



State of Ohio Environmental Protection Agency

*File
Pre-T
Great Lakes Cheese
Inspection*

STREET ADDRESS:

MAILING ADDRESS:

Lazarus Government Center
50 W. Town St., Suite 700
Columbus, Ohio 43215

TELE: (614) 644-3020 FAX: (614) 644-3184
www.epa.state.oh.us

P.O. Box 1049
Columbus, OH 43216-1049

September 18, 2008

**Re: Great Lakes Cheese
Pretreatment Inspection
IDP No.: 3DP00036*AP**

David Ortego
Maintenance Manager
Great Lakes Cheese
17825 Great Lakes Parkway
Hiram, OH 44234

RECEIVED
SEP 24 2008
OHIO EPA NEDO

Dear Mr. Ortego,

On July 15, 2008, Doug Hiestand, Rich Blasick, Ryan Laake and I inspected Great Lakes Cheese (GLC). The inspection was conducted to evaluate the facility's compliance with federal and state pretreatment regulations and its Indirect Discharge Permit (IDP). You, Mr. Art Butt, Mr. Dan Sweeten, Mr. Bill Rodman and Mr. Bob Provost (with Foresight Engineering Group) represented GLC during the inspection. Mr. Jim Reider from Geauga County Department of Water Resources attended the inspection meeting before we toured the facility.

GENERAL FACILITY DESCRIPTION

GLC cuts and packages cheese for private labels. Cheese is purchased from cheese makers in Ohio and other states. Cheese is then cut and/or sliced into desired sizes and packaged. The facility has a total of twenty-two cheese process lines.

Process wastewater is generated during the cleanup of all the cheese process lines on the third shift of every production day. All process wastewater is routed to the facility's wastewater pretreatment system. A new wastewater pretreatment system, which started operation in February 2008, consists of an aerated equalization (EQ) basin, a fine screens/anoxic basin, a pre-aeration basin and two membrane bioreactor (MBR) basins. Effluent from the pretreatment system flows to a manhole in which the treated process wastewater commingles with sanitary wastewater and cooling tower blowdown before it discharges to the Geauga County Troy Oaks Wastewater Treatment Plant (Troy Oaks WWTP). Sludge from the MBR basins is stored in a sludge holding tank and sent for landfilling once a week.

Ted Strickland, Governor
Lee Fisher, Lieutenant Governor
Chris Korleski, Director

A cooling tower for the ammonia chillers used to keep cheese cooled is used approximately four months a year from April to October. As a result, cooling tower blowdown is discharged to the sewer during these four months without going through the wastewater pretreatment system.

SAMPLING RESULTS

A review of GLC's self-monitoring data from January 2005 through February 2008 indicated permit violations for TSS, nitrogen ammonia, total phosphorus and CBOD₅ when the old wastewater pretreatment system was in operation. The main cause for the violations was that the old system was designed to treat fifty percent of the process wastewater. But it was treating all process wastewater because bypassing fifty percent of untreated process wastewater slug loaded the Troy Oaks WWTP.

The results of the samples collected from March through June 2008 (when the new wastewater pretreatment system was in operation) indicated that the concentrations of TSS and CBOD₅ in the final outfall decreased significantly. However, the concentrations of nitrogen ammonia were still higher than the daily maximum limit (10 mg/L) in the facility's IDP most of the time. The concentrations of total phosphorus were still higher than the daily maximum limit (7 mg/L) in the facility's IDP almost forty percent of the time. To investigate if any untreated process wastewater bypasses the wastewater pretreatment system, GLC contracted Harner Plumbing, Inc. to conduct a dye testing in May 2008. Harner Plumbing stated in a document dated May 10, 2008 that: "...Harner Plumbing Inc. dropped dye solution followed by water into all floor drains, hub drains, sinks, condensate drains, etc., connected to process water lines. No dye was put into sanitary lines. When test was complete, no dye was found in the sanitary sewers."

