



Jeremiah W. (Jay) Nixon, Governor

Sara Parker Pauley, Director

DEPARTMENT OF NATURAL RESOURCES

dnr.mo.gov

5.200 BCRSD, Rollingwood Plat #1
Boone County
#MO-0038792

May 13, 2016

Dwayne Cooksey, Operations Manager
Boone County Regional Sewer District
1314 North Seventh Street
Columbia, MO 65201

LETTER OF WARNING RESPONSE REQUIRED

Dear Mr. Cooksey:

An inspection was conducted by Missouri Department of Natural Resources staff pursuant to Section 644.026.1 of the Missouri Clean Water Law on April 12 and 13, 2016. The enclosed report is being issued with a Letter of Warning (LOW).

Violations include:

- Failed to operate the facility so that there is no discharge of sludge to waters of the state as required by the Standard Conditions I of Missouri State Operating Permit #MO-0038792.
- Caused pollution of the tributary to Midway Branch, waters of the state, or placed or caused or permitted to be placed water contaminants in a location where it is reasonably certain to cause pollution of waters of the state.
- Failed to provide at least two operational blowers.

Please refer to the enclosed report for details on findings and required actions. **A written response documenting actions taken to correct the violations is required by the date specified in the report.**



Recycled Paper

BCRSD, Rollingwood Plat #1
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Failure to address the required actions will result in the issuance of a Notice of Violation. If you have any questions or would like to schedule a time to meet with department staff to discuss compliance requirements, please contact Mr. Heaton at (660) 385-8000 in the Northeast Regional Office, 1709 Prospect Drive, Macon, MO 63552 or by email at NERO@dnr.mo.gov.

Sincerely,

NORTHEAST REGIONAL OFFICE

A handwritten signature in black ink, appearing to read "Irene Crawford". The signature is written in a cursive style with a large, looped initial "I".

Irene Crawford
Regional Director

IC/mhm

Enclosures: Report of Inspection

Missouri Department of Natural Resources
Northeast Regional Office
Report of Inspection
BCRSD, Rollingwood Plat #1
Boone County
#MO-0038792
May 13, 2016

Introduction

Pursuant to Section 644.026.1 of the Missouri Clean Water Law, I, Michael Heaton, conducted a compliance inspection of the Boone County Regional Sewer District (BCRSD), Rollingwood Plat #1 wastewater treatment plant in Boone County, Missouri, on April 12, 2016. I set a 24 hour composite sampler during the April 12, 2016, portion of the inspection and I collected the samples on April 13, 2016. The following people participated in the inspection:

BCRSD, Rollingwood Plat #1		
Jason Horton	BCRSD Operator	(573) 881-9918
Missouri Department of Natural Resources		
Northeast Regional Office		
Michael Heaton	Environmental Scientist	(660) 385-8000

This inspection was conducted to determine the facility's compliance with Missouri State Operating Permit #MO-0038792, the Missouri Clean Water Commission Regulations, and the Missouri Clean Water Law. This report presents the findings and observations made during the compliance inspection.

Entity Description and History

Missouri State Operating Permit (MSOP) #MO-0038792 was last issued on September 1, 2013, and expired on June 30, 2015. A permit renewal application was received by the department on September 2, 2014. The facility is required to follow the conditions of the MSOP that expired on June 30, 2015, until the permit is reissued. This permit sets forth effluent limitations, monitoring requirements, and permit conditions, both standard and specific, that the permittee is to follow.

The BCRSD, Rollingwood Plat #1 is owned and operated by the Boone County Regional Sewer District (BCRSD). The facility consists of an extended aeration plant. The MSOP lists the design population equivalent as 100. The design flow for the facility is 10,000 gallons per day and the actual flow for the facility is 2,773 gallons per day. The design sludge production is 1.5 dry tons per year. The facility is not required to be operated by a certified operator.

The legal description of the BCRSD, Rollingwood Plat #1 is listed on the permit as the SE ¼, NW ¼, Section 1, Township 48 North, Range 14 West, in Boone County. The facility is located near the junction of Highway 5 and Hawthorn Drive near Midway. The receiving stream for this facility is a tributary to Midway Branch.

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The Northeast Regional Office previously conducted a water pollution inspection of the facility on October 17, 2005. At the time of the previous inspection, the facility was found to be in non-compliance. A Report of Compliance Inspection was sent to the BCRSD, dated October 27, 2005, and listed the following Unsatisfactory Features: failed to provide an all-weather access road; metal components of the plant were severely corroded. The October 27, 2005, letter required the facility to submit a written statement to the department to address the documented Unsatisfactory Features.

On November 17, 2005, the Northeast Regional Office received the response that was required in the October 27, 2005, letter. The response addressed the issue with the corrosion and the reason why an all-weather access road was not provided. The response stated that an easement was not provided for a road and that the necessary repairs and services can be completed from the current hard service road. Staff from the Northeast Regional Office reviewed the documentation and sent a letter to BCRSD, dated December 14, 2005, stating that the submitted documentation identified the actions taken to correct the deficiencies.

Prior to the inspection, the files for the BCRSD, Rollingwood Plat #1 were reviewed, including the Permit Conditions of MSOP #MO-0038792, to familiarize myself with the requirements specific to this facility. The Discharge Monitoring Reports for the BCRSD, Rollingwood Plat #1 were reviewed from September 1, 2013, to March 31, 2016. The review found that violations of the effluent limitations established in MSOP #MO-0038792 have not occurred in this timeframe. The review also found that the 85% removal efficiency is being achieved, the annual inflow/infiltration reports have been submitted in a timely manner, and the status/progress reports as required in the MSOP Schedule of Compliance have been submitted. The Form S Domestic Sludge Reports have also been submitted and the sludge is hauled to another treatment facility.

Discussion of Inspection and Observations

The inspection was conducted during normal business hours. Prior notification of the inspection was not provided. Upon arrival at the facility, I met with Mr. Horton and the purpose and scope of the inspection were outlined. Mr. Horton granted permission to access the site and accompanied me throughout the tour of the facility.

Upon arrival at the facility, I set the composite sampler at the outfall location in order to collect 24 hour composite samples for Biochemical Oxygen Demand and Total Suspended Solids. A sign marking the outfall location was observed (Photo #: 01). I observed sludge deposits in the receiving stream below the outfall location for approximately 10 feet below the outfall. I returned to the facility on April 13, 2016, to collect the composite samples and to collect other samples as required in the MSOP #MO-0038792.

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After the composite sampler was set, I observed the extended aeration plant. I observed that a chain link fence surrounded the plant. Signs restricting access to the plant were present and the gate to the facility was locked. Grates were not placed on top of the plant, however, the top of the fence was also covered by chain link (Photo #: 05). I observed the aerators at the facility. One of the aerators was operational (Photo #:06) and the other aerator was not operational (Photo #: 07).

I asked Mr. Horton about the sludge handling at the plant. Mr. Horton explained that the sludge is pumped from the facility on a routine basis. Mr. Horton stated that they monitor the settleability and mixed liquor to determine when to remove the sludge from the plant. Mr. Horton explained that the sludge is taken to the Columbia Wastewater Treatment Facility.

I discussed the laboratory analyses with Mr. Horton. Mr. Horton explained he conducts the operational monitoring and that they try to maintain the settleability around 400 ml/L/hr. Mr. Horton explained that Virgil Farnen conducts the other laboratory analyses.

I told Mr. Horton about the sludge deposits in the receiving stream and that the sludge needs to be removed. Mr. Horton explained that the vac truck was being repaired and that the sludge would be removed when the truck is repaired. I asked Mr. Horton if the plant experiences any inflow/infiltration after precipitation events. Mr. Horton stated that the flows will increase about fifty percent after a rainfall event. Mr. Horton stated that he would notify me when the sludge from the receiving stream was removed. On April 14, 2016, I received an email from Mr. Horton, along with photographs, showing that the sludge in the receiving stream had been removed.

Sampling and Monitoring

The appropriate sampling materials were taken on the inspection, including a copy of the Missouri Department of Natural Resources' Standard Operating Procedures for Sampling. Instruments for field monitoring were taken on the inspection that are capable of testing pH, temperature, and conductivity.

Water quality field monitoring was conducted at the following location for the listed parameters. The water being discharged from Outfall #001 at the time of the inspection was clear. Sludge deposits were observed in the receiving stream below the outfall location for approximately 10 feet below the outfall (Photos #: 02-04). The outfall location was the start of the tributary to Midway Branch and the sludge accumulation was observed only on the facility property.

Sample #161157 (Composite Sample) Outfall #001		
Parameter	Result	Units
pH	7.98	s.u.
Temperature	5.1	°C
Conductivity	1270	Microsiemens

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Sampling was conducted at the following location and submitted for laboratory analysis for the parameters listed below. The Environmental Services Program Results of Sample Analysis are listed below.

Sample #161157 (Composite Sample) Outfall #001						
Results of Sample Analyses			Permit Limits			
Parameters	Sample Result	Units	Daily Max	Weekly Average	Monthly Average	Units
BOD ₅	2.96	mg/L		45	30	mg/L
Total Suspended Solids (TSS)	<5	mg/L		45	30	mg/L

Compliance Determination and Required Actions

The facility was found to be in **non-compliance** with the Missouri Clean Water Law, the Clean Water Commission Regulations, and Missouri State Operating Permit #MO-0038792, based upon the observations made at the time of the inspection.

Letter of Warning (LOW)

1. Failed to operate the facility so that there is no discharge of sludge to waters of the state, as required by the Standard Conditions I of MSOP #MO-0038792 [Section 644.076.1, RSMo].

REQUIRED ACTIONS: The facility shall have an evaluation of the system conducted to determine why sludge was discharged to the receiving stream. A written statement listing the results of the evaluation, procedures determined to correct the issue, and a timeline for completion of the procedures shall be submitted to the Northeast Regional Office by **June 12, 2016**.

2. Caused pollution of the tributary to Midway Branch, waters of the state, or placed or caused or permitted to be placed water contaminants in a location where it is reasonably certain to cause pollution of waters of the state [Sections 644.051.1(1) and 644.076.1, RSMo].

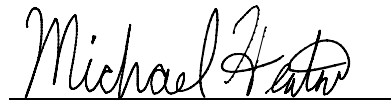
REQUIRED ACTIONS: No Further Action. On April 14, 2016, the department received documentation, which included photographs, that the sludge was removed below the outfall location.

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3. Failed to provide at least two operational blowers [10 CSR 20-8.180(4)(C)3.B.(V)].

REQUIRED ACTIONS: By **June 12, 2016** the facility shall provide documentation to the Northeast Regional Office, which may include photographs and/or receipts describing the actions taken, or intended to take, to correct the non-compliance.

SUBMITTED BY:



Michael Heaton
Environmental Scientist
Northeast Regional Office

REVIEWED BY:



Jamie Shinn
Environmental Supervisor
Northeast Regional Office

MH/mm

Attachment #01-Photos 1-7
Attachment #02-Aerial Map
Attachment #03-Sludge Handling Checklist

Attachment 01



Photo #: 01
By: Michael Heaton
Facility: BCRSD, Rollingwood Plat #1
Permit: #MO-0038792
Location: Boone County

Description: Outfall location. The outfall location was the start of the tributary. A sign was present marking the outfall location.

Date Taken: April 12, 2016
Program: WPC Unit

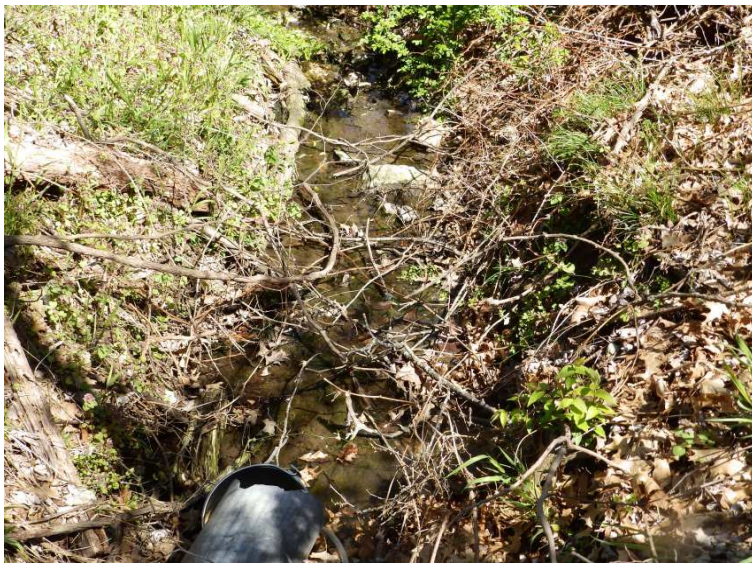


Photo #: 02
By: Michael Heaton
Facility: BCRSD, Rollingwood Plat #1
Permit: #MO-0038792
Location: Boone County

Description: Start of the tributary.

Date Taken: April 12, 2016
Program: WPC Unit

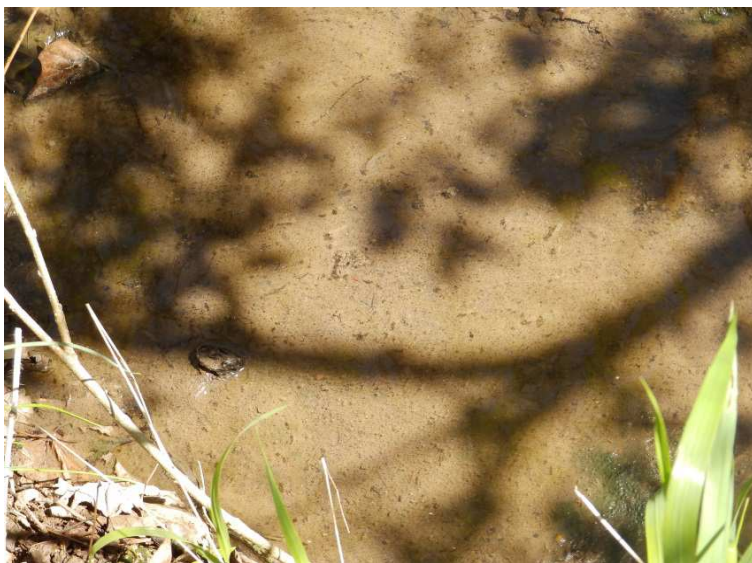


Photo #: 03
By: Michael Heaton
Facility: BCRSD, Rollingwood Plat #1
Permit: #MO-0038792
Location: Boone County

Description: Sludge deposits were observed in the tributary immediately below the outfall structure.

Date Taken: April 12, 2016
Program: WPC Unit

Initial MH



Photo #: 04
By: Michael Heaton
Facility: BCRSD, Rollingwood Plat #1
Permit: #MO-0038792
Location: Boone County

Description: Sludge deposits were observed in the tributary immediately below the outfall structure. Sludge deposits were observed approximately 10 feet below the outfall.

Date Taken: April 12, 2016
Program: WPC Unit



Photo #: 05
By: Michael Heaton
Facility: BCRSD, Rollingwood Plat #1
Permit: #MO-0038792
Location: Boone County

Description: Facility was securely fenced with a locked gate. Signs restricting access were observed.

Date Taken: April 12, 2016
Program: WPC Unit



Photo #: 06
By: Michael Heaton
Facility: BCRSD, Rollingwood Plat #1
Permit: #MO-0038792
Location: Boone County

Description: Aerator at the facility. This aerator was operational.

