



**Environmental
Protection Agency**

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

August 22, 2012

RE: 3DP00021*GP
MINERVA DAIRY
INDUSTRIAL USER INSPECTION
MINERVA
STARK COUNTY

NOTICE OF VIOLATION

Adam Mueller, President
Minerva Dairy
430 Radloff Ave.
P.O. Box 60
Minerva, OH 44657

Dear Mr. Mueller:

On August 7, 2012, representatives of this office conducted an Industrial User Inspection of the above facility. The Ohio EPA was represented by Donna Kniss, Ryan Laake and Michael Irwin. Joan Raycheck and Matt Smith represented the company. This inspection was a follow-up to the inspection on May 1, 2012, to identify the resolution of the following issues:

1. Installation of a conductivity meter on the reverse osmosis (RO) system permeate. The conductivity meter is supposed to route the permeate discharge from a line directly connected to the sewer to a drain leading to the aeration pretreatment plant if the conductivity rises, indicating an RO membrane failure.
2. Operation of the aeration pretreatment plant. At the May 1 inspection, the aeration plant was obviously not operating properly, with orange activated sludge, suggesting little biological activity; clarifier contents that were extremely turbid with no visible sludge blanket; and extremely turbid discharge to the sewer.
3. Repair of the composite sampler and collection of flow proportional composite samples. The composite sampler was broken at the time of the May 1 inspection, and the chain-of-custody forms suggested it had broken for some time. Minerva Dairy is required to collect flow proportional composite samples.

Mr. Smith stated that a Microvision chemical feed meter has been installed for use as a conductivity meter. The typical permeate conductivity is 150 μ S, so the meter has been set to activate the bypass valve at 350 μ S. Permeate is also used to dilute wastewater discharges to the aeration plant in the event of a spill. Mr. Smith was not aware of a spill plan, and indicated that he was working to reduce the number of spills in the facility.

The aeration plant was still operating very poorly. While the activated sludge and digester sludge both were brown/orange, reflecting the presence of biological activity, the tops of both tanks were covered with a thick layer of foam. Mr. Smith indicated that clean-in-place chemicals had been discharged to the aeration plant the previous week, upsetting the operation. The clarifier contents were extremely turbid with no discernible sludge blanket, and the discharge was very turbid and brown. Mr. Smith indicated that the digester decant had been routed to the clarifier the previous

night. This is contrary to standard practices for the successful operation of an aeration plant, which would be to bleed the decant back into the headworks. It was apparent that Mr. Smith knew what happened and how to address it, but it was also clear that Mr. Smith was informed about what happened well after the fact.

The sampling shed, holding the composite sampler, was locked. The totalizing flow meter appeared to be recording flow data. The composite sampler readout showed "errors have occurred". The composite sampler is generally programmed by one of Minerva Dairy's maintenance personnel. Upon closer examination, it appeared that the sampler was programmed to start an hour later, and Ms. Raycheck stated that Ream and Haager would be instructed to come later to pick up the sample. There was speculation that the evaporator removal resulted in a temporary loss of power to the sampling shed. However, no one had notified Ms. Raycheck or Mr. Smith of that fact.

Attachment 1 shows the IDP limit violations that have occurred from January 2009 to July 2012. Attachment 2 shows the calculated CBOD₅ loadings from the Minerva Dairy discharge, and compares them to the maximum discharge load of 207 pounds/day found in Minerva Dairy's 1996 PTI application.

Based on the number of violations, the excessive pollutant loadings, and the poor operating conditions at the facility, Minerva Dairy is required to do the following:

1. At least one Minerva Dairy employee is required to obtain a wastewater class I license. The licensed operator shall be in charge of the operation of the treatment plant, and will direct all activities. The number of personnel authorized to make changes to the aeration plant operations shall be limited, and all actions will be authorized by the licensed operator.
2. Minerva Dairy shall develop an aeration plant operations and maintenance manual, and all employees authorized to access the treatment plant shall be trained in the proper operation. The manual shall contain operator log sheets that document the aeration plant's daily operating conditions, with date, time, and operator initials. A log documenting all operational changes and maintenance actions, e.g., turning on/off blowers or decanting the digester, with date, time and operator initials shall also be developed and implemented.
3. Minerva Dairy currently provides DMR data to the Ohio EPA and the Village of Minerva every six months. By the 20th of the following month, Minerva Dairy shall provide a copy of the previous month's DMR data to the Village of Minerva and to the Ohio EPA Northeast District Office.
4. Communications between Dairy personnel, and especially with the Compliance Officer must be improved, and responsibilities clearly defined. The fact that the start of the composite sample collection was delayed, and therefore the sample pick-up should be delayed, should have been communicated to the proper personnel; it should not have gone unnoticed until we inspected the facility. The fact that the composite sample is being collected properly must be documented. This includes ensuring that the sample is flow proportional with enough aliquots to accurately represent the variability of the discharge.
5. The Minerva Dairy spill plan states that all spills are to be reported to the Emergency Response Coordinator, but does not identify that person. The spill plan shall be revised to clearly identify, by name or position, responsibilities in the event of a spill. The plan shall include who is responsible for immediately notifying the Village when the aeration plant is upset or the discharge to the sanitary sewer appears abnormal.

6. It appears that Dairy personnel are not aware of the negative impacts to the aeration plant's operation as a result of a spill or slug load release from the production area. Therefore, all Dairy personnel need to be trained in spill prevention and response. The training should include situations that require immediate notification of the aeration plant operators, such as the significant spill of cleaning chemicals or a large amount of cream.

The Ohio EPA intends to initiate an IDP modification to incorporate the above items into a compliance schedule in the permit. This compliance schedule will include dates for the submission of the above information and implementation of the changes. Please respond by September 7, 2012, proposing a schedule to implement the items above. This schedule will be evaluated for inclusion in the IDP modification. If you have any questions or comments, please contact me at (330) 963-1285. I can also be reached via e-mail at donna.kniss@epa.state.oh.us.

Sincerely,



Donna J. Kniss
District Engineer
Division of Surface Water
Northeast District Office

DJK/cs

Attachments

cc w/att: Don Luedtke, Village of Minerva
Ryan Laake, Ohio EPA, DSW CO

ec w/att: Joseph Trocchio, Ohio EPA, DSW NEDO

File: Pretreatment Industrial User/Permit-Compliance

Attachment 1

Minerva Dairy, Inc. Limit Violations 01/2009 to 07/2012

Permit No	Station	Parameter	Limit Type	Limit	Reported Value	Violation Date
3DP00021*FP	103	Total Suspended Solids	1D Conc	250	263.	3/17/2009
3DP00021*FP	103	pH, Minimum	1D Conc	5.0	3.99	3/17/2009
3DP00021*FP	103	CBOD 5 day	1D Conc	541	586.	7/20/2010
3DP00021*GP	001	Total Suspended Solids	1D Conc	250	290.	11/1/2011
3DP00021*GP	001	Total Suspended Solids	1D Conc	250	346.	12/13/2011
3DP00021*GP	001	CBOD 5 day	1D Conc	541	795.	8/30/2011
3DP00021*GP	001	CBOD 5 day	1D Conc	541	1040.	11/1/2011
3DP00021*GP	001	CBOD 5 day	1D Conc	541	738.	11/8/2011
3DP00021*GP	001	CBOD 5 day	1D Conc	541	3860.	11/29/2011
3DP00021*GP	001	CBOD 5 day	1D Conc	541	987.	12/6/2011
3DP00021*GP	001	CBOD 5 day	1D Conc	541	917.	12/13/2011
3DP00021*GP	001	Total Suspended Solids	1D Conc	250	265.	5/31/2011
3DP00021*GP	001	CBOD 5 day	1D Conc	541	920.	5/31/2011
3DP00021*GP	001	CBOD 5 day	1D Conc	541	993.	6/7/2011
3DP00021*GP	001	CBOD 5 day	1D Conc	541	804.	1/31/2012
3DP00021*GP	001	Total Suspended Solids	1D Conc	250	287.	4/11/2012
3DP00021*GP	001	Total Suspended Solids	1D Conc	250	550.	4/18/2012
3DP00021*GP	001	CBOD 5 day	1D Conc	541	1220.	4/18/2012
3DP00021*GP	001	Total Suspended Solids	1D Conc	250	455.	6/20/2012

