



Environmental
Protection Agency

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

August 20, 2012

Mario Rea, Owner
Crystal Lake MHP
301 West Fourth Street, Suite 440
Royal Oak, MI 48067

Re: **Crystal Lake MHP**
NPDES Permit 4PV00010/ OH0101788
Compliance Evaluation Inspection
Delaware County

Dear Mr. Rea:

On July 11, 2012, a Compliance Evaluation Inspection was conducted at the Crystal Lake MHP. Present for the inspection were Bob Armstrong from Winelco, Inc. and Phil Burkhard representing Crystal Lake MHP, Kelly Thiel and myself of the Ohio EPA, Central District Office, Division of Surface Water.

The purpose of the inspection was to evaluate compliance with the terms and conditions of your NPDES permit and to evaluate the operation and maintenance of the plant. The inspection raised several concerns in the following areas:

Fixed Media Clarifiers – Several large holes were observed in the plastic media of the fixed media clarifiers. The broken media should be replaced as soon as possible to prevent short circuiting through these units and loss of solids onto the tertiary sand filters.

Inflow and Infiltration - The permittee performed some camera work on the two main lines serving the older, eastern side of the park but little or no work was done as was required in the schedule of compliance. Two water lines repairs were undertaken earlier this year. The average daily flow from March-June 2012 was 21,523 gpd which might indicate that a significant source of inflow and infiltration was eliminated. Please be advised that additional repairs may be required if high flows result in chronic non-compliance with NPDES loading limits

Mario Rea, Owner
Crystal Lake MHP
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If you have any questions or comments concerning the enclosed inspection report, please contact me at (614) 728-3848 or e-mail at mike.sapp@epa.ohio.gov.

Sincerely,

A handwritten signature in black ink that reads "Michael Sapp". The signature is written in a cursive style with a long horizontal stroke extending to the right.

Michael Sapp
Compliance and Enforcement Unit
Division of Surface Water
Central District Office

ec: Mike Sapp

MSInsm Crystal Lake MHP

NPDES Compliance Inspection Report

SECTION A: NATIONAL DATA SYSTEM CODING				
Permit #	NPDES #	Inspection Type	Inspector	Facility Type
4PV00010	OH0101788	CEI	S	Semi-Public
Inspection Date	Entry Time	Exit Time	Notice of Violation	Significant Non-Compliance
7/11/2012	10:30 AM	11:10 AM	No	No

SECTION B: FACILITY DATA	
Name and Location of Facility Inspected	Permit Effective Date
Crystal Lake MHP 1330 Hanover Road Delaware, Ohio 43015	7/1/2006
	Permit Expiration Date
	6/30/2011
Name(s) and Title(s) of On-Site Representatives	Phone Numbers
Bob Armstrong – Contract Operator, Winelco, Inc. Phil Burkhard – Crystal Lake Communities, LLC.	(513) 317-8672
Name and Title of Responsible Official	Phone Number
Mario Rea, Owner	(248) 399-7755

SECTION C: AREAS EVALUATED DURING INSPECTION		
Key: S = Satisfactory, M = Marginal, U = Unsatisfactory, N = Not Evaluated		
U	NPDES Compliance	Permittee did not meet schedule for I/I work
S	Operations & Maintenance	
S	Facility Site Review	
M	Collection System	Water line leaks repaired but no significant work or repairs performed in collection system.
S	Flow Measurement	
S	Receiving Waters	
N	Laboratory	

Comments:

Signatures	
 7/25/12	 7/25/12
Michael Sapp, Inspector Compliance & Enforcement Division of Surface Water Central District Office	Anthony Hanes, Reviewer Permits Supervisor Division of Surface Water Central District Office

SECTION D: PERMIT VERIFICATION

- (a) Correct name and mailing address of permittee..... Y
- (b) Correct name and location of receiving water Y
- (c) Products and production rates conform with permit application Y
- (d) Flows and loadings conform with NPDES permit Y
- (e) Treatment processes are as described in permit application..... Y
- (f) New treatment process added since last inspection..... N
- (g) Notification given to State of new, different or increased discharges NA
- (h) All discharges are permitted Y
- (i) Number and location of discharge points are as described in permit Y

Comments:

SECTION E: COMPLIANCE

- (a) Any significant violations since the last inspection Y
- (b) Permittee is taking actions to resolve violations Y*
- (c) Permittee has a compliance schedule Y
- (d) Permittee is meeting compliance schedule N*

Comments:

*see attached comments

SECTION F: OPERATION AND MAINTENANCE

- (a) Standby power available N
If yes, what type?
- (b) Adequate alarm system available for power or equipment failures Y
- (c) All treatment units in service other than backup units Y
- (d) Wastewater Treatment Works classification..... I
- (e) Operator of Record holds unexpired license of class required by Permit..
Class held: II
- (f) Copy of certificate of Operator of Record displayed on-site N
- (g) Minimum operator staffing requirements fulfilled Y
- (h) Routine and preventative maintenance scheduled and performed..... Y
- (i) Any major equipment breakdown since last inspection N
- (j) Operation and maintenance manual provided and maintained N
- (k) Any plant bypasses since last inspection Y*
- (l) Regulatory agency notified of bypasses Y
By MOR and/or Spill Hotline (1-800-282-9378) X
- (m) Any hydraulic or organic overloads since last inspection..... Y

Comments:

*c and filters overflow occasionally occur during high flow events

SECTION G: RECORD KEEPING

- a) Log book provided Y
- b) Format of log book (i.e. computer log, hard bound book) bound book
- c) Log book(s) kept onsite in an area protected from weather..... Y
- d) Log book contains the following:
 - i) Identification of treatment works..... Y
 - ii) Date/times of arrival/departure for Operator of Record and any other operator required by OAC 3745-7 Y
 - iii) Daily record of operation and maintenance activities (including preventative maintenance, repairs and request for repairs) Y
 - iv) Laboratory results (unless documented on bench sheets) Y
 - v) Identification of person making log entries Y
- e) Has the Operator of Record submitted written notification to the permittee, Ohio EPA and any applicable local environmental agencies when a collection system overflow, treatment plant bypass or effluent limit violation has occurred?....

Comments:

SECTION H: COLLECTION SYSTEM

- a) Percent combined system: 0%
- b) Any collection system overflows since last inspection N
 CSO SSO
- c) Regulatory agency notified of overflows NA
- d) CSO O&M plan provided and implemented..... NA
- e) CSOs monitored and reported in accordance with permit NA
- f) Portable pumps are used to relieve system..... N
- g) Lift station alarms provided and maintained NA
- h) Lift stations equipped with permanent standby power or equivalent NA
- i) Is there an inflow/infiltration problem (separate sewer system), or were there any major repairs to collection system since last inspection..... Y*
- j) Any complaints received since last inspection of basement flooding N
- k) Are any portions of the sewer system at or near capacity N
- l) Are operations changed during high-flow events?..... Y*

Comments:

*see attached

SECTION I: SLUDGE MANAGEMENT

- a) Sludge management plan (SMP) last audited by Ohio EPA:
Audit Date: unknown
- b) Sludge adequately disposed
Method: hauled to another POTW
- c) If sludge is incinerated, where is ash disposed of NA
- d) Is sludge disposal contracted Y
Name: Warners
- e) Has amount of sludge generated changed significantly N
- f) Adequate sludge storage provided at plant Y
- g) Records kept in accordance with State and Federal law Y
- h) Any complaints received last year regarding sludge N
- i) Is sludge adequately processed (digestion, pathogen control) NA

Comments:

SECTION J: SELF-MONITORING PROGRAM

- a) Primary flow measuring device operated and maintained Y
Type of device: hour meters Device location: dosing station
- b) Calibration frequency adequate Y
Date of last calibration: annual
- c) Secondary instruments operated and maintained NA
- d) Flow measurements equipment adequate to handle full range of flows Y
- e) Actual flow discharged is measured N
- f) Flow measuring equipment inspection frequency __daily
- g) Sampling location(s) are as specified by permit Y
- h) Parameters and sampling frequency agree with permit Y
- i) Monitoring records (i.e., flow, pH, DO) maintained for a minimum of three years including all original strip chart recordings (i.e. continuous monitoring instrumentation, calibration and maintenance records) Y

Comments:

SECTION K: Laboratory

- a) EPA applicable analytical testing procedures used (40 CFR 136.3) Y
- b) If alternate procedures are used, are they properly approved? NA
- c) Analysis performed more frequently N
 If yes, are results recorded in permittee's report? NA
- d) Commercial laboratory used:
 Name: Winelco
 Parameters analyzed: all permitted parameters
- e) Quality assurance manual provided and maintained N
- f) Calibration and maintenance of instruments is satisfactory? N
- g) Results of last U.S. EPA quality assurance NA
 Date:

Comments:

SECTION L: EFFLUENT/RECEIVING WATER OBSERVATION

Outfall Number	Outfall sign in place	Oil Sheen	Grease	Turbidity	Foam	Solids	Color	Other
001	Yes	No	No	No	No	No	Clear	

Comments:

SECTION III: MULTIMEDIA OBSERVATIONS

- a) Are there indications of sloppy housekeeping or poor maintenance in work and storage areas or laboratories..... N
- b) Do you notice staining or discoloration of soils, pavement or floors N
- c) Do you notice distressed (unhealthy, discolored, dead) vegetation..... N
- d) Do you see unidentified dark smoke or dust clouds coming from sources other than smokestacks..... N
- e) Do you notice any unusual odors or strong chemical smells N
- f) Do you see any open or unmarked drums, unsecured liquids, or damaged containment facilities N

If any of the above are observed, ask the following questions:

- 1) What is the cause of the condition?
- 2) Is the observed condition or source a waste product?
- 3) Where is the suspected contaminant normally disposed?
- 4) Is this disposal permitted?
- 5) How long has the condition existed and when did it begin?