Date Taken: April 12, 2016
Program: WPC Unit

Initial MH



Photo #: 07

By: Michael Heaton

Facility: BCRSD, Rollingwood Plat #1

Permit: #MO-0038792

Location: Boone County

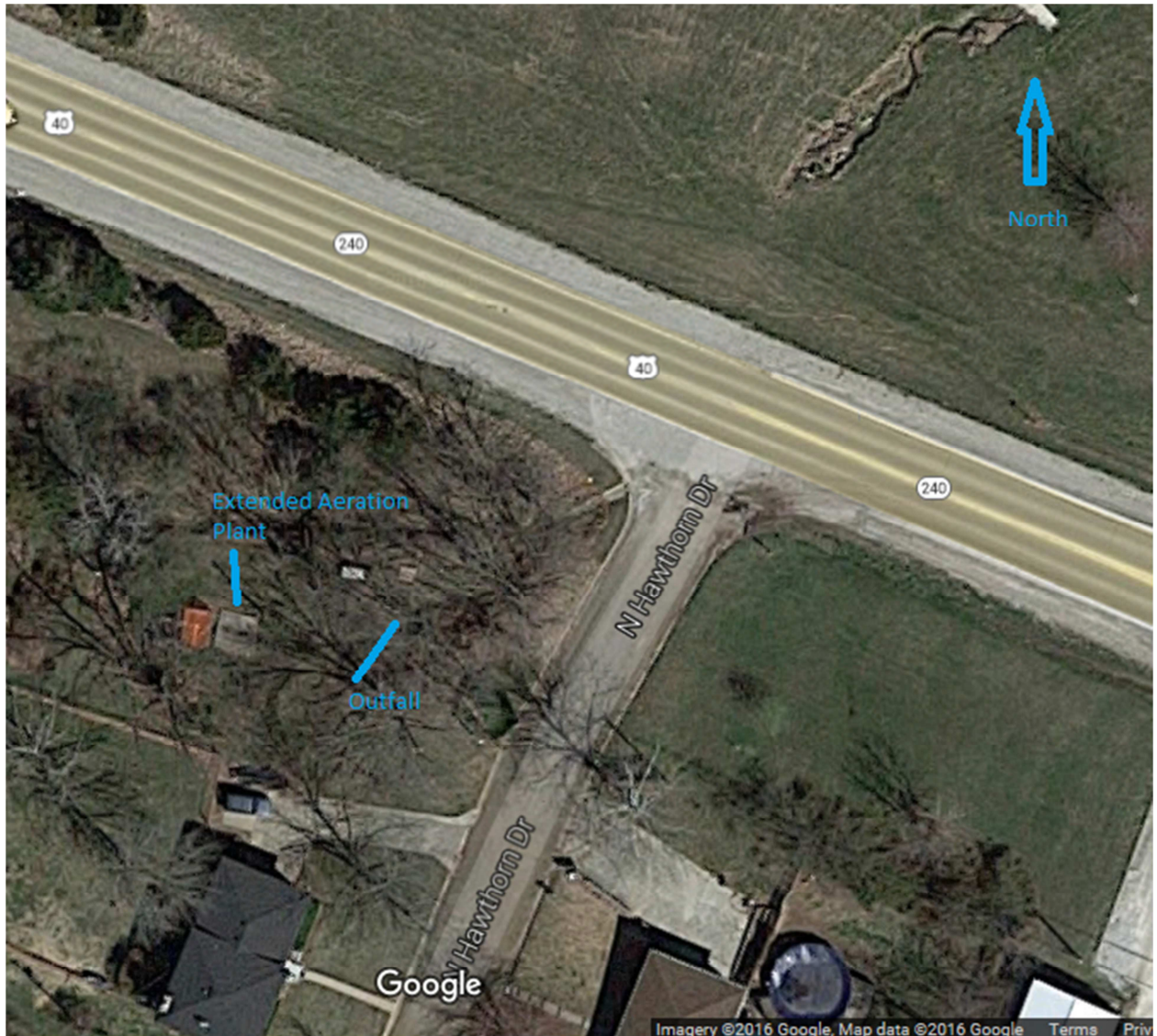
Description: Aerator at the facility. This aerator was not operational.

Date Taken: April 12, 2016

Program: WPC Unit

Initial MH

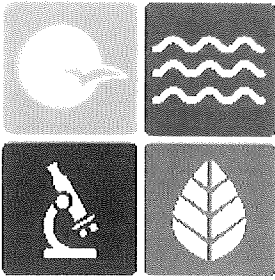
Attachment 02



Attachment 03

Sludge handling checklist for wastewater treatment facilities: BCRSD, Rollingwood Plat #1
MSOP #MO0038792

- 1) What method (land application, incineration, landfill, etc) is utilized for sludge management? Sludge is hauled to Columbia WWTF.
- 2) How often is sludge removed from the facility? When needed.
- 3) When is the last time that sludge was removed? A few weeks prior to the inspection
- 4) Has the Form S annual report been submitted? Yes
- 5) Is the monitoring frequency for metals, pathogens, and vectors (WQ 423) being met? NA
- 6) Are the requirements for pathogens and vector attraction (WQ 424) being met? NA
- 7) Are land applied biosolids below the ceiling concentration for metals (WQ 425)? NA
- 8) Are the nitrogen, soil pH, and soil phosphorus limitations (WQ 426) being met? NA



Missouri Department of Natural Resources
 Environmental Services Program
 PO Box 176 Jefferson City MO 65102-0176

RESULTS OF SAMPLE ANALYSES

LDPR/Job Code:
 FEINS

Program, Contact:
 WPC Chelsey Bodenstab

Chelsey Bodenstab
 Water Pollution Control Branch

Order ID:
 160414009



Report Date:
 4/27/2016

Sample: AC70702		Facility ID: MO0038792	Customer #: 161157	
		Site: BCRSD, Rollingwood Plat 1	County: Boone	
Collect Date: 4/13/2016 2:45:00 PM	Collector: MICHAEL HEATON	Affiliation: NERO		
Comments: Composite: Outfall #001.				
Test	Parameter/Method	Result	Units	Qualifier(s)
Biochemical Oxygen Demand	Biochemical Oxygen Demand/SM 5210-B	2.96	mg/L	
Field pH	Field pH/EPA 150.1	7.98	pH Units	
Field Specific Conductivity	Field Specific Conductivity/SM 2510	1270 uS/cm		
Field Temperature	Field Temperature/EPA 170.1	5.1 C		
Total Suspended Solids (TSS) / NFR	Total Suspended Solids (TSS) / NFR/SM 2540-D	<5	mg/L	ND

The analysis of this sample was performed in accordance with procedures approved or recognized by the U. S. Environmental Protection Agency.

Data Qualifier(s)
 ND Not detected at reported value

Chris Boldt

Chris Boldt, Laboratory Manager
 Environmental Services Program
 Division of Environmental Quality

STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES

Jeremiah W. (Jay) Nixon, Governor • Harry D. Bozoian, Director

5.200 BCRSD South Route K Wastewater Treatment Facility dnr.mo.gov
Boone County
#MO-0087173

November 18, 2016

Mr. Tom Ratermann, General Manager
Boone County Regional Sewer District
1314 North 7th Street
Columbia, MO 65201

**LETTER OF WARNING
RESPONSE REQUIRED**

Dear Mr. Ratermann:

An inspection was conducted by Department of Natural Resources staff pursuant to Section 644.026.1 of the Missouri Clean Water Law on October 20, 2016. The enclosed report is being issued with a Letter of Warning for the violation identified.

Violation includes:

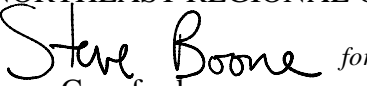
- Failed to submit timely Discharge Monitoring Report (DMR) as required in part "A" of MSOP #MO-0087173 [Section 644.076.1, RSMo, and 10 CSR 20-7.015(9)(D)1.].

Please refer to the enclosed report for details on findings and required actions. **A written response documenting actions taken to correct the violations is required by the date specified in the report.**

Failure to address the required actions will result in the issuance of a Notice of Violation. If you have any questions or would like to schedule a time to meet with department staff to discuss compliance requirements, please contact Mr. Leland Maize at (660) 385-8000 in the Northeast Regional Office, 1709 Prospect Drive, Macon, MO 63552-2602 or by email at NERO@dnr.mo.gov.

Sincerely,

NORTHEAST REGIONAL OFFICE


Irene Crawford
Regional Director

IC/lmj

Enclosures: Report of Inspection

c: Dwayne Cooksey, Boone County Regional Sewer District

**Department of Natural Resources
Northeast Regional Office
Report of Inspection
BCRSD South Route K Wastewater Treatment Facility
1860 West Boris, Columbia, Missouri, 65203, Boone County
#MO-0087173
November 18, 2016**

Introduction

Pursuant to Section 644.026.1 of the Missouri Clean Water Law, I, Mr. Leland Maize, conducted a routine inspection of the Boone County Regional Sewer District (BCRSD) South Route K Wastewater Treatment Facility (WWTF) in Boone County, Missouri, on October 20, 2016. The following people participated in the inspection:

BCRSD South Route K Wastewater Treatment Facility
Mr. Dwayne Cooksey Operations Manager
Mr. Virgil Farnen Operations Supervisor
Mr. Kevin Sublett Operator

Department of Natural Resources
Mr. Leland Maize Environmental Specialist

This inspection was conducted to determine the facility's compliance with Missouri State Operating Permit #MO-0087173, the Missouri Clean Water Commission Regulations, and the Missouri Clean Water Law. This report presents the findings and observations made during the inspection.

Entity Description and History

Missouri State Operating Permit (MSOP) #MO-0087173 was last issued on September 3, 2004, and expired on September 2, 2009. The department received an application for renewal on February 17, 2009. This permit sets forth effluent limitations, monitoring requirements, and permit conditions, both standard and specific, that the permittee is to follow. The facility must follow the conditions of the expired permit until the new permit is issued.

The BCRSD South Route K WWTF is owned and operated by the Boone County Regional Sewer District. The facility is located near 1860 West Boris, Columbia, Missouri 65203. The facility discharges through two outfalls. Outfall #001 discharges effluent from a four cell lagoon with sludge retained in the lagoon. According to the permit, the first two cells of the lagoon are aerated; however, no aerators were observed in the lagoon at the time of the inspection. The design population equivalent is 1,077. The design flow for the facility is 104,000 gallons per day and the actual flow is 42,000 gallons per day. The design sludge production is 16.2 dry tons per year. Outfall #002 discharges effluent from an extended aeration mechanical plant. Sludge is removed and taken to a permitted Wastewater Treatment Facility. The design sludge production is 1,400. The design flow is 140,000 gallons per day and the actual flow is 90,000 gallons per day. The design sludge production for the facility is 25.2 dry tons per year.

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BCRSD South Route K Wastewater Treatment Facility
November 18, 2016
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The UTM Coordinates of the BCRSD South Route K Wastewater Treatment Facility are listed on the permit as the Easting 554761 and Northing 4302620, in Boone County. The receiving stream for this facility is a tributary to Little Bonne Femme Creek and it is located in the 10300102 HUC 8 watershed.

Prior to the inspection, I reviewed the files for the BCRSD South Route K Wastewater Treatment Facility, including the Permit Conditions of MSOP #MO-0087173, to familiarize myself with the requirements specific to this facility.

The regional office performed a previous inspection on February 25, 2014. At the time of the previous inspection, the facility was found to be in non-compliance. A report outlining the findings of the inspection was sent on March 21, 2014, with the following Unsatisfactory Features: Failed to maintain the inner berm slopes of the lagoon to be no less than three to one and failed to provide adequate fencing to discourage trespassing and prevent entering of livestock. On March 26, 2014, the Northeast Regional Office received a letter in response to the inspection report. The letter stated repairs on berms were planned as soon as reasonably possible, and that new fence was installed on March 11, 2014.

Discharge Monitoring Reports were reviewed from January 2014 to September 2016. The department has not received the facility's September 2016 Discharge Monitoring Report (Letter of Warning #1). The facility has been submitting a Form S each year. The facility has been conducting operational monitoring at the required frequencies and has been meeting the removal efficiency for Biochemical Oxygen Demand and Total Suspended Solids.

Discussion of Inspection and Observations

I conducted the inspection during normal business hours. Prior notification of the inspection was provided to ensure timely access to the site. Upon arrival at the facility, I met with Mr. Dwayne Cooksey, Mr. Virgil Farnen, and Mr. Kevin Sublett, and I outlined the purpose and scope of the inspection. Mr. Cooksey granted me permission to access the site and accompanied me throughout the tour of the facility.

As I approached the facility, an all-weather access road was observed. The lagoon and mechanical plant were both surrounded by a perimeter fence with a locked gate at the entrance to each. Warning signs were posted on each side of the perimeter fences.

The facility discharges through two outfalls, identified as Outfall #001 and Outfall #002. Outfall #001 discharges effluent from the four cell lagoon, with sludge retained in the lagoon. According to Mr. Cooksey, the lift station pumps to the mechanical plant but when the lift station cannot keep up with the influent flow, the lift station gravity flows into the lagoon. The lift station at the entrance has an overflow structure that gravity feeds into the primary lagoon cell. During the inspection, I walked around the perimeter of each of the lagoon cells (Photos #1, #2, and #3). The vegetation on the lagoon berms was short in height and well maintained. I did not observe

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BCRSD South Route K Wastewater Treatment Facility
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any damage to the lagoon berms or any signs of leaks. Each of the lagoon cells had greater than two feet of storage remaining at the time of the inspection. I observed Outfall #001 was marked in the field with a sign, but was not discharging during the inspection (Photo #4 and #5). I observed the receiving stream both upstream and downstream from Outfall #001. I did not observe any impact from Outfall #001 on the receiving stream.

Outfall #002 discharges effluent from an extended aeration mechanical plant (Photo #6). Sludge from the mechanical plant is taken to a permitted wastewater treatment facility. The mechanical plant consists of an extended aeration basin, clarifier, and sludge storage. During the inspection, the aerators were functioning in the aeration basin and no dead areas were observed. The water in the aeration basin was light brown in color and had an earthy odor. The water in the clarifier appeared clear at the time of the inspection. I observed Outfall #002. The outfall was marked in the field with a sign and was discharging. I collected samples of the effluent from Outfall #002 for water quality field monitoring and laboratory analyses. I observed the receiving stream both upstream and downstream from Outfall #002. I did not observe any impact from Outfall #002 on the receiving stream.

During the inspection, I observed each of the facility's three lift stations. Mr. Sublett accompanied me to each of the lift stations. The lift stations were all surrounded by a fence with a locked gate at the entrance. Mr. Sublett demonstrated that each of the pumps worked at the lift stations. Mr. Sublett also demonstrated that the audio visual alarms were functional at the time of the inspection. I did not observe any signs of overflows at any of the lift stations. All of the pumps were set to auto when we arrived at the lift stations.

Sampling and Monitoring

The appropriate sampling materials were taken on the inspection, including a copy of the Department of Natural Resources' Standard Operating Procedures for Sampling. Instruments for field monitoring were taken on the inspection that are capable of testing pH, temperature, conductivity, and dissolved oxygen. Ammonia test strips for water quality monitoring were also taken on the inspection.

During the inspection, I observed the receiving stream upstream and downstream from both Outfall #001 and Outfall #002. I did not observe any impact from Outfall #001 or Outfall #002 on the receiving stream.

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Water quality field monitoring was conducted at the following location for the listed parameters.

Sample #162424		
Outfall #002		
Parameter	Result	Units
Dissolved Oxygen	6.58	mg/L
pH	7.24	s.u.
Conductivity	1314	µS/cm
Temperature	19.9	°C

Sampling was conducted and submitted for laboratory analysis of the parameters listed below. The Environmental Services Program Results of Sample Analysis are listed below.

Sample #162424						
Outfall #002						
Results of Sample Analyses			Permit Limits			
Parameters	Sample Result	Units	Daily Max	Weekly Average	Monthly Average	Units
Biochemical Oxygen Demand	< 2	mg/L		45	30	mg/L
Total Suspended Solids	< 5	mg/L		45	30	mg/L
Ammonia as N	0.063	mg/L	4.0		4.0	mg/L

Compliance Determination and Required Actions

The facility was found to be in **non-compliance** with Missouri State Operating Permit #MO-0087173, the Clean Water Commission Regulations, and the Missouri Clean Water Law, based upon the observations made at the time of the inspection.

