/2011
April 2011	581	Phosphorus, Total In S	1/Month	1	0	04/01/2011

Reporting Period	Station	Parameter	Sample Frequency	Expected	Reported	Violation Date
April 2011	581	Sludge Solids, Percent	1/Month	1	0	04/01/2011
April 2011	581	Sludge Solids, Percent	1/Month	1	0	04/01/2011
April 2011	581	Ammonia (NH3) In Sludge	1/Month	1	0	04/01/2011
February 2012	588	Sludge Solids, Percent	1/Month	1	0	02/01/2012
March 2011	901	Phosphorus, Total (P)	2/Month	2	1	03/01/2011
November 2011	901	Phosphorus, Total (P)	2/Month	2	1	11/01/2011
March 2012	901	Phosphorus, Total (P)	2/Month	2	1	03/01/2012
April 2012	901	Water Temperature	1/2months	1	0	04/01/2012
April 2012	901	Total Suspended Solids	1/2months	1	0	04/01/2012
April 2012	901	Nitrogen, Ammonia	1/2months	1	0	04/01/2012
April 2012	901	CBOD 5 day	1/2months	1	0	04/01/2012
April 2012	901	pH	1/2months	1	0	04/01/2012
April 2012	901	Nitrite Plus Nitrate,	1/2months	1	0	04/01/2012
April 2012	901	Specific Conductance a	1/2months	1	0	04/01/2012
April 2012	901	Dissolved Oxygen	1/2months	1	0	04/01/2012
April 2012	901	Residue, Total Dissolved	1/2months	1	0	04/01/2012
April 2012	901	Nitrogen Kjeldahl, Tot	1/2months	1	0	04/01/2012
April 2011	002	Water Temperature	1/Day	1	0	04/01/2011
April 2011	002	Water Temperature	1/Day	1	0	04/02/2011
April 2011	002	Water Temperature	1/Day	1	0	04/03/2011
April 2011	002	Water Temperature	1/Day	1	0	04/04/2011
April 2011	002	Water Temperature	1/Day	1	0	04/05/2011
April 2011	002	Water Temperature	1/Day	1	0	04/06/2011
April 2011	002	Water Temperature	1/Day	1	0	04/07/2011
April 2011	002	Water Temperature	1/Day	1	0	04/08/2011
April 2011	002	Water Temperature	1/Day	1	0	04/09/2011
April 2011	002	Water Temperature	1/Day	1	0	04/10/2011
April 2011	002	Water Temperature	1/Day	1	0	04/11/2011
April 2011	002	Water Temperature	1/Day	1	0	04/12/2011
April 2011	002	Water Temperature	1/Day	1	0	04/13/2011
April 2011	002	Water Temperature	1/Day	1	0	04/14/2011
April 2011	002	Water Temperature	1/Day	1	0	04/15/2011
April 2011	002	Water Temperature	1/Day	1	0	04/16/2011
April 2011	002	Water Temperature	1/Day	1	0	04/17/2011
April 2011	002	Water Temperature	1/Day	1	0	04/18/2011
April 2011	002	Water Temperature	1/Day	1	0	04/19/2011
April 2011	002	Water Temperature	1/Day	1	0	04/20/2011
April 2011	002	Water Temperature	1/Day	1	0	04/21/2011
April 2011	002	Water Temperature	1/Day	1	0	04/22/2011
April 2011	002	Water Temperature	1/Day	1	0	04/23/2011
April 2011	002	Water Temperature	1/Day	1	0	04/24/2011
April 2011	002	Water Temperature	1/Day	1	0	04/25/2011
April 2011	002	Water Temperature	1/Day	1	0	04/26/2011
April 2011	002	Water Temperature	1/Day	1	0	04/27/2011
April 2011	002	Water Temperature	1/Day	1	0	04/28/2011
April 2011	002	Water Temperature	1/Day	1	0	04/29/2011
April 2011	002	Water Temperature	1/Day	1	0	04/30/2011

Be advised that violations of the NPDES Permit are considered violations of Ohio Revised Code 6111.07 and are subject to enforcement action.

Biomonitoring Results

On May 8 and 9, 2012, Ohio EPA conducted a toxicity study of the Alpine Dairy treatment plant effluent. Toxicity studies are intended to determine if the plant effluent exhibits any toxic characteristics for two indicator species. The species used in the controlled laboratory tests are the fathead minnow and water flea. These two species are considered indicative of fish and aquatic insects in Ohio.

Based on the results, it appears that the effluent being discharged on May 8 and 9, 2012 was acutely toxic for the water flea (*Ceriodaphnia dubia*). Based on further analysis, there may also be chronic toxicity associated with the plant effluent. Toxicity may be caused by high levels of total dissolved solids (TDS). Results of the toxicity study are attached for your review.

The results demonstrating the occurrence of toxicity in the Alpine Dairy effluent may cause the NPDES Permit renewal to include toxicity testing. In addition, the NPDES Permit may include a trigger for a toxicity reduction evaluation study. The requirement for a toxicity reduction evaluation study will depend on results from future testing by Alpine Dairy.

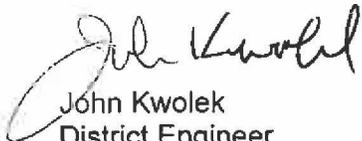
In addition, the results indicating that toxicity may be caused by high levels of TDS indicates that moving the discharge location may be pointless since plant effluent must be free of toxic effects regardless of the discharge location. These issues will be discussed further during preparation of the NPDES Permit renewal.

Alpine Response

Alpine Cheese must provide a written response to this inspection report no later than October 12, 2012. The response must identify the causes of violations noted above and the actions that will be taken by Alpine Dairy to prevent future violations of the NPDES Permit. The response must also identify the individual(s) that will be responsible for implementing the actions.

You may contact this office at (330) 963-1251 or at john.kwolek@epa.state.oh.us in the event you have any questions regarding this inspection report.

Respectfully,



John Kwolek
District Engineer
Division of Surface Water

JK/cs

Cc. Linda Karaffa, Norseland Inc
Larry Reeder, Ohio EPA, Enforcement, DSW, CO