Comments:

SUMMARY OF FINDINGS AND COMMENTS

Crystal Lake Mobile Home Park 4PV00010 - OH0101788

The wastewater treatment plant serving Crystal Lake Mobile Home Park is located at 1330 Hanover Road in Delaware, Ohio and has a design treatment capacity of 24,000 gpd. Effluent from this plant is discharged to an unnamed tributary of Horseshoe Run, which then flows to the Olentangy River. The treatment facility consists of a 3600 gallon grease/trash trap, a flow equalization basin, and aeration system with clarification, two fixed media clarifiers, and tertiary sand filters. In Fall 2007, the facility added two new clarifiers, two additional tertiary sand filters and an ultraviolet disinfection unit which replaced the chlorination/dechlorination facilities. The park has 170 pads; 148 of which are currently occupied.

1. At the time of the inspection, the following general observations were made with the operational practices at the plant;
 - The trash trap is pumped-out once a month.
 - The fixed media clarifiers are hosed down once per week or as needed following storm events.
 - Sludge hauling is performed every two weeks, directly from the sludge holding tank, by a contract hauler.
 - The UV bulbs are replaced yearly.
 - 30-minute settlability tests and spin tests are performed to determine when wasting is necessary. Spin test results typically range from 3.5-4.0%
 - Sludge wasting is based on the appearance of the #2 sludge return.
 - Warner's Septic does all of the contract hauling.
 - The flow equalization blower is run continuously. The aeration blowers are on for an hour followed by a 15 minute off cycle.
 - The flow equalization tank is not equipped with a splitter box. The flow equalization pumps are used to equalize the forward flow rate.
 - The operator indicated that he has an uneven flow split amongst the four clarifiers. The flow split can be adjusted based on the elevation of tubes in the splitter box.

2. The attached table contains a list of NPDES permit violations for the time period between February 2011 – June 2012. The two loading violations in February 2011 were attributed to high flows. This facility was removed from the Significant Non-Compliance list in February 2011 after ammonia violations were resolved during the preceding six month period.
3. An evaluation of effluent flow data for the time period between February 2011-June 2012 shows a daily average flow of 42,731 gpd and a peak flow of 150,177 gpd which occurred on March 20, 2011. The average daily flow has increased significantly since the previous inspection and it exceeds the design average daily flow for the plant (24,000 gpd). The effective and expired NPDES permit included a compliance schedule for inflow and infiltration work.

Some camera work was performed on the two main lines serving the older, eastern side of the park but little or no work was done to repair or replace lines or manholes in these areas. Two water lines repairs were undertaken in January and February 2012. The line repaired in February was reported to be leaking 8 gpm (11,500 gpd) directly into the sanitary sewer. The average daily flow from March-June 2012 was 21,523 gpd which might indicate that a significant source of inflow and infiltration was eliminated. Please be advised that additional repairs may be required if high flows result in chronic non-compliance with NPDES loading limits

4. During high flow events the operator or park maintenance staff will monitor the water level in the flow equalization tank and place the plant into a storm mode to retain solids in the plant. The operator will first shut-off the main blowers then the equalization tank blowers and pumps to allow for gravity overflow between the flow equalization and aeration tanks.
5. Several holes were observed in the plastic media of the fixed media clarifiers. The broken media should be replaced as soon as possible to prevent short circuiting through these units and loss of solids onto the tertiary sand filters.

Compliance Data for Crystal Lake MHP between 2/1/2011 to 6/1/2012

Summary

Permit Effluent Limit Violations: 2
 Permit Effluent Code Violations: 0
 Permit Effluent Frequency Violations: 12
 Compliance Schedule Violations: 0

Limit Violations						
Reporting Period	Station	Parameter	Limit Type	Limit	Reported Value	Violation Date
February 2011	001	Total Suspended Solids	30D Qty	1.1	1.31126	2/1/2011
February 2011	001	CBOD 5 day	30D Qty	0.9	.9441	2/1/2011

Flow Data for Crystal Lake MHP between 2/1/2011 and 6/1/2012

	Date	Flows (GPD)
Ten Highest Flows	3/10/2011	150177
	5/27/2011	140969
	11/29/2011	132609
	12/6/2011	131707
	3/11/2011	123588
	4/26/2011	120411
	5/4/2011	119321
	4/20/2011	118392
	5/19/2011	118136
	4/5/2011	116642
Average Flow Rate		42731