Letter of Warning

1. Failed to submit timely Discharge Monitoring Report (DMR) as required in part "A" of MSOP #MO-0087173 [Section 644.076.1, RSMo, and 10 CSR 20-7.015(9)(D)1.].

REQUIRED ACTIONS: The facility shall submit the September 2016 DMR, or if that information is not available, a written statement to the Northeast Regional Office by **December 19, 2016**, explaining what actions have been taken to correct the unsatisfactory feature and prevent a reoccurrence in the future.

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Recommendations

1. Continue to work with the Water Protection Program throughout the permit renewal process.

Additional Comments/Conclusion

None

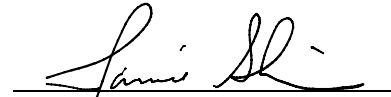
Signatures

SUBMITTED BY:



Leland Maize
Environmental Specialist
Northeast Regional Office

REVIEWED BY:



Jamie Shinn
Environmental Supervisor
Northeast Regional Office

LM/jb

Attachments

- Attachment # 1 – Photos 1 through 6**
Attachment # 2 – Aerial Map

Attachment # 1
BCRSD South Route K Wastewater Treatment Facility
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Photograph #: 1
Taken by: Leland Maize
Entity: BCRSD South Route K Wastewater Treatment Facility
Permit: #MO-0087173
Location: Boone County
Description: Primary cell of the lagoon system.
Date Taken: October 20, 2016
Program: WPC Unit



Photograph #: 2
Taken by: Leland Maize
Entity: BCRSD South Route K Wastewater Treatment Facility
Permit: #MO-0087173
Location: Boone County
Description: Secondary cell of the lagoon system.
Date Taken: October 20, 2016
Program: WPC Unit



Photograph #: 3
Taken by: Leland Maize
Entity: BCRSD South Route K Wastewater Treatment Facility
Permit: #MO-0087173
Location: Boone County
Description: Tertiary cell of the lagoon system.
Date Taken: October 20, 2016
Program: WPC Unit

Initial LM

Attachment # 1
BCRSD South Route K Wastewater Treatment Facility
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Photograph #: 4
Taken by: Leland Maize
Entity: BCRSD South Route K Wastewater Treatment Facility
Permit: #MO-0087173
Location: Boone County
Description: Outfall #001 with a sign marking the location.
Date Taken: October 20, 2016
Program: WPC Unit



Photograph #: 5
Taken by: Leland Maize
Entity: BCRSD South Route K Wastewater Treatment Facility
Permit: #MO-0087173
Location: Boone County
Description: Outfall #001 not discharging during the inspection.
Date Taken: October 20, 2016
Program: WPC Unit



Photograph #: 6
Taken by: Leland Maize
Entity: BCRSD South Route K Wastewater Treatment Facility
Permit: #MO-0087173
Location: Boone County
Description: Aeration basin in the mechanical plant. The aerators were functioning during the inspection.
Date Taken: October 20, 2016
Program: WPC Unit

Initial LM



Sludge Handling Checklist for Wastewater Treatment Facilities

Facility Name: BCRSD South Route K Wastewater Treatment Facility	MSOP #: #MO-0087173		
Issue to be addressed	Options		Not Inspected
What method (land application, incineration, landfill, etc) is used for sludge management?	Sludge is hauled to a permitted facility or retained in the lagoon.		<input type="checkbox"/>
	Date		
How often is sludge removed from the facility?	As needed		<input type="checkbox"/>
When was the last time sludge was removed?	December 2015		<input type="checkbox"/>
	Yes	No	Not Applicable
Has the Form S annual report been submitted?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Have the applicable additional sections been submitted? <small>(If not, please describe deficiencies below in the comments field)</small>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is the form filled out correctly? <small>(If not, please describe deficiencies below in the comments field)</small>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is the monitoring frequency for metals, pathogens and vectors (WQ 423) being met?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Are the requirements for pathogens and vector attraction (WQ 424) being met?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Are land applied biosolids below the ceiling concentration for metals (WQ 425)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Are the nitrogen, soil pH and soil phosphorus limitations (WQ426) being met?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other Comments:			

5.200 BCSD, South Route K Waste Water Treatment Facility
Boone County
#MO-0087173

May 9, 2012

Dwayne Cooksey, Operations Manager
Boone County Regional Sewer District
1314 North 7th Street
Columbia, MO 65201

LETTER OF WARNING

Dear Mr. Cooksey:

A routine compliance inspection of the South Route K Waste Water Treatment Facility, located in Boone County, Missouri, was conducted on April 17, 2012. The inspection was conducted by Stephen Moss, with the Missouri Department of Natural Resources' Northeast Regional Office. Enclosed is a copy of the inspection report.

Please direct your attention to the Required Actions for the Unsatisfactory Features and Recommendations sections of the report. The information requested by the Department is to be submitted to the Northeast Regional Office by **May 30, 2012**. Your cooperation in this matter will be appreciated.

If you have any questions, please contact Stephen Moss or me at (660) 385-8000 in the Northeast Regional Office, 1709 Prospect Drive, Macon, MO 63552-2602.

Sincerely,

NORTHEAST REGIONAL OFFICE



Irene Crawford
Regional Director

IC/sma

Enclosures: Report of Compliance Inspection
 Sample Analysis 1202155

REPORT OF COMPLIANCE INSPECTION
BCSD, SOUTH ROUTE K WASTE WATER TREATMENT FACILITY
BOONE COUNTY
#MO-0087173
May 9, 2012

INTRODUCTION

Pursuant to Section 644.026.1 RSMo of the Missouri Clean Water Law, a routine compliance inspection of the South Route K Waste Water Treatment Facility in Boone County, Missouri, was conducted by Stephen Moss of the Missouri Department of Natural Resources' Northeast Regional Office on April 17, 2012. Kevin Sublett, Operator, participated in the inspection.

This inspection was conducted to determine the facility's compliance with Missouri State Operating Permit #MO-0087173, the Missouri Clean Water Commission Regulations, and the Missouri Clean Water Law. This report presents the findings and observations made during the compliance inspection.

FACILITY DESCRIPTION/HISTORY

Missouri State Operating Permit #MO-0087173 was last issued on September 3, 2004, and expired on September 2, 2009. This permit sets forth effluent limitations, monitoring requirements, and permit conditions, both standard and specific, that the permittee is to follow. An application for renewal was received by the Northeast Regional Office on February 17, 2009. The facility is to operate off the expired permit until a new permit is issued.

The facility currently operates with two outfalls, Outfall #001 and Outfall #002. Outfall #001 discharges effluent from a four-cell lagoon. Outfall #002 discharges effluent from the activated sludge treatment plant. A lift station precedes the plant and lagoon, and pumps the influent wastewater to the plant. When the influent wastewater flows exceed the capacity of the lift station pumps, the wastewater then flows over to the four-cell lagoon. The receiving stream for this facility is an unnamed tributary to Little Bonne Femme Creek.

The legal description of the BCSD, South Route K Waste Water Treatment Facility is listed on the permit as the SW $\frac{1}{4}$, SE $\frac{1}{4}$, NE $\frac{1}{4}$, Section 10, Township 47 North, Range 13 West, in Boone County.

A previous compliance inspection was conducted on February 24, 2009, by the Northeast Regional Office. At the time of the inspection the facility was found to be in compliance with deficiencies. The following unsatisfactory features were listed in the report: failed to maintain the inner berm slopes of the lagoon to be less than three to one and failed to carry out the minimum requirements for laboratory testing to ensure adequate wastewater systems in-plant operational control.

DISCUSSION OF INSPECTION AND OBSERVATIONS

Prior to the inspection the files for the BCSD, South Route K Waste Water Treatment Facility were reviewed, including the Permit Conditions of Missouri State Operating Permit #MO-0087173, to familiarize the inspector with the requirements specific to this facility. The Discharge Monitoring Reports were found to be complete and up-to-date. The facility has conducted operational monitoring twice a week in accordance with MSOP #MO-0087173.

The inspection was conducted during normal business hours. Prior notification was not provided to the facility. Upon arrival at the facility, the inspector met with Kevin Sublett, Operator, and the purpose and scope of the inspection were outlined. Mr. Sublett granted permission to access the site and accompanied the inspector throughout the tour of the facility.

Mr. Moss started the inspection of the BCSD, South Route K Wastewater Treatment Facility by observing the activated sludge treatment plant. The facility is surrounded by a security fence and a locked gate. Warning signs were posted on all sides of the treatment plant. The sludge holding basin was observed to have no deficiencies. The two clarifiers were both functioning properly at the time of the inspection. Mr. Sublett stated that screenings from the facility are properly disposed of in a dumpster. According to a Form S submitted to the Department for the reporting period of 2011, eleven (11) dry tons of sludge were removed from the plant and disposed of at the Columbia Regional Municipal Wastewater Treatment Plant.

Outfall #002 was observed. Mr. Moss observed a sign marking the outfall location. The effluent was discharging through a concrete V-notch weir structure. The effluent was observed to be clear. The receiving stream was observed to be clear with no signs of water quality impacts from previous discharges. Mr. Sublett stated that the flow is electronically monitored. Samples were taken of the effluent from the V-notch weir structure. The samples were taken to the Department's Environmental Services Program for analyses.

Mr. Moss observed the lift station associated with the lagoons and plant. The lift station had two functional pumps at the time of the inspection. The lift station had a fence around the wet well and the control panel. Warning signs were posted on the entrance gate. The lift station is designed to pump the influent wastewater to the activated sludge treatment plant. In case of high flows, the influent wastewater can overflow from the wet well into the collection system servicing the four-cell lagoon. The control panel is provided with a low water alarm. Mr. Moss did not observe any concerns with the wet well or control panel.

Mr. Moss travelled around the perimeter of the four-cell lagoon. Mr. Moss observed a security fence around the perimeter of the facility. Warning signs were observed posted around the perimeter of the facility. The facility was observed to have tall grass around the lagoons that needed to be mowed. No deep-rooted vegetation was observed at the time of the inspection. Mr.

Report of Compliance Inspection
BCSD, South Route K Waste Water Treatment Facility
May 9, 2012
Page 3

Moss observed damage to the second, third, and fourth cells of the lagoon caused by rodent burrows. Riprap has been placed around the edge of the second cell of the lagoon to prevent erosion. Duckweed was observed covering portions of each of the cells. Missouri State Operating Permit #MO-0087173 states the first and second cells of the lagoon are to be aerated. The aerators were not functional at the time of the inspection.

Outfall #001 was observed. A sign that read "Outfall #002" was used to mark the outfall location. The outfall was marked incorrectly since this is Outfall #001. The outfall was not discharging at the time of the inspection. The receiving stream was observed to be clear with no signs of water quality impacts caused from previous discharges.

WATER QUALITY MONITORING

The appropriate sampling materials were taken on the inspection, including a copy of the Missouri Department of Natural Resources' Standard Operating Procedures for Sampling. Instruments for field monitoring were taken on the inspection that are capable of testing pH, temperature, conductivity, and dissolved oxygen. A HACH® ammonia test kit for water quality monitoring was also taken on the inspection.

Water quality field monitoring was conducted at the following location(s) for the listed parameters. The effluent was observed to be clear in color and no odors were noted. The receiving stream was observed to be clear with no signs of water quality impacts from previous discharges.

Outfall #002		
Parameter	Result	Units
pH	7.30	s.u.
Temperature	19.0	°C
Dissolved Oxygen	3.31	mg/L
Conductivity	898	Microsiemens

Sampling was conducted at the following location(s) and submitted for laboratory analysis for the parameters listed below.

Report of Compliance Inspection
BCSD, South Route K Waste Water Treatment Facility
May 9, 2012
Page 4

Outfall #002						
Results of Sample Analyses 1202155			Permit Limits			
Parameters	Sample Result	Units	Daily Max	Weekly Average	Monthly Average	Units
BOD ₅	2.12	mg/L	-----	65	45	mg/L
Total Suspended Solids (TSS)	<5	mg/L	-----	120	80	mg/L
Ammonia as Nitrogen	0.11	mg/L	-----	4.0	4.0	mg/L

COMPLIANCE DETERMINATION

The facility was found to be in **non-compliance** with the Missouri Clean Water Law, the Clean Water Commission Regulations, and Missouri State Operating Permit #MO-0087173, based upon the observations made at the time of the inspection.

UNSATISFACTORY FEATURES

1. Failed to operate and maintain facilities to comply with the Missouri Clean Water Law and applicable permit conditions [Sections 644.051.1(3) and 644.076.1, RSMo].

REQUIRED ACTIONS: The aerators in the first two (2) cells of the lagoon were not functional at the time of the inspection. The facility shall submit a written statement to the Northeast Regional Office by **May 30, 2012**, explaining what actions have been taken to correct the unsatisfactory feature and prevent a recurrence in the future.

2. Failed to maintain the inner berm slopes of the lagoon to be no less than three to one (3:1) [10 CSR 20-8.200(6)(A)3.].

REQUIRED ACTIONS: The lagoon berms have developed erosion damage from wave erosion, bank dens and tunnels from muskrats. The facility is to repair the damaged berms. Inner and outer slopes are to be no less than 3:1. Clay soil is to be compacted into the damaged areas. Riprap or vegetate the repaired areas. The Department recommends the use of riprap to cover the repaired areas to prevent future damage to the site. The facility must ensure that the Unsatisfactory Feature will be addressed by **May 30, 2012**.

RECOMMENDATIONS – Actions that are being recommended by the inspector but are not required to bring the facility into compliance at the time of the inspection.

Report of Compliance Inspection
BCSD, South Route K Waste Water Treatment Facility
May 9, 2012
Page 5

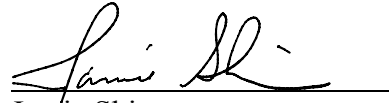
1. Ensure that the vegetation on the inner lagoon berms is routinely reduced in height; six inch height is recommended.
2. The audio/visual alarms at the lift station should be routinely checked to ensure that they are functioning properly.
3. Ensure that a sign is provided at each outfall that correctly states the outfall number as provided in Missouri State Operating Permit #MO-0087173.

SUBMITTED BY:



Stephen Moss
Environmental Specialist
Northeast Regional Office

REVIEWED BY:



Jamie Shinn
Environmental Specialist
Northeast Regional Office

SM/ah



Photo #: 1
By: Stephen Moss
Facility: BCSD, South Route K Waste Water Treatment Facility
Permit: #MO-0087173
Location: Boone County

Description: View of the extended aeration plant.

Date/Time Taken: April 17, 2012
Program: WPC Unit



Photo #: 2
By: Stephen Moss
Facility: BCSD, South Route K Waste Water Treatment Facility
Permit: #MO-0087173
Location: Boone County

Description: View of the extended aeration plant

Date/Time Taken: April 17, 2012
Program: WPC Unit



Photo #: 3
By: Stephen Moss
Facility: BCSD, South Route K Waste Water Treatment Facility
Permit: #MO-0087173
Location: Boone County

Description: View of the V-notch weir structure.

Date/Time Taken: April 17, 2012
Program: WPC Unit

Initial SM



Photo #: 4
By: Stephen Moss
Facility: BCSD, South Route K Waste Water Treatment Facility
Permit: #MO-0087173
Location: Boone County

Description: View of the lift station.

Date/Time Taken: April 17, 2012
Program: WPC Unit



Photo #: 5
By: Stephen Moss
Facility: BCSD, South Route K Waste Water Treatment Facility
Permit: #MO-0087173
Location: Boone County

Description: View of the damaged lagoon berms on the third cell.

Date/Time Taken: April 17, 2012
Program: WPC Unit



Photo #: 6
By: Stephen Moss
Facility: BCSD, South Route K Waste Water Treatment Facility
Permit: #MO-0087173
Location: Boone County

Description: View of the second cell of the lagoon.

Date/Time Taken: April 17, 2012
Program: WPC Unit

Initial SM



Photo #: 7
 By: Stephen Moss
 Facility: BCSD, South Route K Waste Water Treatment Facility
 Permit: #MO-0087173
 Location: Boone County

Description: View of the fourth cell of the lagoon.