Attachment 2

Minerva Dairy, Inc. Calculated CBOD Loads 01/2009 to 07/2012

Date	Parameter	Units	Reported			Reported		Load, lb/day
			Value	Parameter	Units	Value	Units	
1/6/2009	Flow Rate	GPD	95000	CBOD 5 day	mg/l	23	18.2	
1/13/2009	Flow Rate	GPD	80000	CBOD 5 day	mg/l	26	17.4	
1/20/2009	Flow Rate	GPD	84000	CBOD 5 day	mg/l	15	10.5	
1/27/2009	Flow Rate	GPD	86000	CBOD 5 day	mg/l	21	15.1	
2/3/2009	Flow Rate	GPD	88000	CBOD 5 day	mg/l	27	19.8	
2/10/2009	Flow Rate	GPD	81000	CBOD 5 day	mg/l	29	19.6	
2/17/2009	Flow Rate	GPD	84000	CBOD 5 day	mg/l	25.1	17.6	
2/24/2009	Flow Rate	GPD	85000	CBOD 5 day	mg/l	28	19.9	
3/3/2009	Flow Rate	GPD	81000	CBOD 5 day	mg/l	43	29.1	
3/10/2009	Flow Rate	GPD	85000	CBOD 5 day	mg/l	13	9.2	
3/17/2009	Flow Rate	GPD	82000	CBOD 5 day	mg/l	199	136.2	
3/24/2009	Flow Rate	GPD	78000	CBOD 5 day	mg/l	14	9.1	
3/31/2009	Flow Rate	GPD	80000	CBOD 5 day	mg/l	12	8.0	
4/7/2009	Flow Rate	GPD	84000	CBOD 5 day	mg/l	7	4.9	
4/14/2009	Flow Rate	GPD	112000	CBOD 5 day	mg/l	15	14.0	
4/21/2009	Flow Rate	GPD	104000	CBOD 5 day	mg/l	13	11.3	
4/28/2009	Flow Rate	GPD	108000	CBOD 5 day	mg/l	5	4.5	
5/5/2009	Flow Rate	GPD	90000	CBOD 5 day	mg/l	5	3.8	
5/11/2009	Flow Rate	GPD	98000	CBOD 5 day	mg/l	49	40.1	
5/19/2009	Flow Rate	GPD	126000	CBOD 5 day	mg/l	13	13.7	
5/26/2009	Flow Rate	GPD	142000	CBOD 5 day	mg/l	5	5.9	
6/2/2009	Flow Rate	GPD	136000	CBOD 5 day	mg/l	236	267.8	
6/9/2009	Flow Rate	GPD	132000	CBOD 5 day	mg/l	20	22.0	
6/16/2009	Flow Rate	GPD	128000	CBOD 5 day	mg/l	15	16.0	
6/23/2009	Flow Rate	GPD	96000	CBOD 5 day	mg/l	28	22.4	
6/30/2009	Flow Rate	GPD	107000	CBOD 5 day	mg/l	5	4.5	
7/7/2009	Flow Rate	GPD	60000	CBOD 5 day	mg/l	50	25.0	
7/14/2009	Flow Rate	GPD	80000	CBOD 5 day	mg/l	82	54.7	
7/21/2009	Flow Rate	GPD	120000	CBOD 5 day	mg/l	18	18.0	
7/28/2009	Flow Rate	GPD	60000	CBOD 5 day	mg/l	1	0.5	
8/4/2009	Flow Rate	GPD	40000	CBOD 5 day	mg/l	5	1.7	
8/11/2009	Flow Rate	GPD	60000	CBOD 5 day	mg/l	43	21.5	
8/18/2009	Flow Rate	GPD	92000	CBOD 5 day	mg/l	77	59.1	
8/25/2009	Flow Rate	GPD	70000	CBOD 5 day	mg/l	85	49.6	
9/1/2009	Flow Rate	GPD	80000	CBOD 5 day	mg/l	208	138.9	
9/8/2009	Flow Rate	GPD	100000	CBOD 5 day	mg/l	5	4.2	
9/15/2009	Flow Rate	GPD	105000	CBOD 5 day	mg/l	41	35.9	
9/22/2009	Flow Rate	GPD	70000	CBOD 5 day	mg/l	42	24.5	
9/29/2009	Flow Rate	GPD	80000	CBOD 5 day	mg/l	9	6.0	
10/6/2009	Flow Rate	GPD	65000	CBOD 5 day	mg/l	101	54.8	