MEASURE OF TOTAL FLOW

The facility installed an ultrasonic flow meter at the permitted sampling location, a manhole that includes treated process wastewater, sanitary wastewater and cooling tower blowdown. You stated during the inspection that you suspected sometimes flows were over estimated because of the inorganic objects in the raw sanitary wastewater. During the inspection, we observed when a piece of paper was removed from the pipe where the flow was measured, the instantaneous flow of the flow meter dropped to half of it was before the paper was removed. However, by looking at the flow data since January 2005, we suspect that sometimes flows were underestimated as well. For example, the total flow for April 5, 2007 was 9,409 gallons. If an estimated 12,000 gallons of sanitary wastewater is subtracted from the total flow, the flow for process wastewater became -2,591 gallons.

REQUIRED ACTIONS

GLC is required to take following actions:

- GLC's Indirect Discharge Permit requires collecting flow-proportional samples for composite samples. GLC has been collecting time-proportional samples. GLC needs to collect flow-proportional samples.
- GLC needs to find an alternative method to obtain accurate flows for the facility. Obtaining accurate flows will also ensure that the flow-proportional samples are representative of the quality of the facility's wastewater discharge.
- GLC needs to prepare a report for the dye testing conducted in May. The document from Harner Plumbing dated May 10, 2008 did not provide the information that needs to be included in a dye testing report. The report should at a minimum:
 - > contain a site map that shows the locations where dye solution was dropped and the locations that were monitored;
 - > indicate the approximate time for all the dye solution dropping and the monitoring; and if the time that took the dye solution to travel in the piping was taken into consideration.

Ohio EPA will consider moving the sampling location in the Indirect Discharge Permit for GLC to the end of the wastewater pretreatment system if the dye testing report can demonstrate that all process wastewater flows are directed to the pretreatment system.

- GLC needs to investigate the cause(s) for high concentrations of nitrogen ammonia and total phosphorus in the final outfall.

RENEWAL OF INDIRECT DISCHARGE PERMIT

GLC's Indirect Discharge Permit expired on June 30, 2008. Ohio EPA received a permit renewal application on June 8, 2008. Ohio EPA is currently working on the permit renewal.

Mr. David Ortego
September 18, 2008
Page 4

Please provide a response to this letter within 30 days from the receipt of this letter.
Please contact me at (614) 728-1323 if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to be 'Julia Zhang', with a horizontal line extending to the right.

Julia Zhang, P.E.
Environmental Specialist
Permit & Compliance Section
Division of Surface Water

cc: Jim Reider, Geauga County Department of Water Resources
Doug Bowen, Geauga County Department of Water Resources
Doug Hiestand, DSW, NEDO

INDUSTRIAL USER INSPECTION CHECKLIST

Facility: **Great Lakes Cheese**
OH Number: **OH0043508**
Facility Representative: **David Ortego,
Art Butt, Dan Sweeten, Bill Rodman,
Bob Provost (with Foresight
Engineering Group)**

Date of inspection: **July 16, 2008**
IDP Number: **3DP00036*AP**
Inspector(s): **Doug Hiestand, Rich Blasick,
Ryan Laake, Julia Zhang**

COMPLIANCE

1. Date of last pretreatment inspection:

April 26, 2001.

2. Has the facility been in compliance with its permit limits since the last inspection? Y / N
If no, explain:

The facility had permit violations for total suspended solids, nitrogen ammonia, total phosphorus and CBOD₅. The cause for the violations was that the old extended aeration system was designed to treat 50% of the facility's process wastewater. However, the facility had to send all the process wastewater to the old system because the POTW was slug loaded when 50% of the process wastewater bypassed the old system.

3. Is the facility in compliance with all other requirements? Y / N / NA
Sampling procedures Y / N / NA
Reporting (late reporting, failure to report, etc) Y / N / NA
Compliance schedules Y / N / NA
Submitted BMR and 90 day compliance reports Y / N / NA
Any other requirements Y / N / NA

If any of the above five answers is no, explain:

The facility's IDP requires flow-proportional samples to be collected. However, time-proportional samples have been collected.