Date/Time Taken: April 17, 2012
 Program: WPC Unit



Photo #: 8
 By: Stephen Moss
 Facility: BCSD, South Route K Waste Water Treatment Facility
 Permit: #MO-0087173
 Location: Boone County

Description: View of Outfall #001 that is marked Outfall #002.

Date/Time Taken: April 17, 2012
 Program: WPC Unit



Photo #: 9
 By: Stephen Moss
 Facility: BCSD, South Route K Waste Water Treatment Facility
 Permit: #MO-0087173
 Location: Boone County

Description: View of the first cell of the lagoon.

Date/Time Taken: April 17, 2012
 Program: WPC Unit

Initial SM

Sludge handling checklist for wastewater treatment facilities

- 1) What method (land application, incineration, landfill, etc) is utilized for sludge management?

Land Application

- 2) How often is sludge removed from the facility?

Annually

- 3) When is the last time that sludge was removed?

September 2011

- 4) Has the Form S annual report been submitted?

Yes, Form S was received on January 20, 2012.

- 5) Is the monitoring frequency for metals, pathogens, and vectors (WQ 423) being met?

NA

- 6) Are the requirements for pathogens and vector attraction (WQ 424) being met?

NA

- 7) Are land applied biosolids below the ceiling concentration for metals (WQ 425)?

NA

- 8) Are the nitrogen, soil pH, and soil phosphorus limitations (WQ 426) being met?

NA



Missouri Department of Natural Resources
Environmental Services Program

Order ID 120417007 Program, Contact: WPC Paul Dickerson
Report Date: 05/02/2012 LPR/JobCode: FEINS



Sample: AB70533



Facility ID: MO0087173
County: Boone

Site: BCSD, South Route K WWTF
Sample Reference ID:

Collector: STEPHEN MOSS

Affiliation: NERO

Collect Date: 4/17/2012 1:00:00PM

Customer #: 1202155

Entry Point:

Sample Comment: Grab, outfall #002

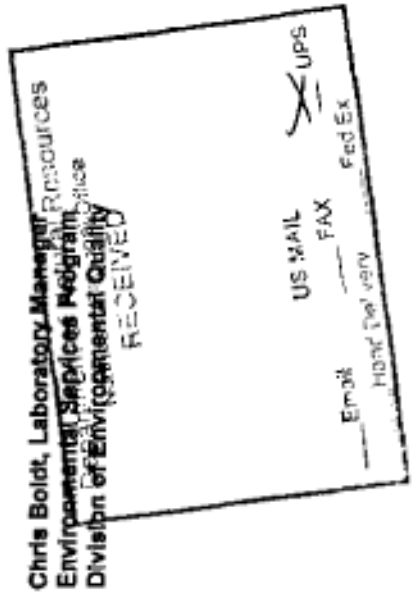
Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Ammonia as N	Ammonia as N	0.11		mg/L	15,829	EPA 350.1
Biochemical Oxygen Demand	Biochemical Oxygen Demand	2.12		mg/L	15,800	SM 5210-C
Field Dissolved Oxygen	Field Dissolved Oxygen	3.31		mg/L		SM 4500-O-G
Field pH	Field pH	7.30		pH Units		EPA 150.1
Field Specific Conductivity	Field Specific Conductivity	898		µS/cm		SM 2510
Field Temperature	Field Temperature	19 °C				EPA 170.1
Non Filterable Residue	Non Filterable Residue	<5	ND	mg/L	15,754	SM 2540-D

The analysis of this sample was performed in accordance with procedures approved or recognized by the U.S. Environmental Protection Agency.

Qualifier Descriptions

- 01 Improper collection method
- 02 Improper preservation
- 03 Exceeded holding time
- 04 Analyzed by Contract Laboratory
- 05 Estimated value, detected below PQL
- 06 Estimated value, QC data outside limits
- 07 Estimated value, analyte outside calibration range
- 08 Analyte present in blank at > 1/2 reported value
- 09 Sample was diluted during analysis
- 10 Laboratory error
- 11 Estimated value, matrix interference
- 12 Insufficient quantity
- 13 Estimated value, true result is >= reported value
- 14 Estimated value, non-homogeneous sample
- 15 No Result - Failed Quality Controls Requirements
- 16 Not analyzed - related analyte not detected
- 17 Results in dry weight
- 18 Sample pH is outside the acceptable range
- 19 Estimated value
- 20 Not analyzed - Instrument failure
- 21 No result - spectral interference
- 22 pH was performed at the Laboratory
- 23 Contract Lab specific qualifier - see sample comments
- 24 No result - matrix interference
- 25 No Result: Excessive Chlorination
- 26 No Result: Excessive Dechlorination

Chris Boldt





Jeremiah W. (Jay) Nixon, Governor

Sara Parker Pauley, Director

DEPARTMENT OF NATURAL RESOURCES

dnr.mo.gov

5.200 BCSD - South Route K WWTF
Boone County
#MO-0087173

March 21, 2014

Tom Ratermann, General Manager
Boone County Regional Sewer District
1314 North 7th Street
Columbia, MO 65201

Dear Mr. Ratermann:

A routine compliance inspection of the Boone County Regional Sewer District (BCSD) - South Route K Wastewater Treatment Facility (WWTF), located in Boone County, Missouri, was conducted on February 25, 2014. The inspection was conducted by Mr. Mike Smith, with the Missouri Department of Natural Resources' Northeast Regional Office. Enclosed is a copy of the inspection report.

Please direct your attention to the Required Actions for the Unsatisfactory Features and Recommendations sections of the report. The information requested by the department is to be submitted to the Northeast Regional Office by **April 11, 2014**. Your cooperation in this matter will be appreciated.

At the time of the report, the sample results for Biochemical Oxygen Demand (BOD), Total Suspended Solids (TSS) and Ammonia, Sample #140422, were not available. Additional violations may be documented upon receipt of the sample analysis results. The results will be provided to the facility when they become available.

In accordance with 10 CSR 20-7.015(9)(H)2., all permits were to insure compliance with effluent limits to protect whole body contact and secondary contact recreation by no later than December 31, 2013. Missouri State Operating Permit (MSOP) #MO-0087173 was issued on

BCSD - South Route K WWTF
March 21, 2014
Page 2

September 3, 2004, and expired on September 2, 2009. A new MSOP #MO-0087173 has not been issued since the September 2, 2009, expiration. In order to address the issue of upgrading to meet bacterial effluent limitations, please coordinate with the Compliance and Enforcement Section of the Water Pollution Control Branch.

If you have any questions regarding the enclosed inspection report or would like to schedule a time to meet with department staff to discuss actions required to bring your facility into compliance, please contact Mr. Smith at (660) 385-8000 in the Northeast Regional Office, 1709 Prospect Drive, Macon, MO 63552-2602 or by email at NERO@dnr.mo.gov. Response to any Required Actions may be sent via email.

Sincerely,

NORTHEAST REGIONAL OFFICE

 *for*

Irene Crawford
Regional Director

IC/msb

Enclosures: Report of Compliance Inspection

c: Paul Dickerson, Water Pollution Control Branch, Compliance and Enforcement Section

*Celebrating 40 years of taking care of Missouri's natural resources.
To learn more about the Missouri Department of Natural Resources visit dnr.mo.gov.*

REPORT OF COMPLIANCE INSPECTION
BCSD - SOUTH ROUTE K WWTF
BOONE COUNTY
#MO-0087173
March 21, 2014

INTRODUCTION

Pursuant to Section 644.026.1 RSMo of the Missouri Clean Water Law, a routine compliance inspection of the Boone County Regional Sewer District (BCSD) - South Route K Wastewater Treatment Facility (WWTF) in Boone County, Missouri, was conducted by Mr. Mike Smith of the Missouri Department of Natural Resources' Northeast Regional Office on February 25, 2014. Mr. Kevin Sublet, Operator, and Mr. Dwayne Cooksey, Operations Manager, participated in the inspection.

This inspection was conducted to determine the facility's compliance with Missouri State Operating Permit #MO-0087173, the Missouri Clean Water Commission Regulations, and the Missouri Clean Water Law. This report presents the findings and observations made during the compliance inspection.

FACILITY DESCRIPTION/HISTORY

Missouri State Operating Permit (MSOP) #MO-0087173 was last issued on September 3, 2004, and expired on September 2, 2009. This permit sets forth effluent limitations, monitoring requirements, and permit conditions, both standard and specific, that the permittee is to follow. A permit renewal application was received from the facility on February 17, 2009. The facility must follow the requirements of the expired permit until a new permit is issued.

The BCSD - South Route K WWTF consists of two outfalls. Outfall #001 consists of a four cell lagoon, with aeration in the first two cells. Sludge is retained in the lagoon. The design population equivalent for Outfall #001 is listed as 1,077 with a design flow of 104,000 gallons per day. Actual flow is listed as 42,000 gallons per day. Design sludge production is 16.2 dry tons per year.

Outfall #002 consists of an extended aeration plant with sludge holding. Sludge is hauled to the Columbia Regional Wastewater Treatment Plant. The design population equivalent for Outfall #002 is listed as 1,400 with a design flow of 140,000 gallons per day. Actual flow is listed as 90,000 gallons per day. Design sludge production is 25.2 dry tons per year.

A lift station precedes the extended aeration plant and lagoon systems. Influent wastewater is pumped from the lift station to the extended aeration plant. When the influent flows exceed the capacity of the lift station pumps to the extended aeration plant, the influent wastewater flows to the four-cell lagoon system.

The legal description of the BCSD - South Route K WWTF is listed on the permit as the SW ¼, SE ¼, NE ¼, Section 10, Township 47 North, Range 13 West, in Boone County. The receiving stream for this facility is an unnamed tributary to Little Boone Femme Creek.

Report of Compliance Inspection
BCSD - South Route K WWTF
March 21, 2014
Page 2

A previous routine compliance inspection was conducted at the facility by the Northeast Regional Office's Water Pollution Compliance Unit on April 17, 2012. At the time of that inspection, the facility was found to be operating in non-compliance and a Letter of Warning was issued to the facility on May 9, 2012. The following two Unsatisfactory Features were cited in the report: 1. Failed to operate and maintain facilities to comply with the Missouri Clean Water Law and applicable permit conditions; and 2. Failed to maintain the inner berms slopes of the lagoon to be no less than three to one (3:1).

On May 18, 2012, a response letter was received from the facility in response to the May 9, 2012, inspection report. The response letter stated that the aerators do not need to be operated since the lagoons do not normally receive flow. The response stated the dissolved oxygen tests taken routinely in the lagoons average between 7 to 8 mg/L, and running the aerators when they are not needed would waste energy and increase operational and maintenance costs. The response also stated that they would be evaluating the lagoon berm erosion damage and pursuing the necessary steps for repair.

DISCUSSION OF INSPECTION AND OBSERVATIONS

Prior to the inspection, the files for the BCSD - South Route K WWTF were reviewed, including the Permit Conditions of Missouri State Operating Permit (MSOP) #MO-0087173, to familiarize the inspector with the requirements specific to this facility.

The inspection was conducted during normal business hours. Prior notification of the inspection was provided the morning of the inspection to ensure timely access to the site. Upon arrival at the facility, the inspector met with Mr. Dwayne Cooksey, Operations Manager, and the purpose and scope of the inspection were outlined. Mr. Cooksey granted permission to access the site and accompanied the inspector during part of the tour of the facility. Mr. Kevin Sublet, Operator, accompanied Mr. Smith during part of the inspection.

Mr. Smith first made observations of the extended aeration plant, Outfall #002. Mr. Cooksey stated the facility Operator, Mr. Kevin Sublet, was hauling sludge from the facility today and should arrive shortly. Mr. Smith asked how often sludge is removed from the facility. Mr. Cooksey stated about 15-16 thousand gallons are removed about every couple of months or so. The gate to the extended aeration plant had a lock to prevent unauthorized access. The perimeter fence around the facility appeared to be in good condition, with signs posted on all sides of the fence (Photo #1). Mr. Smith observed the sludge holding tanks (Photo #2). A hose that was being used to pump sludge from the facility was observed. Mr. Cooksey stated the sludge is hauled to the Columbia Regional Wastewater Treatment Plant. No concerns with the sludge holding tanks were observed.

Report of Compliance Inspection
BCSD - South Route K WWTF
March 21, 2014
Page 3

Mr. Smith then observed the facility's aeration chambers (Photo #3). Aeration was occurring at the time of the inspection. The wastewater appeared brown in color, with minimal foaming observed. Mr. Smith then observed the facility's clarifiers (Photo #4). The water in the clarifiers appeared clear, with no concerns noted.

Mr. Sublet then arrived at the facility. Mr. Smith observed Outfall #002. A sign marking the outfall location was observed (Photo #5). Effluent was discharging from the v-notch weir at the time of the inspection. The effluent appeared clear and no odor was detected in the area. Mr. Smith observed the unnamed tributary below the facility's outfall location (Photo #6). No evidence of a sludge discharge was observed in the tributary. Mr. Smith continued downstream and observed the location where the tributary enters a larger tributary to Little Boone Femme Creek. The water in the larger tributary appeared clear at the time of the inspection (Photo #7). No impact from the facility was observed in the tributary.

Mr. Cooksey left the facility at that time. Mr. Smith gathered materials to collect samples from Outfall #002. Mr. Smith collected samples for Biochemical Oxygen Demand (BOD), Total Suspended Solids (TSS) and Ammonia. The samples were delivered to the Environmental Services Program lab in Jefferson City for analysis. The sample results were not available at the time of this report and will be provided to the facility when they become available. Mr. Smith conducted water quality field monitoring on the facility's effluent, the results of which can be found under the Water Quality Monitoring Section of this report.

Mr. Smith then made observations of the lift station just prior to the treatment plant and lagoon system (Photo #8). The lift station was surrounded by a fence with warning signs posted and a locked gate. Mr. Smith observed the control panel for the lift station (Photo #9). Both pumps were tested and appeared to be operating correctly. No alarm test button was available on the control panel. Inside of the wet well was observed (Photo #10). No buildup of grease or solids was observed.

Mr. Smith then made observations of the four-cell lagoon system. The gate to the lagoon system was locked upon arrival and a warning sign was observed posted on the gate. Part of the wooden perimeter fence around the facility was observed to be down on the ground (Photo #11). Mr. Sublet stated that a recent wind storm had blown down the fence and the frozen ground has prevented the fence from being repaired. He stated they were hoping to repair the fence later in the week if the weather warms up enough. Mr. Smith observed plastic orange fencing in place of the wooden fence at the time of the inspection. The remainder of the perimeter fence around the facility appeared to be in good condition (Photo #12). Warning signs were observed posted on all sides of the fence.

The four lagoon cells were observed. Erosion damage and muskrat damage was observed on the inner lagoon berms of the first lagoon cell (Photo #13). Some duckweed was observed in the cell at the time of the inspection. Two feet of freeboard was available in the lagoon. No evidence of an unpermitted discharge through the lagoon berms was observed. No deep-rooted vegetation

Report of Compliance Inspection
BCSD - South Route K WWTF
March 21, 2014
Page 4

was observed growing on the lagoon berms. According to the permit, the first cell of the lagoon is an aerated cell. No aerator was observed in the first cell of the lagoon. Mr. Smith observed the second lagoon cell. Rip-rap was observed on the inner berms of the second cell (Photo #14). The lagoon berms appeared to be in good condition. Over two feet of freeboard was available in the second cell. No evidence of an unpermitted discharge through the lagoon berms was observed. No deep-rooted vegetation was observed growing on the lagoon berms. The permit also lists the second lagoon cell as an aerated cell. An aerator was observed in the second cell, but was not functioning at the time of the inspection (Photo #15). Mr. Sublet stated they don't need to operate aerators since the lagoons receive very minimal flows and don't discharge.

