



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

Re: Erie County
City of Vermillion
NPDES Permit

May 8, 2013

Mr. Bob Kurtz
Service Director
City of Vermillion
5511 Liberty Avenue
Vermillion, Ohio 44089

Dear Mr. Kurtz:

On April 16, 2013, Mr. Rick Zuzik conducted a compliance inspection of the Vermillion wastewater treatment plant (WWTP). Mr. Barry Boehnlein, Lead Operator, and other operators of Uni-Tech Environmental provided information on facility operations. The inspection consisted of an interview utilizing a compliance checklist covering major areas of facility operations, and a walkthrough of the entire plant. At the time of my visit, a clear final effluent was observed being discharged into the Vermillion River. A number of issues were also discussed and our comments are as follows:

- 1) The Schedule of Construction required by Director's Final Findings and Orders (F&O's) indicates that the pump station overflows at Elberta Beach will be eliminated by March 31, 2014, and Romp's by March 31, 2015. The Elberta Beach pump station improvement project is currently under construction, on schedule, and is approximately 30% complete. It includes gravity in-pump out equalization basin, telemetry upgrades and a replacement generator. We recently received a report from CT Consultants titled "Evaluation of Romps Pump Station and Peak Flow Storage Alternatives" dated March 2013. It is under review and comments will be provided under separate cover.

Your annual Sanitary Sewer Overflow (SSO) report indicated 12 events at Romp's in 2012, and four thus far in 2013, and 13 events at Elberta Beach in 2012, and four thus far in 2013. There were three water-in-basement (WIB) events. Bypass Notification Form 4498 was provided to email me directly to satisfy the 24-hour notification requirement. Usage of this form also eliminates the need to complete the 5-Day Follow Up Report.

- 2) The 90 day trial to accept limited quantities of septage was recently completed, and we received an evaluation report. As many as four loads per day equaling approximately 12,000 gallons has been taken and introduced at the headworks. Plant performance was closely monitored, and a comparative analysis of conventional pollutants for the same

period last year and prior three months of the trial indicated comparable final effluent quality with no detrimental effects. Uni-Tech is confident additional septage can be treated, and has requested an extension of the trial with the intention of increasing up to a maximum of 25,000 gpd. We will agree to another three month trial period with another written summary evaluation to be submitted to me with a determination to continue or limit the program. I also ask that low level mercury levels be monitored, as septage is a known potential source of mercury. Once again, it is hoped that proceeds from this program can eventually be used to rehabilitate the sludge gravity thickener tank which has been out of service for years.

- 3) One of six final clarifiers is out of service for rehabilitation. This is the third clarifier to be renovated, keeping with the in-house program to renovate two or three units per year until all six are completed. The project to convert from liquid chlorine disinfection to sodium hypochlorite is slightly behind schedule, but should be complete by June. Please notify me when the new system is placed in service. One of the influent screw pumps is scheduled to have the bearings rebuilt, and a sludge digester control panel has been repaired, which will now allow sludge levels to be monitored in the tanks improving operational control.
- 4) Discharge monitoring reports are being received in a timely manner and some minor violations were reported in 2012. Two ammonia violations were addressed with increased aeration, one chlorine residual violation was due to a plugged regulator and two pH violations were due to probe issues, which were addressed. Full compliance with all final effluent limitations has been reported thus far in 2013.
- 5) We received the 2012 annual report summarizing the mercury pollutant minimization program (PMP). A 12 month average of final effluent data indicated compliance with the Water Quality based limit of 1.5 ng/l; however, an unusually high concentration was found at the Route 60 lift station and will be monitored. Surveys were returned from the three dental offices, and Best Management Practices have now been established. The Vermilion High School determined that no mercury containing equipment is being used in the labs. Minimal sewer jet cleaning was accomplished due to one retirement and one employee out for medical reasons. The one position was recently posted to be refilled. Once fully staffed, the sewer cleaning program should be reestablished. Please continue to implement the mercury PMP as approved.
- 6) Collection system improvements include 16 of 22 manholes being replaced in the Elberta Beach area and repairs have been made in 8 of the 11 manholes identified as needing repairs in Edison Estates.
- 7) The lab received the highest rating available in the 2012 U.S. EPA laboratory quality assurance performance evaluation program DMRQA #32. If you recall, the outgoing Superintendent did not participate in this program in 2011 prior to leaving.

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The staff of Uni-Tech continues to provide improved plant operations and maintenance and I look forward to their continued cooperation in the future. The completed inspection is enclosed. If you have any questions, or any of the above is in error, please call Rick Zuzik at (419) 373-3020, or email at rick.zuzik@epa.ohio.gov.