The facility's IDP has a compliance schedule that requires the facility to submit a slug control plan to Ohio EPA's Northeast District Office. But the facility didn't submit the plan.

4. Was the facility required to perform any actions as a result of the last inspection? Y / N
Explain any unresolved actions:

The facility was required to submit an IDP application to Ohio EPA. The application was submitted in September 2002.

FACILITY OPERATIONAL CHARACTERISTICS

5. Number of Employees: **531** 6. Shifts/Day: **3**
7. Production Days/Year: **250** 8. Hours/shift: **8**

9. Any production changes since the last inspection? Y / N
If yes, explain:

Production has increased approximately 120%.

10. General facility description and operations:

Great Lakes Cheese cuts and packages cheese for private labels. Cheese is purchased from cheese makers in Ohio and other states. Cheese is then cut and/or sliced into desired sizes and packaged.

The facility has a total of twenty-two cheese process lines.

11. Any change in materials used in production since the last inspection?
If yes, explain:

~~Y~~ / N

12. Any expansion or production increase expected within the next year?
If yes, explain:

Y / ~~N~~

Production is expected to increase by 10% in volume in the next year

WASTEWATER TREATMENT

13. Provide a schematic diagram and description of the wastewater treatment system:

The wastewater treatment system consists of a 24,000-gallon aerated EQ basin, a 4,000-gallon anoxic basin containing fine screens, a 10,000-gallon pre-aeration basin, and two Enviroquip MBR basins totaling 5,436 gallons. The MBR basins contain 2 cartridges with a total of 100 membranes in them. Sludge from the MBR basins is stored in a 3,000-gallon holding tank before it is hauled to a landfill for disposal on a weekly basis.

14. Was a PTI issued for the treatment system? Y / N

15. Were there any modifications to the treatment system since the previous inspection? Y / N

A membrane bioreactor (MBR) system replaced the old extended aeration system.

If yes, was a PTI obtained? Y / N

PTI Number: 598138

Date: *May 2007*

16. What is the treatment mode of operation? Batch / Continuous / Combination

If batch, list the frequency and duration:

17. Who is responsible for operating the treatment system?

Art Butt, Maintenance Supervisor.

18. How often is the treatment system checked?

Daily. Flow levels of the treatment tanks and mixed-liquor suspended solids (MLSS) are checked.

19. Is there an alarm system for the system? Y / N
Explain:

Yes. Alarms will kick off when the flow level in a treatment tank is too high or a sludge pump is not working.

20. Is there an operations and maintenance manual? Y / N

21. Is an inventory of critical spare parts maintained? Y / N

Critical parts including influent pumps, EQ pumps, sludge recycle pumps, MBR and pre-aeration tank blowers are redundant.

If yes, list:

WASTEWATER TREATMENT CONTINUED

22. Are there any bypasses in the system? Y / N
If yes, describe the location:

A bypass valve is located in a manhole in the parking lot.

Have bypasses occurred since the last inspection? Y / N

Was the POTW notified? Y / N

Not always because the facility's IDP allows bypass of process wastewater because the old wastewater treatment system could only treat 50% of the process wastewater.

23. Are residuals or sludges generated? Y / N

Method of disposal:

Landfilling

Frequency and amount of disposal:

1,500 to 3,000 gallons per week.

Name of hauler/landfill/disposal facility:

Tim Frank

Is any sludge generated subject to RCRA regulations? Y / N

If land applying sludge, is there a sludge management plan? Y / N

PROCESS AND WASTEWATER INFORMATION

24. List all processes generating wastewater, current wastewater flows, and where applicable, production rates as well as values on which the permit limits are based:

REGULATED PROCESS	SAMPLE LOCATION	WASTEWATER FLOW (GPD)		PRODUCTION DATA (SPECIFY UNITS)	
		Permit	Current	Permit	Current
1. Cheese Process lines Cleanup wastewater ¹	Final outfall which is a manhole that includes total discharge from the facility	18,200	24,669		
2.					
3.					
4.					
5.					
Total Regulated Process Flow					
Non-contact Cooling Blowdown ²			5,000		
Reverse Osmosis Condensate					
Demineralizer Regeneration					
Filter Backwash					
Compressor Condensate					
Storm Water					
Other Dilute Flows					
Unregulated Flows (provide list)					
Sanitary ³			12,000		
TOTAL FLOW					

Notes:

1 – Total flows including sanitary and cooling tower blowdown.