Mr. Smith observed the third and fourth lagoon cells. Erosion damage was observed on the inner lagoon berms of both cells (Photos #16 & #17). No evidence of an unpermitted discharge was observed from either cell. Over two feet of freeboard was available in both the lagoons. No deep-rooted vegetation was discovered growing on the lagoon berms of either cell.

Mr. Smith observed Outfall #001. The outfall location was marked with a sign in the field (Photo #18). The lagoon system was not discharging at the time of the inspection. The receiving stream was observed (Photo #19). No evidence of an impact from the lagoons was observed in the receiving stream.

Mr. Smith and Mr. Sublet then traveled to the facility's two other lift stations. The first lift station is located at the corner of New Meadow and Coneflower Streets. A fence around the lift station was observed. The control panel was observed and the two pumps were tested and appeared to be operating correctly (Photo #20). No test for the alarm was available. Inside of the wet well was observed with no concerns noted (Photo #21). No evidence of an overflow from the lift station was observed. The next lift station, located on Route K, was then observed (Photo #22). A fence was observed surrounding the lift station. The control panel was observed (Photo #23). The pumps were tested and appeared to be operating correctly. A test for the audiovisual alarm was available. The alarm did not activate when tested. Mr. Sublet stated the alarm worked last Friday and would be repaired. Inside of the wet well was observed with no concerns noted (Photo #24). No evidence of an overflow from the lift station was observed.

Mr. Smith reviewed the department's records for the facility. The facility has been submitting monthly Discharge Monitoring Reports (DMRs) as required and has been in compliance with permitted effluent limits. Annual Form S – Domestic Sludge Reporting forms have been received from the facility as required. Mr. Smith reviewed the facility's draft permit. The draft permit includes a requirement to develop an Operation and Maintenance (O&M) Manual for the facility. The draft permit also requires that a Whole Effluent Toxicity (WET) Test be conducted once during the permit cycle. The draft permit also contains a Schedule of Compliance to meet E. Coli and Ammonia limits. The facility should review the new permit when issued and become familiar with all the requirements.

WATER QUALITY MONITORING

The appropriate sampling materials were taken on the inspection, including a copy of the Missouri Department of Natural Resources' Standard Operating Procedures for Sampling. Instruments for field monitoring were taken on the inspection that are capable of testing pH, temperature, conductivity, and dissolved oxygen. HACH® ammonia test strips for water quality monitoring were also taken on the inspection.

Water quality field monitoring was conducted at the following location for the listed parameters.

BCSD – South Route K WWTF, #MO-0087173 Outfall #002, Sample #140422		
Parameter	Result	Units
pH	7.25	s.u.
Temperature	9.1	°C
Dissolved Oxygen	6.58	mg/L
Conductivity	1276	Microsiemens

Sampling was conducted at the following location and submitted for laboratory analysis for the parameters listed below. The Environmental Services Program Results of Sample Analysis were not available at the time of this report and will be provided to the facility when they become available.

BCSD – South Route K WWTF, #MO-0087173 Outfall #002, Sample #140422						
Results of Sample Analyses			Permit Limits			
Parameters	Sample Result	Units	Daily Max	Weekly Average	Monthly Average	Units
BOD ₅	*	mg/L	-----	45	30	mg/L
Total Suspended Solids (TSS)	*	mg/L	-----	45	30	mg/L
Ammonia	*	mg/L	4.0	-----	4.0	mg/L

* Sample results not available at the time of this report.

COMPLIANCE DETERMINATION

The facility was found to be in **non-compliance** with the Missouri Clean Water Law, the Clean Water Commission Regulations, and Missouri State Operating Permit #MO-0087173, based upon the observations made at the time of the inspection.

At the time of this report, the sample results for Biochemical Oxygen Demand (BOD), Total Suspended Solids (TSS) and Ammonia, Sample #140422, were not available. Additional violations may be documented upon receipt of the sample analysis results. The results will be provided to the facility when they become available.

UNSATISFACTORY FEATURES

1. Failed to maintain the inner berm slopes of the lagoon to be no less than three to one (3:1) [10 CSR 20-8.200(6)(A)].

REQUIRED ACTIONS: The lagoon berms of the first, third and fourth cells have developed erosion damage from wave erosion, bank dens and tunnels from muskrats. The owner must repair the damaged berms. Inner and outer slopes are to be no less than 3:1. Clay soil is to be compacted into the damaged areas. Riprap or vegetate the repaired areas. The department recommends the use of riprap to cover the repaired areas to prevent future damage to the site. By **April 11, 2014**, the facility shall provide documentation to the Northeast Regional Office, which may include photographs and/or receipts describing the actions taken, or intended to take, to correct the non-compliance issues described in this inspection report.

2. Failed to provide adequate fencing to discourage trespassing and prevent entering of livestock [10 CSR 20-8.200(8)(A)].

REQUIRED ACTIONS: A portion of the perimeter fence was down at the time of the inspection. The facility must repair or construct adequate fencing in the damaged area of the fence. By **April 11, 2014**, the facility shall provide documentation to the Northeast Regional Office, which may include photographs and/or receipts describing the actions taken, or intended to take, to correct the non-compliance issues described in this inspection report.

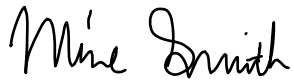
RECOMMENDATIONS – Actions that are being recommended by the inspector but are not required to bring the facility into compliance at the time of the inspection.

1. Repair the audiovisual alarm at the Route K lift station.
2. Review all the requirements of the new permit when issued.
3. Routinely examine the storm water diversion system to ensure that additional storm water is not entering the lagoon system or pooling and saturating the lagoon berms.
4. Ensure that routine mowing of the lagoon berms is conducted on a regular schedule.

Report of Compliance Inspection
BCSD - South Route K WWTF
March 21, 2014
Page 7

5. Ensure a sufficient spare parts inventory is kept on-site at the extended aeration plant so routine maintenance can occur in a timely manner.
6. Routinely inspection the effluent pipe for obstructions; clean out and repair the piping as needed.

SUBMITTED BY:



Mike Smith
Environmental Specialist
Northeast Regional Office

MS/bb



Photo #: 1
By: Mike Smith
Facility: BCSD - South Route K WWTF
Permit: #MO-0087173
Location: Boone County

Description: View of the extended aeration plant. Lock observed on gate to prevent unauthorized access. Perimeter fence was in good condition with signs observed posted on all sides.

Date Taken: February 25, 2014
Program: WPC Unit



Photo #: 2
By: Mike Smith
Facility: BCSD - South Route K WWTF
Permit: #MO-0087173
Location: Boone County

Description: View of the sludge holding tanks. Hose observed that had been used to pump sludge from the facility the day of the inspection, according to Mr. Cooksey.

Date Taken: February 25, 2014
Program: WPC Unit



Photo #: 3
By: Mike Smith
Facility: BCSD - South Route K WWTF
Permit: #MO-0087173
Location: Boone County

Description: View of aeration chamber. Aeration occurring at the time of the inspection. Wastewater appeared brown in color.

Date Taken: February 25, 2014
Program: WPC Unit

Initial MDS



Photo #: 4
By: Mike Smith
Facility: BCSD - South Route K WWTF
Permit: #MO-0087173
Location: Boone County

Description: View of facility clarifier. Water in the clarifier appeared clear. No concerns noted.

Date Taken: February 25, 2014
Program: WPC Unit



Photo #: 5
By: Mike Smith
Facility: BCSD - South Route K WWTF
Permit: #MO-0087173
Location: Boone County

Description: View of sign marking Outfall #002. Effluent discharging from the v-notch weir. Effluent appeared clear with no odor detected.

Date Taken: February 25, 2014
Program: WPC Unit



Photo #: 6
By: Mike Smith
Facility: BCSD - South Route K WWTF
Permit: #MO-0087173
Location: Boone County

Description: View directly downstream of the facility's outfall location. No concerns noted.

Date Taken: February 25, 2014
Program: WPC Unit

Initial MDS



Photo #: 7
By: Mike Smith
Facility: BCSD - South Route K WWTF
Permit: #MO-0087173
Location: Boone County

Description: View of where the small tributary observed in Photo #6 enters a larger tributary to Little Boone Femme Creek. Water in the tributary appeared clear with no impacts from the facility observed.

Date Taken: February 25, 2014
Program: WPC Unit



Photo #: 8
By: Mike Smith
Facility: BCSD - South Route K WWTF
Permit: #MO-0087173
Location: Boone County

Description: View of the lift station just prior to the extended aeration plant and lagoon system. Perimeter fence with locked gate and warning signs observed.

Date Taken: February 25, 2014
Program: WPC Unit



Photo #: 9
By: Mike Smith
Facility: BCSD - South Route K WWTF
Permit: #MO-0087173
Location: Boone County

Description: View of the control panel at lift station prior to the treatment plant. Both pumps tested and appeared to be functioning properly. No test for the alarm available.

Date Taken: February 25, 2014
Program: WPC Unit

Initial MDS



Photo #: 10
By: Mike Smith
Facility: BCSD - South Route K WWTF
Permit: #MO-0087173
Location: Boone County

Description: View inside the wet well at the lift station prior to the treatment plant. No concerns inside the wet well observed.

Date Taken: February 25, 2014
Program: WPC Unit



Photo #: 11
By: Mike Smith
Facility: BCSD - South Route K WWTF
Permit: #MO-0087173
Location: Boone County

Description: View of area in the perimeter fence around the lagoons where the wooden fence was down. Mr. Sublet stated a recent wind storm blew down the fence. Plastic orange fence observed in place of the wooden fence.

Date Taken: February 25, 2014
Program: WPC Unit



Photo #: 12
By: Mike Smith
Facility: BCSD - South Route K WWTF
Permit: #MO-0087173
Location: Boone County

Description: View of warning sign posted on the perimeter fence around the lagoon system.

Date Taken: February 25, 2014
Program: WPC Unit

Initial MDS



Photo #: 13
By: Mike Smith
Facility: BCSD - South Route K WWTF
Permit: #MO-0087173
Location: Boone County

Description: View of erosion and muskrat damage to the inner lagoon berms of the first lagoon cell.

Date Taken: February 25, 2014
Program: WPC Unit



Photo #: 14
By: Mike Smith
Facility: BCSD - South Route K WWTF
Permit: #MO-0087173
Location: Boone County

Description: View of rip-rap observed on the inner lagoon berms of the second cell. Lagoon berms of the second cell appeared to be in good condition.

Date Taken: February 25, 2014
Program: WPC Unit



Photo #: 15
By: Mike Smith
Facility: BCSD - South Route K WWTF
Permit: #MO-0087173
Location: Boone County

Description: View of the aerator observed in the second lagoon cell. Aerator not functioning at the time of the inspection.

Date Taken: February 25, 2014
Program: WPC Unit

Initial MDS



Photo #: 16
By: Mike Smith
Facility: BCSD - South Route K WWTF
Permit: #MO-0087173
Location: Boone County

Description: View of erosion damage observed on the inner berms of the third lagoon cell.

Date Taken: February 25, 2014
Program: WPC Unit



Photo #: 17
By: Mike Smith
Facility: BCSD - South Route K WWTF
Permit: #MO-0087173
Location: Boone County

Description: View of the eroded inner lagoon berms of the fourth lagoon cell. Inlet side of the discharge pipe observed.

Date Taken: February 25, 2014
Program: WPC Unit



Photo #: 18
By: Mike Smith
Facility: BCSD - South Route K WWTF
Permit: #MO-0087173
Location: Boone County

Description: View of a sign marking Outfall #001. No discharge was occurring at the time of the inspection.

Date Taken: February 25, 2014
Program: WPC Unit

Initial MDS



Photo #: 19
By: Mike Smith
Facility: BCSD - South Route K WWTF
Permit: #MO-0087173
Location: Boone County

Description: View of the receiving stream at Outfall #001. No impacts from the facility observed.

Date Taken: February 25, 2014
Program: WPC Unit



Photo #: 20
By: Mike Smith
Facility: BCSD - South Route K WWTF
Permit: #MO-0087173
Location: Boone County

Description: View inside the control panel at the lift station on the corner of New Meadow and Coneflower Streets. Both pumps tested and appeared to be functioning properly. No test for the alarm available.

Date Taken: February 25, 2014
Program: WPC Unit



Photo #: 21
By: Mike Smith
Facility: BCSD - South Route K WWTF
Permit: #MO-0087173
Location: Boone County

Description: View inside the wet well at the lift station on the corner of New Meadow and Coneflower Streets. No concerns observed.

Date Taken: February 25, 2014
Program: WPC Unit

Initial MDS



Photo #: 22
By: Mike Smith
Facility: BCSD - South Route K WWTF
Permit: #MO-0087173
Location: Boone County

Description: View of the lift station on Route K. No evidence of an overflow observed. Lift station surrounded by a fence with warning signs and a locked gate.

Date Taken: February 25, 2014
Program: WPC Unit



Photo #: 23
By: Mike Smith
Facility: BCSD - South Route K WWTF
Permit: #MO-0087173
Location: Boone County

Description: View of the control panel at the Route K lift station. Pumps tested and appeared to be working properly. Audiovisual alarm tested and did not activate and should be repaired.

Date Taken: February 25, 2014
Program: WPC Unit



Photo #: 24
By: Mike Smith
Facility: BCSD - South Route K WWTF
Permit: #MO-0087173
Location: Boone County

Description: View inside the wet well at the Route K lift station. No concerns observed.

Date Taken: February 25, 2014
Program: WPC Unit

Initial MDS

Sludge handling checklist for wastewater treatment facilities

BCSD – South Route K WWTF, #MO-0087173

- 1) What method (land application, incineration, landfill, etc) is utilized for sludge management?

Sludge from the extended aeration plant is hauled to the Columbia Regional Wastewater Treatment Plant. Sludge from the lagoons is retained in the lagoons.

- 2) How often is sludge removed from the facility?

Approximately every 2 to 3 months from the extended aeration plant

- 3) When is the last time that sludge was removed?

February 25, 2014

- 4) Has the Form S annual report been submitted?

Yes

- 5) Is the monitoring frequency for metals, pathogens, and vectors (WQ 423) being met?

NA

- 6) Are the requirements for pathogens and vector attraction (WQ 424) being met?

NA

- 7) Are land applied biosolids below the ceiling concentration for metals (WQ 425)?

NA

- 8) Are the nitrogen, soil pH, and soil phosphorus limitations (WQ 426) being met?

NA

STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES

Jeremiah W. (Jay) Nixon, Governor

Sara Parker Pauley, Director

dnr.mo.gov

5.200 BCSD-Sugar Tree Hills Subdivision
Boone County
MO-0083500

April 22, 2011

Mr. Dwayne Cooksey
Boone County Regional Sewer District
1314 N. 7th Street
Columbia, MO 65201

Dear Mr. Cooksey:

A routine compliance inspection of the BCSD-Sugar Tree Hills Subdivision, located in Boone County, Missouri was conducted on April 12, 2011. The inspection was conducted by Mr. Sam Loyd, with the Missouri Department of Natural Resources' Northeast Regional Office. Enclosed is a copy of the inspection report.

Please direct your attention to the Required Actions for the Unsatisfactory Feature and Recommendations sections of the report.

At the time of the report the results of sample analysis 1102259 were not completed. Violations may be documented upon receipt of the sample analysis results. The results will be provided to the facility when they are available.

If you have any questions, please contact Mr. Loyd or me at (660) 385-8000 in the Northeast Regional Office, 1709 Prospect Drive, Macon, MO 63552-2602.

Sincerely,

NORTHEAST REGIONAL OFFICE



Irene Crawford
Regional Director

IC/sll

Enclosures: Report of Compliance Inspection

**REPORT OF COMPLIANCE INSPECTION
BCSD-SUGAR TREE HILLS SUBDIVISION
BOONE COUNTY
MO-0083500
April 22, 2011**

INTRODUCTION

Pursuant to Section 644.026.1 RSMo of the Missouri Clean Water Law, a routine compliance inspection of the BCSD-Sugar Tree Hills Subdivision in Boone County, Missouri, was conducted by Mr. Sam Loyd of the Missouri Department of Natural Resources' Northeast Regional Office on April 12, 2011. Mr. Virgil Farnen, Operations Supervisor, participated in the inspection. Ms. Lynn Milberg and Ms. Raissa Espejo with the Department's Environmental Services Program were also present during the inspection.