Yours truly,



Elizabeth A. Wick, P.E.
Environmental Engineer/Section Manager
Division of Surface Water

RAZ/jlm

Enclosure

pc: Uni-Tech Environmental Services
Lynn Miggins, P.E., KS Associates

ec: Tracking



State of Ohio Environmental Protection Agency
Northwest District Office

NPDES Compliance Inspection Report

Section A: National Data System Coding					
Permit #	NPDES#	Month/Day/Year	Inspection Type	Inspector	Facility Type
2PD00032	OH0023614	4/16/2012	C	S	1

Section B: Facility Data		
Name and Location of Facility Inspected	Entry Time	Permit Effective Date
City of Vermilion WWTP 799 West River Rd Vermilion, OH 44089	10:00 am	8/1/2011
	Exit Time	Permit Expiration Date
	12:30 pm	7/31/2016
Name(s) and Title(s) of On-Site Representatives	Phone Number(s)	
Barry Boehnlein- Lead Operator Mark Francis, Christina Faith	(440) 308-5633	
Name, Address and Title of Responsible Official	Phone Number	
Robert Kurtz, Director of Public Service	(440) 204-2424	

Section C: Areas Evaluated During Inspection					
(S = Satisfactory, M = Marginal, U = Unsatisfactory, N = Not Evaluated)					
S	Permit	S	Flow Measurement	N/A	Pretreatment
S	Records/Reports	S	Laboratory	S	Compliance Schedule
S	Operations & Maintenance	S	Effluent/Receiving Waters	S	Self-Monitoring Program
S	Facility Site Review	S	Sludge Storage/Disposal	S	Other
U	Collection System				

Section D: Summary of Findings (Attach additional sheets if necessary)			
Inspector		Reviewer	
			
5-7-13		5/7/13	
Date		Date	
Richard A. Zuzik, MSE Division of Surface Water Northwest District Office		Thomas Poffenberger, P.E. Water Quality Engineer Division of Surface Water Northwest District Office	

Sections E thru K: Complete on all inspections as appropriate
Y – Yes, N – No, N/A – Not Applicable, N/E – Not Evaluated

Section E: Permit Verification

Inspection observations verify the permit

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

Comments/Status:

Section F: Compliance Schedules/Violations

- (a) Any significant violations since the last inspection..... N
- (b) Permittee is taking actions to resolve violations..... N/A
- (c) Permittee has a compliance schedule..... N
- (d) Compliance schedule contained in Director's Findings and Orders
- (e) Permittee is meeting compliance schedule..... Y

Comments/Status:

Director's Findings and Orders construction schedule modified to eliminate Elberta Beach P.S. SSO by 3/31/14 and Romps P.S. SSO by 3/31/15.

Elberta Beach improvements under construction at approximately 30% complete

Section G: Operation & Maintenance

Treatment Works:

Treatment facility properly operated and maintained

- (a) Standby power available.....generator X or dual feed Y
- (b) Adequate alarm system available for power or equipment failures.. Y
- (c) All treatment units in service other than backup units..... N
- (d) Wastewater Treatment Works classification (OAC 3745-7)..... III
- (e) Operator of Record holds unexpired license of class required by permit..... Y
 Class: III
- (f) Copy of certificate of Operator of Record displayed on-site..... Y
- (g) Minimum operator staffing requirements fulfilled (OAC 3745-7)... Y
- (h) Routine and preventative maintenance scheduled/performed... Y
- (i) Any major equipment breakdown since last inspection..... N
- (j) Operation and maintenance manual provided and maintained.... Y
- (k) Any plant bypasses since last inspection..... N/A
- (l) Regulatory agency notified of bypasses..... N/A
 On MORs and/or Spill Hotline (1-800-282-9378)
- (m) Any hydraulic and/or organic overloads since last inspection..... Y

Record Keeping:

- (a) Log book provided..... Y
- (b) Format of log book (i.e. computer log, hard bound book)

Hardbound 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
- (d) Has the operator of record submitted written notification to the permittee, Ohio EPA and (if applicable) any local environmental agencies when a collection system overflow, treatment plant bypass or effluent limit violation has occurred..... Y

Section G: Operation & Maintenance (con't)

Collection System:

- (a) Percent combined system: 0%
- (b) Any collection system overflows since last inspection..... Y
(CSO and/or SSO X)
- (c) Regulatory agency notified of overflows (SSOs)..... Y
- (d) CSO O&M plan provided and implemented..... N/A
- (e) CSOs monitored and reported in accordance with permit..... N/A
Portable pumps used to relieve system..... N
- (g) Lift station alarms provided and maintained..... Y
- (h) Are lift stations equipped with permanent standby power
or equivalent..... Y
- (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 Y
- (k) Are any portions of the sewer system at or near capacity..... Y

Comments/Status:

Romps- 12 SSO's in 2012 and 4 in 2013
Elberta Beach- 13 SSO's in 2012 and 4 in 2013
3 Water in Basement events in 2012

16 of 22 manholes replaced in the Elberta Beach area and repairs have been made
in 8 of 11 manholes identified as needing repairs in Edison Estates.