2 – Cooling tower blowdown only discharges approximately 4 months a year.

3 – Flow for sanitary wastewater is estimated based on 25 gpd/person.

25. For the above flows not discharged to the POTW, list point of discharge and permit (if any).

SELF MONITORING

26. Sample location(s) described in the facility's permit:

A manhole which includes total discharge from the facility just prior to discharge into the POTW sewer system.

27. Is the facility sampling at the location(s) described in the permit? **Y / N**
If no, describe the actual location:

28. Is the location(s) where the facility is sampling representative? **Y / N**
If no, indicate a representative location:

29. Is the flow measured or estimated? **Measured / Estimated**
If measured, how often is the meter calibrated?

Annually

If estimated, describe method of estimation:

30. Is pH monitored continuously? **Y / N**
If yes, how often is the meter calibrated?

31. Does the facility collect its own samples? **Y / N**
If no, specify the sample collector:

Geauga County Department of Water Resources

32. Are appropriate sampling procedures followed?
Monitoring frequencies **Y / N**
Sample collection (grab for pH, O&G, CN, phenols, VOCs, hexavalent chromium) **Y / N**
Flow proportioned samples **Y / N**
Proper preservation techniques **Y / N**
Sample holding times **Y / N**
Chain-of-custody forms **Y / N**

33. Are samples analyzed in accordance with 40 CFR 136? **Y / N**

34. Laboratory conducting analyses:

Geauga County's laboratory

TOXICS MANAGEMENT

35. Are any listed toxic organics used in the facility? Y / N
If yes, identify organics:

36. Does the facility have a current toxic organic management plan(TOMP)? Y / N
If yes, is it being implemented? Y / N

37. Has the facility had any uncontrolled releases or spills to the POTW since the previous inspection? If yes, please explain: Y / N

38. Does the facility need a spill prevention plan or slug discharge control plan? Y / N

A slug discharge control plan is not needed because all floor drains in the production area are routed to the new wastewater pretreatment system. Therefore, all process wastewater is treated by the wastewater pretreatment system before it is discharged to the sewer system. The wastewater pretreatment system has enough capacity to treat all the wastewater.

There is a bypass valve at the facility that allows the discharge of untreated process wastewater to the sewer. Ohio EPA recommends that the facility lock the manhole in which the bypass valve is located and give the key to the staff at Geauga County.

If yes, does the facility have a written plan? Y / N

39. Identify any potential slug load or spill areas:

REQUIRED FOLLOW-UP ACTIONS

1. GLC's Indirect Discharge Permit requires collecting flow-proportional samples for composite samples. GLC has been collecting time-proportional samples. GLC needs to collect flow-proportional samples.

2. GLC needs to find an alternative method to obtain accurate flows for the facility. Obtaining accurate flows will also ensure that the flow-proportional samples are representative of the quality of the facility's wastewater discharge.

3. GLC needs to prepare a report for the dye testing conducted in May. The document from Harner Plumbing dated May 10, 2008 did not provide the information that needs to be included in a dye testing report. The report should at a minimum:

- contain a site map that shows the locations where dye solution was dropped and the locations that were monitored;
- indicate the approximate time for all the dye solution dropping and the monitoring; and if the time that took the dye solution to travel in the piping was taken into consideration.

Ohio EPA will consider moving the sampling location in the Indirect Discharge Permit for GLC to the end of the wastewater pretreatment system if the dye testing report can demonstrate that all process wastewater flows are directed to the pretreatment system.

4. GLC needs to investigate the cause(s) for high concentrations of nitrogen ammonia and total phosphorus in the final outfall.