This inspection was conducted to determine the facility's compliance with Missouri State Operating Permit #MO-0083500, the Missouri Clean Water Commission Regulations, and the Missouri Clean Water Law. This report presents the findings and observations made during the compliance inspection.

FACILITY DESCRIPTION/HISTORY

Missouri State Operating Permit #MO-0083500 was last issued on August 11, 2006, and expires on August 10, 2011. This permit sets forth effluent limitations, monitoring requirements, and permit conditions, both standard and specific, that the permittee is to follow. A permit renewal application was received on March 1, 2010.

The Sugar Tree Hills Subdivision Wastewater Treatment Facility is owned and operated by the Boone County Regional Sewer District. The facility is a two-cell lagoon with sludge retained in the lagoon. According to the permit the design population equivalent for the facility is 182 with a design flow of 18,200 gallons per day. Actual flow is listed as 7,000 gallons per day. Design sludge production is listed as 2.7 dry tons per year.

The legal description of the BCSD-Sugar Tree Hills Subdivision is listed on the permit as the NW ¼, NE ¼, Section 18, Township 48 North, Range 13 West, in Boone County. The receiving stream for this facility is an unnamed tributary to Perche Creek.

A previous compliance inspection was conducted by the Northeast Regional Office on April 26, 2007. Based on the findings of the inspection a letter of warning was issued to the facility on June 13, 2007, for the following unsatisfactory features: failure to collect an annual influent sample, failed to clearly mark the outfall, and erosion damage to the lagoon berms was observed.

On June 28, 2007, a response to the June 13, 2007, letter of warning was received at the Northeast Regional Office. The response stated that an influent sample had been collected and the DMR could be resubmitted if needed. The response stated that the outfall would be marked and damage to the lagoon berms would be repaired as recommended.

**Report of Compliance Inspection
BCSD-Sugar Tree Hills Subdivision
April 22, 2011
Page 2**

On October 31, 2007, a letter was sent to the Boone County Regional Sewer District stating that the actions outlined in the June 28, 2007, response letter adequately addressed the unsatisfactory features outlined in the June 13, 2007, letter of warning. The letter also stated that an influent sample had been taken as stated and the results had been received at the Northeast Regional Office.

DISCUSSION OF INSPECTION AND OBSERVATIONS

Prior to the inspection, the files for the BCSD-Sugar Tree Hills Subdivision, were reviewed, including the Permit Conditions of Missouri State Operating Permit #MO-0083500, to familiarize the inspector with the requirements specific to this facility. Submitted Discharge Monitoring Reports and Operational Monitoring results were complete and up to date. An annual influent sample analysis has also been received.

The inspection was conducted during normal business hours. Prior notification of the inspection was provided to ensure timely access to the site. Upon arrival at the facility, the inspector met with Mr. Virgil Farnen, Operations Supervisor, and the purpose and scope of the inspection were outlined. Mr. Farnen granted permission to access the site and accompanied the inspector throughout the tour of the facility.

Approaching the facility the inspector observed construction activities near the entrance to the lagoon. Mr. Farnen said that they were connecting the subdivision to the City of Columbia's wastewater treatment plant and were going to close out the lagoon. The construction project and future closure activities are covered under Missouri State Operating Permit #MO-R109EY0. Mr. Farnen stated that the sewer connector had been constructed and would be fully operational soon, but the lagoon was currently still in service.

An all-weather access road was provided to the lagoon system. A perimeter security fence was present with a closed and locked access gate. Warning signs were posted on all sides of the fencing. Entering the facility the inspector observed the lagoons. The berms of the lagoon appeared to be routinely mowed. No deep rooted vegetation was observed. Erosion of the lagoon berms was observed around the transfer pipes between the lagoon cells. The first cell of the lagoon was covered with duckweed.

The inspector then proceeded to the outfall, which was clearly marked. The outfall was discharging. Water quality field monitoring was conducted on the effluent and water samples were collected for analysis. The discharge water was clear with a faint green tint to it. The receiving stream was observed. The water in the stream was clear with no evidence of sludge or solid deposits.

Before leaving the site the preliminary findings of the inspection were summarized with Mr. Farnen.

WATER QUALITY MONITORING

The appropriate sampling materials were taken on the inspection, including a copy of the Missouri Department of Natural Resources' Standard Operating Procedures for Sampling. Instruments for field monitoring were taken on the inspection that are capable of testing pH, temperature, conductivity, and dissolved oxygen. A HACH® ammonia test kit for water quality monitoring was also taken on the inspection.

Water quality field monitoring was conducted at the following location for the listed parameters.

Outfall #001		
Parameter	Result	Units
pH	7.32	s.u.
Ammonia as Nitrogen	3.0	mg/L
Temperature	18.6	°C
Dissolved Oxygen	3.97	mg/L
Conductivity	931	Microsiemens

Sampling was conducted and submitted for laboratory analysis. The Department's Environmental Services Program results of Sample Analysis 1102259 were not completed at the time of the report. The results will be provided to the facility when they are available.

COMPLIANCE DETERMINATION

The facility was found to be **in compliance** with the Missouri Clean Water Law, the Clean Water Commission Regulations, and Missouri State Operating Permit #MO-0083500, based upon the observations made at the time of the inspection. However, an unsatisfactory feature was observed that should be corrected to ensure continued compliance. At the time of the report the results of sample analysis 1102259 were not completed. Violations may be documented upon receipt of the sample analysis results.

UNSATISFACTORY FEATURE

1. Failed to maintain the inner berm slopes of the lagoon to be less than three to one (3:1) [10 CSR 20-8.020(13)(A)3.C.].

REQUIRED ACTION: The lagoon berms have developed erosion damage. The facility must monitor the erosion and take appropriate steps to prevent any unauthorized discharges from the berms due to the erosion damage, until the lagoon has been properly closed.

Report of Compliance Inspection
BCSD-Sugar Tree Hills Subdivision
April 22, 2011
Page 4

RECOMMENDATIONS – Actions that are being recommended by the inspector but are not required to bring the facility into compliance at the time of the inspection.

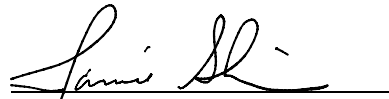
- A lagoon closure plan must be submitted to the Department for review and approval prior to closure of the lagoon. After closure is completed, the facility must then submit Form J to request termination of the Missouri State Operating Permit.

SUBMITTED BY:



Sam Loyd
Environmental Specialist
Northeast Regional Office

REVIEWED BY:



Jamie Shinn
Environmental Specialist
Northeast Regional Office

SL/lis



Photo #: 1 of 3
By: Mr. Sam Loyd
Facility: BCSD-Sugar Tree Hills Subdivision
Permit: MO-0083500
Location: Columbia, MO

Description: View of the entry gate with warning sign.

Date/Time Taken: April 12, 2011
Program: WPC Unit



Photo #: 2 of 3
By: Mr. Sam Loyd
Facility: BCSD-Sugar Tree Hills Subdivision
Permit: MO-0083500
Location: Columbia, MO

Description: View of the erosion around the transfer pipe between the two lagoon cells.

Date/Time Taken: April 12, 2011
Program: WPC Unit



Photo #: 3 of 3
By: Mr. Sam Loyd
Facility: BCSD-Sugar Tree Hills Subdivision
Permit: MO-0083500
Location: Columbia, MO

Description: View of the outfall.

Date/Time Taken: April 12, 2011
Program: WPC Unit

Initial SL

Facility ID#:

MoCWIS/ACE TRACKING

Compliance Monitoring ID#:

Water Pollution – FY11

****Facility Name** BCSD-Sugar Tree Hills Subdivision

Permit # MO-0083500

****Facility Address** Route UU

****County** Boone

****City** Columbia

****Zip Code** 65201

****Inspector** Mr. Sam Loyd

Location Info: UTM Easting: 549627 UTM Northing: 4311962 Regional Office: Northeast Regional Office

✓ Below

Description of Activity ACE Data Entry Screen Equivalent

****Inspection Date (CM Activity Date):** April 12, 2011

****Report Date (CM Activity Report Date):**

ENTER INTO ACE

WP: TMDL Development

WP: Operator Certification

ENTER INTO MoCWIS

SRF

CAFO Site Specific

Minor

CSO

MS4

General Permit CAFO and AFO

SSO Compliance Strategy

Industrial Stormwater

Inspection and Enhancements

Pretreatment

Emergency

Land Disturbance Phase I

Compliance Assistance

Land Disturbance Phase II

Data Record or Review

Major

Unpermitted Facility

CM ACTIVITY OBSERVATIONS & CM ACTION VIOLATIONS

Construction without permit

Schedule of Compliance not being met

No Certified operator

Sludge Related Violations

Facility is not meeting effluent limits

SWPPP Violations

Contaminants found certain to enter waters of the state

Wastewater irrigation problems

Operating without the required permit

Reporting DMRs or other standard conditions not being met

Failure to reply for a renewal of permit

Failure to comply with conditions of permit

Failure to upgrade facilities

Pretreatment problems

Violated subdivision regulations

Inadequate Dechlorination

Caused pollution to waters of the state

Inadequate Disinfection

Violated water quality standards

Failed to notify the Depart within 24 hrs of a bypass or non compliance event

Other (Operator & Maintenance Problems) add detail to comments

Facility/Site in Compliance : YES NO

Comments for MoCWIS :

CM ACTIONS

LOW (Letter of Warning)

****Action Date (LOW) & Due Date**

NOV (Notice of Violation) Action# (NOV#)

****Action Date (NOV) & Due Date**

AC (Administratively Closed)

****Action Date (AC) & Due Date**

EAR (Enforcement Action Request)

****Action Date (EAR) & Due Date**

RTC (Returned to Compliance)

****Action Date (RTC) & Due Date**

SOC (Schedule of Compliance)

****Action Date (SOC) & Due Date**

Description of Violations :

Action Complete Date:

**** Indicates required for ACE & MoCWIS. If Action Type is selected, an Action Date is required.**



DEPARTMENT OF NATURAL RESOURCES

dnr.mo.gov

CERTIFIED MAIL

7014 1200 0001 0386 4704

5.200 BCSD, Sunnyslope WWTF
Boone County
#MO-0095354
NOV #NER 2014061217386348

August 11, 2015

Mr. Dwayne Cooksey, Operations Manager
Boone County Regional Sewer District
1314 North Seventh Street
Columbia, MO 65201

NOTICE OF VIOLATION

Dear Permittee:

Missouri State Operating Permit (MSOP) #MO-0095354 was issued for the Boone County Regional Sewer District, Sunnyslope Subdivision Wastewater Treatment Facility in Boone County, Missouri. This permit sets forth specific effluent limitations, monitoring requirements, and specific permit conditions regarding the facility.

A review of your Discharge Monitoring Reports (DMRs) for the 4th Quarter 2013 and 1st Quarter 2014 monitoring periods shows that the effluent limitations established in your MSOP have been exceeded. The effluent limits and the values that have exceeded those effluent limits are listed below.

Outfall	Monitoring Period	Parameter	Permitted Limitations	Reported Values
001	4 th Quarter 2013 (December 2013)	Biochemical Oxygen Demand (BOD)	45 mg/L Monthly Avg. 65 mg/L Weekly Avg.	234 mg/L
		Total Suspended Solids (TSS)	80 mg/L Monthly Avg. 120 mg/L Weekly Avg.	162 mg/L
001	1 st Quarter 2014 (January 2014)	BOD	45 mg/L Monthly Avg. 65 mg/L Weekly Avg.	75.5 mg/L
001	1 st Quarter 2014 (February 2014)	BOD	45 mg/L Monthly Avg. 65 mg/L Weekly Avg.	68 mg/L

BCSD Sunnyslope Subdivision
August 11, 2015
Page 2

Therefore, Notice of Violation #NER 2014061217386348 is hereby issued to Sunnyslope Subdivision for failure to comply with the aforementioned effluent limitations. Boone County Regional Sewer District previously submitted a letter to the department that proposed that the facility install an aerator in the lagoon to help decrease the BOD concentration, and our department responded that a construction permit was not required and that the facility's description would be updated during the permit's renewal. Per state regulation 10 CSR 20-7.015(9)(D)(4), please provide a written report by **September 1, 2015**, which explains if the aerator was installed as proposed and if this has prevented a reoccurrence of the violations. Boone County Regional Sewer District, Sunnyslope Subdivision Wastewater Treatment Facility will be considered in non-compliance with these violations until the documentation is submitted to this office. Our files will reflect the continued non-compliance regarding these violations until the required documentation is submitted for review.

Be advised that violation of your State Operating Permit conditions, including effluent limits, schedules of compliance, or standard and special conditions, is a serious matter. It is our hope that through conference, conciliation, and persuasion, violations can be corrected. We ask for your urgent cooperation.

If you have any questions, please contact Mr. David See at (660) 385-8000, in the Northeast Regional Office 1709 Prospect Drive, Macon, MO 63552 or by email at NERO@dnr.mo.gov. Responses to this letter may be sent via email.

Sincerely,

NORTHEAST REGIONAL OFFICE



Irene Crawford
Regional Director

IC/dsb

5.200 BCSD, Sunnyslope WWTF
Boone County
#MO-0095354

October 24, 2013

Mr. Tom Ratermann, General Manager
Boone County Regional Sewer District
1314 North Seventh Street
Columbia, MO 65201

LETTER OF WARNING

Dear Mr. Ratermann:

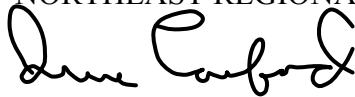
A routine compliance inspection of the Boone County Regional Sewer District (BCSD), Sunnyslope Wastewater Treatment Facility (WWTF), located in Boone County, Missouri was conducted on September 26, 2013. The inspection was conducted by Mr. Leland Maize, with the Missouri Department of Natural Resources' Northeast Regional Office. Enclosed is a copy of the inspection report.

Please direct your attention to the Required Actions for the Unsatisfactory Features and Recommendations sections of the report. The information requested by the department is to be submitted to the Northeast Regional Office by **November 14, 2013**. Your cooperation in this matter will be appreciated.

If you have any questions regarding the enclosed inspection report or would like to schedule a time to meet with department staff to discuss actions required to bring your facility into compliance, please contact Mr. Leland Maize or me at (660) 385-8000 in the Northeast Regional Office, 1709 Prospect Drive, Macon, MO 63552-2602 or by email at NERO@dnr.mo.gov. Responses to any Required Actions may be sent via email.

Sincerely,

NORTHEAST REGIONAL OFFICE



Irene Crawford
Regional Director

IC/lma

Enclosures: Report of Compliance Inspection
Sample Analysis #131374

**REPORT OF COMPLIANCE INSPECTION
BCSD, SUNNYSLOPE WWTF
BOONE COUNTY
#MO-0095354
October 24, 2013**

INTRODUCTION

Pursuant to Section 644.026.1 RSMo of the Missouri Clean Water Law, a routine compliance inspection of the Boone County Regional Sewer District (BCSD), Sunnyslope Wastewater Treatment Facility (WWTF) in Boone County, Missouri, was conducted by Mr. Leland Maize of the Missouri Department of Natural Resources' Northeast Regional Office on September 26, 2013. Mr. Russell Palmer, Operator, participated in the inspection.

This inspection was conducted to determine the facility's compliance with Missouri State Operating Permit #MO-0095354, the Missouri Clean Water Commission Regulations, and the Missouri Clean Water Law. This report presents the findings and observations made during the compliance inspection.