Section H: Sludge Management

- (a) Sludge management plan (SMP)
Submitted date: Approval #: Not submitted N/A
- (b) Sludge management plan current..... Y
- (c) Sludge adequately disposed..... Y
(Method:)
- (d) If sludge is incinerated, where is ash disposed of
- (e) Is sludge disposal contracted..... Y
(Name:)
- (f) Has amount of sludge generated changed significantly since
last inspection..... N
- (g) Adequate sludge storage provided at plant..... Y
- (h) Land application sites monitored and inspected per SMP..... N/A
- (i) Records kept in accordance with State and Federal law..... Y
- (j) Any complaints received in last year regarding sludge..... N
- (k) Is sludge adequately processed (digestion, pathogen control)..... N/A

Comments/Status:

All sludge disposed of in landfill
Andritz centrifuge producing 32% solids
Exploring land application option to save money

Section I: Self-Monitoring Program

Flow Measurement:

- (a) Primary flow measuring device operated and maintained..... Y
Type of device: Ultrasonic & Parshall flume X Ultrasonic & Weir Weir
Calculated from influent Other (Specify:)
- (b) Calibration frequency adequate Y
(Date of last calibration: 5/12)
- (c) Secondary instruments operated and maintained..... Y
- (d) Flow measurement equipment adequate to handle full range
of flows..... Y
- (e) Actual flow discharged is measured..... Y
- (f) Flow measuring equipment inspection frequency
X Daily Weekly monthly other

Comments/Status:

Calibration scheduled for May

Section I: Self-Monitoring Program (con't)

Sampling:

- (a) Sampling location(s) are as specified by permit..... Y
- (b) Parameters and sampling frequency agree with permit..... Y
- (c) Permittee uses required sampling method..... Y
- (d) Sample collection procedures are adequate..... Y
 - (i) Samples refrigerated during compositing..... Y
 - (ii) Proper preservation techniques used..... Y
 - (iii) Containers and sample holding times prior to analysis conform with 40 CFR 136.3..... Y
- (e) 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
- (f) Adequate records maintained of sampling date, time, location, etc.. Y

Laboratory:

General

- (a) EPA approved analytical testing procedures used (40 CFR 136.3).. Y
- (b) If alternate analytical procedures are used, proper approval has been obtained..... Y
- (c) Analyses being performed more frequently than required by permit. Y
- (d) If (c) is yes, are results in permittee's self-monitoring report..... Y
- (e) Commercial laboratory used..... Y
Parameters analyzed by commercial lab: Metals, Mercury

Lab name: Jones & Henry, Alloway

Quality Control/Quality Assurance

- (f) Quality assurance manual provided and maintained..... Y
 - (g) Satisfactory calibration and maintenance of instruments/equipment. Y
 - (h) Adequate records maintained..... Y
 - (i) Results of latest USEPA quality assurance performance sampling program: X Satisfactory Marginal Unsatisfactory
- Date:

Comments/Status:

DMRQA # 32

Section J: Effluent/Receiving Water Observations

Outfall Number	Oil sheen	Grease	Turbidity	Visible Foam	Visible Floating Solids	Color	Other
001	none	none	none	none	none	none	

Comments/Status:

Section K: 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/Status:

Permit #:2PD00032
NPDES #:OH0023614 OH0023614

F. GUIDE - VISUAL OBSERVATION - UNIT PROCESS

RATING CODES: S = Satisfactory; U = Unsatisfactory; M = Marginal; IN = In Operation; OUT = Out of Operation

CONDITION OR APPEARANCE		RATING	COMMENTS
General	Grounds	S	
	Buildings	S	
	Potable Water Supply Protection	S	
	Safety Features	S	
	Bypasses	-	
	Stormwater Overflows	-	
	Alternate Power Source	S	Diesel Generator – failed Buss Bar electrical switch to be replaced , on order
Preliminary	Maintenance of Collection Systems	M	F&O's for eliminating pump station SSOs, 75% of MH's replaced in Edison Est
	Screw Pumps	In	2 screw pumps, 1 to have bearings rebuilt soon
	Ventilation	S	
	Bar Screen	In	2 mechanical
	Disposal of Screenings / Grit	S	Landfill
	Aerated Grit Chamber	In	
	Septage	-	3 month trial to accept septage to be extended with additional volume
Primary	Settling Tanks	In	3 rd tank repaired and brought back in service July 2012. All 3 in service
	Scum Removal	S	
	Sludge Removal	S	
	Effluent	S	Normal
Sludge Disposal	Digesters	In	One primary, one secondary. Tank levels monitoring equip. repaired
	Temperature and pH	S	
	Gas Production	-	Wasted
	Heating Equipment	S	
	Sludge Pumps	In	
	Sludge Centrifuge	In	Andritz Centrifuge producing 32% solids
	Disposal of Sludge	S	Landfill
	Gravity Thickener	Out	
Other	Flow Meter and Recorder	In	1.2 mgd ATOV
	Records	S	
	Lab Controls	S	
	Chemical Treatment	In	Ferrous chloride for phosphorus removal
Secondary-Tertiary List items as required	Four Aeration Tanks	In	4 tanks, reddish brown, fine bubble diffusers
	Six Final Clarifiers	In	One of six out for rehabilitation (2 previously done, 3 remaining) Good settling
Disinfection	Effluent	S	Very Clear
	Disinfection System	Out	Switching from Chlorine to Sodium Hypochlorite, (to be ready by June)
	Effective Dosage	-	
	Contact Time	-	
	Contact Tank	In	
	Dechlorination	-	Sodium Bisulfite