Attachment 2

Minerva Dairy, Inc. Calculated CBOD Loads 01/2009 to 07/2012

Date	Parameter	Units	Reported			Reported Value	Load, lb/day
			Value	Parameter	Units		
10/13/2009	Flow Rate	GPD	65000	CBOD 5 day	mg/l	79	42.8
10/20/2009	Flow Rate	GPD	65000	CBOD 5 day	mg/l	16	8.7
10/27/2009	Flow Rate	GPD	65000	CBOD 5 day	mg/l	80	43.4
11/3/2009	Flow Rate	GPD	65000	CBOD 5 day	mg/l	77	41.8
11/10/2009	Flow Rate	GPD	65000	CBOD 5 day	mg/l	80	43.4
11/17/2009	Flow Rate	GPD	80000	CBOD 5 day	mg/l	14	9.3
12/1/2009	Flow Rate	GPD	70000	CBOD 5 day	mg/l	74	43.2
12/8/2009	Flow Rate	GPD	65000	CBOD 5 day	mg/l	24	13.0
12/15/2009	Flow Rate	GPD	65000	CBOD 5 day	mg/l	8	4.3
12/22/2009	Flow Rate	GPD	120000	CBOD 5 day	mg/l	75	75.1
12/29/2009	Flow Rate	GPD	120000	CBOD 5 day	mg/l	20	20.0
1/5/2010	Flow Rate	GPD	87880	CBOD 5 day	mg/l	44	32.3
1/12/2010	Flow Rate	GPD	74580	CBOD 5 day	mg/l	227	141.3
1/19/2010	Flow Rate	GPD	80790	CBOD 5 day	mg/l	82	55.3
1/26/2010	Flow Rate	GPD	75230	CBOD 5 day	mg/l	47	29.5
2/2/2010	Flow Rate	GPD	94330	CBOD 5 day	mg/l	21	16.5
2/9/2010	Flow Rate	GPD	84480	CBOD 5 day	mg/l	134	94.5
2/16/2010	Flow Rate	GPD	90345	CBOD 5 day	mg/l	75	56.5
2/23/2010	Flow Rate	GPD	81460	CBOD 5 day	mg/l	25	17.0
3/2/2010	Flow Rate	GPD	80613	CBOD 5 day	mg/l	20	13.5
3/9/2010	Flow Rate	GPD	91190	CBOD 5 day	mg/l	17	12.9
3/16/2010	Flow Rate	GPD	76180	CBOD 5 day	mg/l	5	3.2
3/23/2010	Flow Rate	GPD	81800	CBOD 5 day	mg/l	46	31.4
3/30/2010	Flow Rate	GPD	97230	CBOD 5 day	mg/l	22	17.8
4/6/2010	Flow Rate	GPD	61710	CBOD 5 day	mg/l	22	11.3
4/13/2010	Flow Rate	GPD	70390	CBOD 5 day	mg/l	19	11.2
4/20/2010	Flow Rate	GPD	97620	CBOD 5 day	mg/l	14	11.4
4/27/2010	Flow Rate	GPD	90935	CBOD 5 day	mg/l	156	118.4
5/4/2010	Flow Rate	GPD	94280	CBOD 5 day	mg/l	7	5.5
5/11/2010	Flow Rate	GPD	86800	CBOD 5 day	mg/l	62	44.9
5/18/2010	Flow Rate	GPD	133625	CBOD 5 day	mg/l	122	136.0
5/25/2010	Flow Rate	GPD	84216	CBOD 5 day	mg/l	31	21.8
6/1/2010	Flow Rate	GPD	124940	CBOD 5 day	mg/l	9	9.4
6/8/2010	Flow Rate	GPD	123760	CBOD 5 day	mg/l	30	31.0
6/15/2010	Flow Rate	GPD	101620				
6/22/2010	Flow Rate	GPD	132285				
6/29/2010	Flow Rate	GPD	104480				
7/6/2010	Flow Rate	GPD	115000	CBOD 5 day	mg/l	295	283.1
7/13/2010	Flow Rate	GPD	112125	CBOD 5 day	mg/l	43	40.2
7/20/2010	Flow Rate	GPD	121990	CBOD 5 day	mg/l	586	<u>596.5</u>