FACILITY DESCRIPTION/HISTORY

Missouri State Operating Permit #MO-0095354 was last issued on November 16, 2007, and expired on November 15, 2012. An application for renewal was received by the department on March 19, 2012. This permit sets forth effluent limitations, monitoring requirements, and permit conditions, both standard and specific, that the permittee is to follow. The facility must abide by the conditions of the expired permit until a new permit is issued.

The BCSD, Sunnyslope WWTF is owned and operated by the Boone County Regional Sewer District. The facility consists of a single cell lagoon with sludge retained in the lagoon. The permit lists the design population equivalent for the facility as 55. The design flow for the facility is 5,500 gallons per day with an actual flow of 4,400 gallons per day. The design sludge production for the facility is 1.0 dry tons per year.

The legal description of the BCSD, Sunnyslope WWTF is listed on the permit as the NW ¼, NW ¼, Section 14, Township 50 North, Range 12 West, in Boone County. The receiving stream for this facility is an unnamed tributary to Kelley Branch.

The Northeast Regional Office previously conducted a water pollution inspection of the facility on September 27, 2006. At the time of the previous inspection, the facility was found to be in non-compliance due to the following Unsatisfactory Features, which were outlined in a November 27, 2006 inspection report:

1. Failed to submit complete Discharge Monitoring Reports as required in Part "A" of Missouri State Operating Permit #MO-0095354 [Section 644.076.1, RSMo and 10 CSR 20-7.015(9)(A)1].

Report of Compliance Inspection
BCSD, Sunnyslope WWTF
October 24, 2013
Page 2

2. Facility failed to collect an influent sample at least once per year in order to ensure a removal efficiency of 65% is being met by the wastewater treatment system, as required by the effluent limitations and monitoring requirements of Missouri State Operating Permit #MO-0095354 [Section 644.076.1, RSMo].

On December 11, 2006, the Northeast Regional Office received a letter from the facility in response to the November 27, 2006 inspection report. The letter stated that the report was prepared but inadvertently failed to be mailed and that staff would make every effort to comply with submitting influent testing results in the future.

On September 3, 2013, the facility was issued a Letter of Warning for reporting an exceedance of the effluent limitation for Biochemical Oxygen Demand on the facility's 3rd Quarter 2012 and 4th Quarter 2012 Discharge Monitoring Reports.

On April 6, 2010, the facility was issued a Letter of Warning for reporting an exceedance of the effluent limitation for Biochemical Oxygen Demand on the facility's 4th Quarter 2009 Discharge Monitoring Report.

On September 19, 2012, the facility was issued a Letter of Warning for reporting an exceedance of the effluent limitation for Biochemical Oxygen Demand and Total Suspended Solids on the facility's 1st Quarter 2012 Discharge Monitoring Report. The facility was also cited for not reporting Ammonia as N, Biochemical Oxygen Demand, pH, Temperature, or Total Suspended Solids on the facility's 2nd Quarter 2012 Discharge Monitoring Report.

DISCUSSION OF INSPECTION AND OBSERVATIONS

Prior to the inspection, the files for the BCSD, Sunnyslope WWTF were reviewed, including the Permit Conditions of Missouri State Operating Permit #MO-0095354, to familiarize the inspector with the requirements specific to this facility.

The inspection was conducted during normal business hours. Prior notification of the inspection was provided to ensure timely access to the site. Prior to arrival at the facility, Mr. Maize contacted Mr. Dwayne Cooksey, Operations Manager, to inform him of the inspection. Upon arrival at the facility, the inspector met with Mr. Russell Palmer, Operator, and the purpose and scope of the inspection were outlined. Mr. Palmer granted permission to access the site and accompanied the inspector throughout the tour of the facility.

As Mr. Maize approached the facility, an all-weather access road was observed leading to the entrance of the facility. A perimeter fence was observed surrounding the facility with warning signs on each side of the perimeter fence. Some of the signs were faded. Mr. Maize observed a gate at the entrance to the facility which was locked prior to the inspection.

Report of Compliance Inspection
BCSD, Sunnyslope WWTF
October 24, 2013
Page 3

The inspection began with observations of the facility. The facility consists of a single cell lagoon with sludge retained in the lagoon. Mr. Maize observed sludge surfacing in two spots in the north portion of the lagoon. The lagoon surface was covered with duckweed. The vegetation on the berms was kept short and was well maintained. Mr. Maize walked around the perimeter of the lagoon berm. Mr. Maize did not observe any damage or leaks in the lagoon berm.

The inspection then proceeded to the facility's outfall. The outfall was marked in the field. The outfall was discharging at the time of the inspection. Mr. Maize collected samples of the facility's effluent for sample analyses. Water quality field monitoring was also conducted on the facility's effluent. Mr. Maize observed the receiving stream for the facility both upstream and downstream from the facility's outfall. The receiving stream was dry upstream from the facility's outfall. Mr. Maize did not observe any visual impact from the facility on the receiving stream.

Mr. Maize reviewed the facility's records. The facility's Discharge Monitoring Reports are up to date and complete. The facility has not been submitting results for influent samples once per year as required in Missouri State Operating Permit #MO-0095354. The facility has been submitting inflow and infiltration reports twice per year. The facility has a program developed for maintenance and repair of the collection system. The program developed encompasses several facilities owned by the Boone County Regional Sewer District.

WATER QUALITY MONITORING

The appropriate sampling materials were taken on the inspection, including a copy of the Missouri Department of Natural Resources' Standard Operating Procedures for Sampling. Instruments for field monitoring were taken on the inspection that are capable of testing pH, temperature, conductivity, and dissolved oxygen. A HACH[®] ammonia test kit for water quality monitoring was also taken on the inspection.

Mr. Maize observed the receiving stream upstream and downstream from the facility's outfall. The receiving stream was dry upstream from the facility's outfall. Mr. Maize did not observe any visual impact from the facility on the receiving stream.

Water quality field monitoring was conducted at the following location for the listed parameters.

Sample #131374		
Outfall #001		
Parameter	Result	Units
pH	7.00	s.u.
Temperature	21.0	°C
Dissolved Oxygen	1.04	mg/L
Conductivity	1110	Microsiemens

Report of Compliance Inspection
BCSD, Sunnyslope WWTF
October 24, 2013
Page 4

Sampling was conducted at the following location and submitted for laboratory analysis for the parameters listed below. The Environmental Services Program Results of Sample Analyses are listed below.

Sample #131374 Outfall #001						
Results of Sample Analyses			Permit Limits			
Parameters	Sample Result	Units	Daily Max	Weekly Average	Monthly Average	Units
BOD ₅	68.7	mg/L		65	45	mg/L
Total Suspended Solids (TSS)	24.0	mg/L		120	80	mg/L

COMPLIANCE DETERMINATION

The facility was found to be in **non-compliance** with the Missouri Clean Water Law, the Clean Water Commission Regulations, and Missouri State Operating Permit #MO-0095354, based upon the observations made at the time of the inspection.

UNSATISFACTORY FEATURES

1. Failed to collect an influent sample in order to ensure a removal efficiency of 65% is being met by the wastewater treatment system, as required by the effluent limitations and monitoring requirements of Missouri State Operating Permit (MSOP) #MO-0095354 [Section 644.076.1, RSMo].

REQUIRED ACTION: The BCSD, Sunnyslope WWTF is required to collect a wastewater influent sample, at least once per year while discharging, for five day Biochemical Oxygen Demand (BOD₅) and Total Suspended Solids (TSS) in order to ensure a removal efficiency of 65% is being met by the wastewater treatment facility. Influent testing should occur in conjunction with one or more of the monthly effluent tests as the facility discharges. The facility must submit a written statement to the Northeast Regional Office by **November 14, 2013**, explaining what actions have been taken to correct the violation and prevent a reoccurrence in the future.

2. On September 26, 2013, failed to comply with the effluent limits contained in Part A of Missouri State Operating Permit (MSOP) #MO-0095354 [Sections 644.051.1(3) and 644.076.1, RSMo].

Report of Compliance Inspection
BCSD, Sunnyslope WWTF
October 24, 2013
Page 5

REQUIRED ACTION: The samples from the inspection were analyzed and contained a Biochemical Oxygen Demand value of 68.7 mg/L. Missouri State Operating Permit #MO-0095354 includes Biochemical Oxygen Demand effluent limitations of 65 mg/L weekly average and 45 mg/L monthly average. The facility shall submit a written statement to the Northeast Regional Office by **November 14, 2013**, explaining what actions have been taken to correct the unsatisfactory feature and prevent a reoccurrence in the future.

RECOMMENDATIONS – Actions that are being recommended by the inspector but are not required to bring the facility into compliance at the time of the inspection.

1. Routinely examine the wastewater collection system to determine if Inflow and Infiltration is allowing storm water to enter the system.
2. Consider monitoring the sludge levels in the lagoon to ensure that the lagoon has enough wastewater treatment holding time.
3. Consider placing riprap on the interior of the lagoon cell berms.
4. Consider replacing faded signs to ensure that the warning signs are easily read.

SUBMITTED BY:



Leland Maize
Environmental Specialist
Northeast Regional Office

REVIEWED BY:



Jamie Shinn
Environmental Specialist
Northeast Regional Office

LM/aa



Photo #: 1
By: Leland Maize
Facility: BCSD, Sunnyslope WWTF
Permit: #MO-0095354
Location: Boone County

Description: Lagoon cell with sludge surfacing in two places. Duckweed covering the lagoon cell.

Date Taken: September 26, 2013
Program: WPC Unit



Photo #: 2
By: Leland Maize
Facility: BCSD, Sunnyslope WWTF
Permit: #MO-0095354
Location: Boone County

Description: Sign marking the facility's outfall.

Date Taken: September 26, 2013
Program: WPC Unit

Initial LM

Sludge Handling Checklist for Wastewater Treatment Facilities

- 1) What method (land application, incineration, landfill, etc) is utilized for sludge management?**

Sludge is retained in the lagoon.

- 2) How often is sludge removed from the facility?**

Sludge has never been removed from the facility.

- 3) When is the last time that sludge was removed?**

Sludge has never been removed from the facility.

- 4) Has the Form S annual report been submitted?**

N/A

- 5) Is the monitoring frequency for metals, pathogens, and vectors (WQ 423) being met?**

N/A

- 6) Are the requirements for pathogens and vector attraction (WQ 424) being met?**

N/A

- 7) Are land applied biosolids below the ceiling concentration for metals (WQ 425)?**

N/A

- 8) Are the nitrogen, soil pH, and soil phosphorus limitations (WQ 426) being met?**

N/A



Jeremiah W. (Jay) Nixon, Governor

Sara Parker Pauley, Director

DEPARTMENT OF NATURAL RESOURCES

dnr.mo.gov

5.200 BCSD - Sunnyslope Subdivision
Boone County
#MO-0095354

September 3, 2013

Mr. Tom Ratermann, General Manager
Boone County Regional Sewer District
1314 N 7th Street
Columbia, MO 65201

LETTER OF WARNING

Dear Mr. Ratermann:

Missouri State Operating Permit #MO-0095354 was issued for the BCSD - Sunnyslope Subdivision in Boone County. This permit sets forth specific effluent limitations, monitoring requirements, and specific permit conditions regarding the facility.

A review of your Discharge Monitoring Reports (DMRs) for the 3rd Quarter 2012 and 4th Quarter 2012 monitoring periods shows that the effluent limitations established in your Missouri State Operating Permit (MSOP) have been exceeded. The effluent limits and the values that have exceeded those effluent limits are listed below.

Outfall	Monitoring Period	Parameter	Permitted Limitations	Reported Values
001	3 rd Quarter 2012	Biochemical Oxygen Demand	45 mg/L Monthly Avg. 65 mg/L Weekly Avg.	66 mg/L 69 mg/L
001	4 th Quarter 2012	Biochemical Oxygen Demand	45 mg/L Monthly Avg. 65 mg/L Weekly Avg.	102 mg/L

In addition, a review of your Discharge Monitoring Report (DMR) for the 2nd Quarter 2012 shows that you reported a flow of 0.00144 MGD (April 2012). However, you did not report any of the monitoring parameters. We received a return letter from you addressing our previous letter of warning. Your letter stated that we should have a "No Discharge Report dated June 7, 2012" for 2nd Quarter 2012 on file. The 2nd quarter monitoring period includes April, May, and June, and the facility reported a flow in April 2012, therefore the required monitoring parameters are required to be submitted.

BCSD - Sunnyslope Subdivision
September 3, 2013
Page 2

Please provide a written report by **September 24, 2013**, to the department which explains the cause(s) for the non-compliance, the exact dates of non-compliance, the date anticipated to return to compliance, and what steps your operation will take to prevent a reoccurrence of these violations. BCSD - Sunnyslope Subdivision will be considered in non-compliance with these violations until the documentation is submitted to this office. Our files will reflect the continued non-compliance regarding these violations until the required documentation is submitted for review.

Be advised that violation of your State Operating Permit conditions, including effluent limits, schedules of compliance, or standard and special conditions, is a serious matter. It is our hope that through conference, conciliation, and persuasion, violations can be corrected. We ask for your urgent cooperation.

If you have any questions, please contact Joe Bowdish at (660) 385-8000, in the Northeast Regional Office 1709 Prospect Drive, Macon, MO 63552.

Sincerely,

NORTHEAST REGIONAL OFFICE



Irene Crawford
Regional Director

IC/jbb



Jeremiah W. (Jay) Nixon, Governor

Sara Parker Pauley, Director

DEPARTMENT OF NATURAL RESOURCES

dnr.mo.gov

5.200 BCSD, Sunnyslope WWTF
Boone County
#MO-0095354

September 16, 2016

Tom Ratermann, General Manager
Boone County Regional Sewer District
1314 North Seventh Street
Columbia, MO 65201

LETTER OF WARNING RESPONSE REQUIRED

Dear Mr. Ratermann:

An inspection was conducted by Department of Natural Resources staff pursuant to Section 644.026.1 of the Missouri Clean Water Law on September 1, 2016. The enclosed report is being issued with a Letter of Warning for the violations identified.

Violations include:

- Failed to submit inflow and infiltration reports in April and October of each year
- Failed to maintain the inner berm slopes of the lagoon to be no less than three to one (3:1)
- Failed to meet the 65% removal efficiency for Total Suspended Solids in March 2015

Please refer to the enclosed report for details on findings and required actions. **A written response documenting actions taken to correct the violations is required by the date specified in the report.**

BCSD, Sunnyslope WWTF
September 16, 2016
Page 2

If you have any questions or would like to schedule a time to meet with department staff to discuss compliance requirements, please contact Stephen Moss at (660) 385-8000 in the Northeast Regional Office, 1709 Prospect Drive, Macon, MO 63552-2602 or by email at NERO@dnr.mo.gov.

Sincerely,

NORTHEAST REGIONAL OFFICE



Irene Crawford
Regional Director

IC/smj

Enclosures: Report of Inspection

c: Dwayne Cooksey, Boone County Regional Sewer District, Operations Manager

**Department of Natural Resources
Northeast Regional Office
Report of Inspection
BCSD, Sunnyslope WWTF
0.3 mile Southeast of Route U and Ricketts Road
Hallsville, Missouri, 65255, Boone County
#MO-0095354
September 16, 2016**

Introduction

Pursuant to Section 644.026.1 of the Missouri Clean Water Law, I, Stephen Moss, conducted a routine inspection of the Boone County Regional Sewer District (BCSD), Sunnyslope Wastewater Treatment Facility (WWTF) in Boone County, Missouri, on September 1, 2016. The following people participated in the inspection:

BCSD, Sunnyslope WWTF

Dwayne Cooksey Operations Manager (573) 881-9912

Department of Natural Resources

Stephen Moss Environmental Specialist (660) 385-8000

This inspection was conducted to determine the facility's compliance with Missouri State Operating Permit #MO-0095354, the Missouri Clean Water Commission Regulations, and the Missouri Clean Water Law. This report presents the findings and observations made during the inspection.