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Minerva Dairy, Inc. Calculated CBOD Loads 01/2009 to 07/2012

Date	Parameter	Units	Reported			Reported Value	Load, lb/day
			Value	Parameter	Units		
7/27/2010	Flow Rate	GPD	92260	CBOD 5 day	mg/l	20	15.4
8/3/2010	Flow Rate	GPD	83905	CBOD 5 day	mg/l	16	11.2
8/10/2010	Flow Rate	GPD	44941	CBOD 5 day	mg/l	22	8.3
8/17/2010	Flow Rate	GPD	92200	CBOD 5 day	mg/l	39	30.0
8/24/2010	Flow Rate	GPD	88970	CBOD 5 day	mg/l	14	10.4
8/31/2010	Flow Rate	GPD	33315	CBOD 5 day	mg/l	6	1.7
9/7/2010	Flow Rate	GPD	87020	CBOD 5 day	mg/l	7	5.1
9/14/2010	Flow Rate	GPD	78675	CBOD 5 day	mg/l	20	13.1
9/21/2010	Flow Rate	GPD	69395	CBOD 5 day	mg/l	130	75.3
9/28/2010	Flow Rate	GPD	90780	CBOD 5 day	mg/l	59	44.7
10/5/2010	Flow Rate	GPD	93600	CBOD 5 day	mg/l	10	7.8
10/12/2010	Flow Rate	GPD	94750	CBOD 5 day	mg/l	15	11.9
10/19/2010	Flow Rate	GPD	37265	CBOD 5 day	mg/l	9	2.8
10/26/2010	Flow Rate	GPD	75940	CBOD 5 day	mg/l	14	8.9
11/2/2010	Flow Rate	GPD	73011	CBOD 5 day	mg/l	84	51.2
11/9/2010	Flow Rate	GPD	87560	CBOD 5 day	mg/l	55	40.2
11/16/2010	Flow Rate	GPD	81510	CBOD 5 day	mg/l	35	23.8
11/23/2010	Flow Rate	GPD	114083	CBOD 5 day	mg/l	17	16.2
11/30/2010	Flow Rate	GPD	69080	CBOD 5 day	mg/l	39	22.5
12/7/2010	Flow Rate	GPD	71650	CBOD 5 day	mg/l	77	46.0
12/14/2010	Flow Rate	GPD	36900	CBOD 5 day	mg/l	20	6.2
12/21/2010	Flow Rate	GPD	82410	CBOD 5 day	mg/l	77	52.9
12/28/2010	Flow Rate	GPD	86210	CBOD 5 day	mg/l	45	32.4
1/4/2011	Flow Rate	GPD	102600	CBOD 5 day	mg/l	49	42.0
1/11/2011	Flow Rate	GPD	79000	CBOD 5 day	mg/l	13	8.6
1/18/2011	Flow Rate	GPD	80000	CBOD 5 day	mg/l	25	16.7
1/25/2011	Flow Rate	GPD	105795	CBOD 5 day	mg/l	75	66.2
2/1/2011	Flow Rate	GPD	94340	CBOD 5 day	mg/l	297	233.8
2/8/2011	Flow Rate	GPD	97280	CBOD 5 day	mg/l	66	53.6
2/15/2011	Flow Rate	GPD	103370	CBOD 5 day	mg/l	37.4	32.3
2/22/2011	Flow Rate	GPD	104160	CBOD 5 day	mg/l	31	26.9
3/1/2011	Flow Rate	GPD	90260	CBOD 5 day	mg/l	14	10.5
3/8/2011	Flow Rate	GPD	29630	CBOD 5 day	mg/l	18	4.5
3/15/2011	Flow Rate	GPD	74820	CBOD 5 day	mg/l	47	29.3
3/22/2011	Flow Rate	GPD	70490	CBOD 5 day	mg/l	40	23.5
3/29/2011	Flow Rate	GPD	83870	CBOD 5 day	mg/l	9	6.3
4/5/2011	Flow Rate	GPD	84280	CBOD 5 day	mg/l	7	4.9
4/12/2011	Flow Rate	GPD	104665	CBOD 5 day	mg/l	5	4.4
4/19/2011	Flow Rate	GPD	67420	CBOD 5 day	mg/l	13	7.3
4/26/2011	Flow Rate	GPD	107940	CBOD 5 day	mg/l	21	18.9

Attachment 2

Minerva Dairy, Inc. Calculated CBOD Loads 01/2009 to 07/2012

Date	Parameter	Units	Reported			Reported Value	Load, lb/day
			Value	Parameter	Units		
5/3/2011	Flow Rate	GPD	120685	CBOD 5 day	mg/l	19	19.1
5/10/2011	Flow Rate	GPD	122120	CBOD 5 day	mg/l	4	4.1
5/17/2011	Flow Rate	GPD	82835	CBOD 5 day	mg/l	13	9.0
5/24/2011	Flow Rate	GPD	111900	CBOD 5 day	mg/l	4	3.7
5/31/2011	Flow Rate	GPD	164740	CBOD 5 day	mg/l	920	<u>1264.7</u>
6/7/2011	Flow Rate	GPD	117700	CBOD 5 day	mg/l	993	<u>975.3</u>
6/14/2011	Flow Rate	GPD	103300	CBOD 5 day	mg/l	484	<u>417.2</u>
6/21/2011	Flow Rate	GPD	138710	CBOD 5 day	mg/l	503	<u>582.2</u>
6/28/2011	Flow Rate	GPD	80430	CBOD 5 day	mg/l	99	66.4
7/5/2011	Flow Rate	GPD	296135	CBOD 5 day	mg/l	33	81.5
7/12/2011	Flow Rate	GPD	115570	CBOD 5 day	mg/l	29	28.0
7/19/2011	Flow Rate	GPD	113350	CBOD 5 day	mg/l	494	467.2
7/26/2011	Flow Rate	GPD	59175	CBOD 5 day	mg/l	20	9.9
8/2/2011	Flow Rate	GPD	61830	CBOD 5 day	mg/l	5	2.6
8/9/2011	Flow Rate	GPD	110765	CBOD 5 day	mg/l	56	51.8
8/16/2011	Flow Rate	GPD	95850	CBOD 5 day	mg/l	49	39.2
8/23/2011	Flow Rate	GPD	106780	CBOD 5 day	mg/l	9	8.0
8/30/2011	Flow Rate	GPD	95120	CBOD 5 day	mg/l	795	<u>631.0</u>
9/6/2011	Flow Rate	GPD	105890	CBOD 5 day	mg/l	16	14.1
9/13/2011	Flow Rate	GPD	180180	CBOD 5 day	mg/l	24	36.1
9/20/2011	Flow Rate	GPD	155155	CBOD 5 day	mg/l	31	40.1
9/27/2011	Flow Rate	GPD	129260	CBOD 5 day	mg/l	28	30.2
10/4/2011	Flow Rate	GPD	131070	CBOD 5 day	mg/l	17	18.6
10/11/2011	Flow Rate	GPD	102850	CBOD 5 day	mg/l	143	122.7
10/18/2011	Flow Rate	GPD	292860	CBOD 5 day	mg/l	56	136.8
10/25/2011	Flow Rate	GPD	60890	CBOD 5 day	mg/l	16	8.1
11/1/2011	Flow Rate	GPD	101810	CBOD 5 day	mg/l	1040	<u>883.5</u>
11/8/2011	Flow Rate	GPD	100620	CBOD 5 day	mg/l	738	<u>619.6</u>
11/15/2011	Flow Rate	GPD	94069	CBOD 5 day	mg/l	29	22.8
11/22/2011	Flow Rate	GPD	40300	CBOD 5 day	mg/l	80	26.9
11/29/2011	Flow Rate	GPD	131480	CBOD 5 day	mg/l	3860	<u>4234.9</u>
12/6/2011	Flow Rate	GPD	156895	CBOD 5 day	mg/l	987	<u>1292.2</u>
12/13/2011	Flow Rate	GPD	64289	CBOD 5 day	mg/l	917	491.9
12/20/2011	Flow Rate	GPD	60163	CBOD 5 day	mg/l	38	19.1
12/27/2011	Flow Rate	GPD	76630	CBOD 5 day	mg/l	146	93.4
1/3/2012	Flow Rate	GPD	94990	CBOD 5 day	mg/l	60	47.6
1/10/2012	Flow Rate	GPD	34766	CBOD 5 day	mg/l	82	23.8
1/17/2012	Flow Rate	GPD	82008	CBOD 5 day	mg/l	171	117.0
1/24/2012	Flow Rate	GPD	87482	CBOD 5 day	mg/l	5	3.6
1/31/2012	Flow Rate	GPD	72540	CBOD 5 day	mg/l	804	486.7

Attachment 2

Minerva Dairy, Inc. Calculated CBOD Loads 01/2009 to 07/2012

Date	Parameter	Units	Reported			Reported Value	Load, lb/day
			Value	Parameter	Units		
2/7/2012	Flow Rate	GPD	205715	CBOD 5 day	mg/l	273	468.6
2/14/2012	Flow Rate	GPD	103325	CBOD 5 day	mg/l	77	66.4
2/21/2012	Flow Rate	GPD	81325	CBOD 5 day	mg/l	59	40.0
2/28/2012	Flow Rate	GPD	91350	CBOD 5 day	mg/l	183	139.5
3/6/2012	Flow Rate	GPD	132540	CBOD 5 day	mg/l	13	14.4
3/14/2012	Flow Rate	GPD	78500	CBOD 5 day	mg/l	24	15.7
3/21/2012	Flow Rate	GPD	104830	CBOD 5 day	mg/l	72	63.0
3/28/2012	Flow Rate	GPD	60250	CBOD 5 day	mg/l	17	8.5
4/4/2012	Flow Rate	GPD	104100	CBOD 5 day	mg/l	62	53.9
4/11/2012	Flow Rate	GPD	104110	CBOD 5 day	mg/l	147	127.7
4/18/2012	Flow Rate	GPD	84000	CBOD 5 day	mg/l	1220	<u>855.1</u>
4/25/2012	Flow Rate	GPD	105300	CBOD 5 day	mg/l	90	79.1
5/2/2012	Flow Rate	GPD	78275	CBOD 5 day	mg/l	91	59.4
5/9/2012	Flow Rate	GPD	58200	CBOD 5 day	mg/l	49	23.8
5/16/2012	Flow Rate	GPD	71600	CBOD 5 day	mg/l	23	13.7
5/23/2012	Flow Rate	GPD	71600	CBOD 5 day	mg/l	58	34.7
5/30/2012	Flow Rate	GPD	82700	CBOD 5 day	mg/l	37	25.5
6/6/2012	Flow Rate	GPD	80600	CBOD 5 day	mg/l	45	30.3
6/13/2012	Flow Rate	GPD	10800	CBOD 5 day	mg/l	17	1.5
6/20/2012	Flow Rate	GPD	68900	CBOD 5 day	mg/l	103	59.2
6/27/2012	Flow Rate	GPD	35800	CBOD 5 day	mg/l	44	13.1