Entity Description and History

Missouri State Operating Permit (MSOP) #MO-0095354 was last issued on November 16, 2007, and expired on November 15, 2012. The facility submitted a renewal application on March 19, 2012. This permit sets forth effluent limitations, monitoring requirements, and permit conditions, both standard and specific, that the permittee is to follow. The facility is required to follow the conditions of the expired permit until a new permit is issued.

The BCSD, Sunnyslope WWTF is owned and operated by the Boone County Regional Sewer District. The facility consists of a single-cell lagoon with sludge retained in the lagoon. The permit lists the design population equivalent for the facility as 55. The design flow for the facility is 5,500 gallons per day with an actual flow of 4,400 gallons per day. The design sludge production for the facility is 1.0 dry tons per year.

The legal description of the BCSD, Sunnyslope WWTF is listed on the permit as the NW ¼, NW ¼, Section 14, Township 50 North, Range 12 West, in Boone County. The UTM coordinates are listed on the permit as 3907245/09214132, in Boone County. The receiving stream for this facility is a tributary to Kelley Branch and it is located in the 10300102 HUC 8 watershed.

Report of Inspection
BCSD, Sunnyslope WWTF
September 16, 2016
Page 2

Prior to the inspection, I reviewed the files for the BCSD, Sunnyslope WWTF, including the Permit Conditions of MSOP #MO-0095354, to familiarize myself with the requirements specific to this facility.

The regional office performed the previous inspection on September 26, 2013. At the time of the inspection, the facility was found to be operating in non-compliance and a Letter of Warning was issued to the facility for the following unsatisfactory features: failed to collect an influent sample in order to ensure a removal efficiency of 65% is being met by the wastewater treatment system and failed to comply with the effluent limits. On November 7, 2013, the facility submitted a response to the Letter of Warning. The response stated that influent testing was conducted in 2006, but it was inadvertently not reported on the Discharge Monitoring Report due to operator error. The response stated that the facility has had issues with Biochemical Oxygen Demand exceeding the monthly average, and they have contacted the local utility to provide electricity so a single horsepower aerator can be installed in the lagoon to provide additional oxygen.

On August 11, 2015, the facility was issued a Notice of Violation for exceeding effluent limitations in the 4th Quarter 2013 and the 1st Quarter 2014. On August 28, 2015, the facility submitted a response to the Notice of Violation. The response stated that the facility added an aerator to the lagoon in order to assist the facility in meeting the effluent limitations. The response stated that the addition of the aerator was approved by the Water Protection Program in a letter dated January 2, 2014.

I conducted a file review of the department's files for the facility. I reviewed the facility's Discharge Monitoring Reports (DMRs) since the previous inspection in September 2013. I found that the facility has submitted each of the required DMRs. I found that the facility has been submitting Inflow and Infiltration Reports once per year, instead of the submitting the reports semi-annually as required by the facility's Missouri State Operating Permit. The facility is required to collect an influent sample once per year to ensure that the facility is meeting the removal efficiency of 65%. I found that that facility has been collecting an influent sample once per year. I found that the facility did not meet the removal efficiency of 65% for Total Suspended Solids in March 2015.

Discussion of Inspection and Observations

I conducted the inspection during normal business hours. Prior notification of the inspection was provided while I was in route to ensure timely access to the site. Upon arrival at the facility, I met with Dwayne Cooksey and I outlined the purpose and scope of the inspection. Mr. Cooksey granted me permission to access the site and accompanied me throughout the tour of the facility.

I began the inspection with observations of the single-cell lagoon (Photo #1). I observed the facility had a perimeter fence surrounding the lagoon. I observed warning signs posted on the perimeter fence on each side of the facility. The facility's entrance gate is located in the northeast

**Report of Inspection
BCSD, Sunnyslope WWTF
September 16, 2016
Page 3**

corner of the facility and the entrance gate was observed to be locked. North Sunnyslope Road provides access to the facility. The facility's aerator was observed to be functional at the time of the inspection (Photo #1). I observed erosion damage on the inner berm slope around a majority of the single-cell lagoon (Photo #2). The lagoon cell was observed to have over two feet of available freeboard. I observed duckweed covering approximately 80% of the surface of the lagoon cell.

I observed Outfall #001 (Photo #3). The facility had a sign marking the location of Outfall #001. The facility was observed to be discharging at the time of the inspection and samples of the effluent were collected for analysis. I observed the effluent to be light green in color with no odors. I did not observe any water quality impacts caused by previous discharges in the receiving stream.

Following the inspection, I discussed the facility with Mr. Cooksey. I asked Mr. Cooksey what the future plan is for the facility. Mr. Cooksey stated that he was unsure of what the future plan is with this lagoon. Mr. Cooksey stated that the Boone County Regional Sewer District has tried to get the City of Hallsville to connect the area, but Mr. Cooksey stated that the city did not appear to be interested. I asked Mr. Cooksey if the Sunnyslope WWTF was included in the Boone County Regional Sewer District's program for repair and maintenance of the collection system. Mr. Cooksey stated that this facility was included in the plan. I stated that this facility is required to submit semi-annual Inflow and Infiltration Reports in accordance with the facility operating permit. Mr. Cooksey stated that the issue with the Inflow and Infiltration Reports has been addressed. I stated that erosion damage on the inner berm slopes of the lagoon should be addressed.

Sampling and Monitoring

The appropriate sampling materials were taken on the inspection, including a copy of the Department of Natural Resources' Standard Operating Procedures for Sampling. Instruments for field monitoring were taken on the inspection that are capable of testing pH, temperature, conductivity, and dissolved oxygen. Ammonia test strips for water quality monitoring were also taken on the inspection.

Water quality field monitoring was conducted at the following location for the listed parameters.

Outfall #001		
Parameter	Result	Units
Dissolved Oxygen	5.24	mg/L
pH	7.85	s.u.
Conductivity	811	µS/cm
Temperature	22.2	°C

Report of Inspection
BCSD, Sunnyslope WWTF
September 16, 2016
Page 4

Sampling was conducted and submitted for laboratory analysis. The department's Environmental Services Program results of Sample Analysis #162365 were not completed at the time of the report. The results will be provided to the facility when they are available. Additional violations may be documented upon receipt of the sample analysis results.

Compliance Determination and Required Actions

The facility was found to be **not in compliance** with Missouri State Operating Permit #MO-0095354, the Clean Water Commission Regulations, and the Missouri Clean Water Law, based upon the observations made at the time of the inspection.

Letter of Warning

1. Failed to submit inflow and infiltration reports in April and October of each year, as required by Special Condition #9 of Missouri State Operating Permit #MO-0095354 [Section 644.076.1, RSMo].

REQUIRED ACTION: The facility has been submitting inflow and infiltration reports on an annual basis instead of twice per year. The facility shall submit a written statement to the Northeast Regional Office by **October 17, 2016**, explaining what actions have been taken to correct the unsatisfactory feature and prevent a reoccurrence in the future.

2. Failed to maintain the inner berm slopes of the lagoon to be no less than three to one (3:1) [10 CSR 20-8.020(13)(A)3.C.].

REQUIRED ACTION: The lagoon berms have developed erosion damage from wave erosion, bank dens and tunnels from muskrats. The owner must repair the damaged berms. Inner and outer slopes are to be no less than 3:1. Clay soil is to be compacted into the damaged areas. Riprap or vegetate the repaired areas. The department recommends the use of riprap to cover the repaired areas to prevent future damage to the site. By **October 17, 2016**, the facility shall provide documentation to the Northeast Regional Office, which may include photographs and/or receipts describing the actions taken, or intended to take, to correct the non-compliance.

3. Failed to meet the 65% removal efficiency for Total Suspended Solids as required by Table B. Influent Monitoring Requirements of Missouri State Operating Permit #MO-0095354 [Section 644.076.1, RSMo].

REQUIRED ACTION: The facility is required to collect a wastewater influent sample at least once per year for five day Biochemical Oxygen Demand (BOD5) and Total Suspended Solids (TSS) in order to ensure a removal efficiency of 65% is being met by the wastewater treatment facility. The facility failed to meet the 65% removal efficiency in March 2015. The facility shall submit a written statement to the Northeast Regional Office by **October 17, 2016**, explaining

**Report of Inspection
BCSD, Sunnyslope WWTF
September 16, 2016
Page 5**

what actions have been taken to correct the unsatisfactory feature and to prevent a reoccurrence in the future.

Recommendations

1. Ensure that routine mowing of the lagoon berms is conducted on a regular schedule.

Additional Comments/Conclusion

None


Signatures

SUBMITTED BY:



Stephen Moss
Environmental Specialist
Northeast Regional Office

REVIEWED BY:



Jamie Shinn
Environmental Supervisor
Northeast Regional Office

SM/jb

Attachments

- Attachment # 1 – Photos**
- Attachment # 2 – Aerial Map**
- Attachment # 3 – Sludge Checklist**

Attachment # 1
BCSD, Sunnyslope WWTF
September 16, 2016
Page 1



Photograph #: 1
Taken by: Stephen Moss
Entity: BCSD, Sunnyslope WWTF
Permit: #MO-0095354
Location: BOONE
Description: View of the single cell lagoon. The aerator can be observed to be operational in photo.
Date Taken: September 1, 2016
Program: WPC Unit



Photograph #: 2
Taken by: Stephen Moss
Entity: BCSD, Sunnyslope WWTF
Permit: #MO-0095354
Location: BOONE
Description: View of erosion damage on the inner berm slope on the east side of the lagoon cell.
Date Taken: September 1, 2016
Program: WPC Unit



Photograph #: 3
Taken by: Stephen Moss
Entity: BCSD, Sunnyslope WWTF
Permit: #MO-0095354
Location: BOONE
Description: View of Outfall #001.
Date Taken: September 1, 2016
Program: WPC Unit

Initial SM



Sludge Handling Checklist for Wastewater Treatment Facilities

Facility Name: BCSD, Sunnyslope WWTF	MSOP #: MO-0095354		
Issue to be addressed	Options		Not Inspected
What method (land application, incineration, landfill, etc) is used for sludge management?	Sludge is retained in the lagoon		<input type="checkbox"/>
	Date		
How often is sludge removed from the facility?	Never		<input type="checkbox"/>
When was the last time sludge was removed?	Never		<input type="checkbox"/>
	Yes	No	Not Applicable
Has the Form S annual report been submitted?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Have the applicable additional sections been submitted? <small>(If not, please describe deficiencies below in the comments field)</small>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Is the form filled out correctly? <small>(If not, please describe deficiencies below in the comments field)</small>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Is the monitoring frequency for metals, pathogens and vectors (WQ 423) being met?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Are the requirements for pathogens and vector attraction (WQ 424) being met?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Are land applied biosolids below the ceiling concentration for metals (WQ 425)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Are the nitrogen, soil pH and soil phosphorus limitations (WQ426) being met?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other Comments:			



Jeremiah W. (Jay) Nixon, Governor

Sara Parker Pauley, Director

DEPARTMENT OF NATURAL RESOURCES

dnr.mo.gov

5.200 Sunnyslope Subdivision-BCRSD
Boone County
#MO-0095354

September 19, 2012

Boone County Regional Sewer District
1314 North 7th Street
Columbia, MO 65201

LETTER OF WARNING

Dear Permittee:

Missouri State Operating Permit #MO-0095354 was issued for the Sunnyslope Subdivision-BCRSD in Boone County. This permit sets forth specific effluent limitations, monitoring requirements, and specific permit conditions regarding the facility.

The Missouri Department of Natural Resources' Northeast Regional Office has received your 1st and 2nd Quarter 2012 Discharge Monitoring Reports (DMRs) for the Sunnyslope Subdivision-BCRSD.

- It was noted that the effluent data you reported from Outfall #001 exceeded the effluent limitation parameters of BOD and TSS. A BOD concentration of 57 mg/L was reported, whereas permit #MO-0095354 sets forth a monthly average limit of 45 mg/L. A TSS concentration of 106 mg/L was reported, whereas permit #MO-0095354 sets forth a monthly average limit of 80 mg/L.
- It was noted that a flow was reported for April 2012 of 0.00144 MGD, however no data was reported for the 2nd Quarter of 2012 for Ammonia, BOD, pH, Temperature, or TSS.

Please provide a written report by **October 10, 2012**, to the Department which explains the cause(s) for the non-compliance, the exact dates of non-compliance, the date anticipated to return to compliance, and what steps your operation will take to prevent a reoccurrence of these violations. Sunnyslope Subdivision-BCRSD will be considered in non-compliance with these violations until the documentation is submitted to this office. Our files will reflect the continued non-compliance regarding these violations until the required documentation is submitted for review.

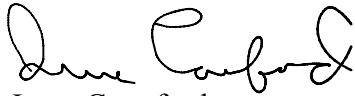
Sunnyslope Subdivision-BCRSD
September 19, 2012
Page 2

Be advised that violation of your State Operating Permit conditions, including effluent limits, schedules of compliance, or standard and special conditions, is a serious matter. It is our hope that through conference, conciliation, and persuasion, violations can be corrected. We ask for your urgent cooperation.

If you have any questions, please contact Joe Bowdish at (660) 385-8000, in the Northeast Regional Office 1709 Prospect Drive, Macon, MO 63552.

Sincerely,

NORTHEAST REGIONAL OFFICE

A handwritten signature in black ink, appearing to read "Irene Crawford". The signature is fluid and cursive, with a large initial "I" and "C".

Irene Crawford
Regional Director

IC/jba



Jeremiah W. (Jay) Nixon, Governor

Sara Parker Pauley, Director

DEPARTMENT OF NATURAL RESOURCES

dnr.mo.gov

5.200 BCSD, Trails West Subdivision
Boone County
#MO-0092002

April 4, 2014

Mr. Tom Ratermann, General Manager
Boone County Regional Sewer District
1314 North Seventh Street
Columbia, MO 65201

Dear Mr. Ratermann:

A routine compliance inspection of the Boone County Regional Sewer District (BCSD), Trails West Subdivision, located in Boone County, Missouri, was conducted on February 27, 2014. The inspection was conducted by Mr. Leland Maize, with the Missouri Department of Natural Resources' Northeast Regional Office. Enclosed is a copy of the inspection report.

Please direct your attention to the Required Actions for the Unsatisfactory Features and Recommendations sections of the report. The information requested by the department is to be submitted to the Northeast Regional Office by **April 25, 2014**. The facility must also continue to coordinate with the Compliance and Enforcement Section of the Water Pollution Control Branch to resolve these issues. Your cooperation in this matter will be appreciated.

BCSD, Trails West Subdivision
April 4, 2014
Page 2

If you have any questions regarding the enclosed inspection report, please contact Mr. Leland Maize at (660) 385-8000 in the Northeast Regional Office, 1709 Prospect Drive, Macon, MO 63552-2602 or by email at NERO@dnr.mo.gov.

Sincerely,

NORTHEAST REGIONAL OFFICE



Irene Crawford
Regional Director

IC/lmb

Enclosures: Report of Compliance Inspection

c: Paul Dickerson, Compliance and Enforcement Section, Water Pollution Control Branch

*Celebrating 40 years of taking care of Missouri's natural resources.
To learn more about the Missouri Department of Natural Resources visit dnr.mo.gov.*

**REPORT OF COMPLIANCE INSPECTION
BCSD, TRAILS WEST SUBDIVISION
BOONE COUNTY
#MO-0092002
April 4, 2014**

INTRODUCTION

Pursuant to Section 644.026.1 RSMo of the Missouri Clean Water Law, a routine compliance inspection of the Boone County Regional Sewer District (BCSD), Trails West Subdivision in Boone County, Missouri, was conducted by Mr. Leland Maize of the Missouri Department of Natural Resources' Northeast Regional Office on February 27, 2014. Mr. Dwayne Cooksey, Operations Manager, and Mr. Virgil Farnen, Operations Supervisor, participated in the inspection.

This inspection was conducted to determine the facility's compliance with Missouri State Operating Permit #MO-0092002, the Missouri Clean Water Commission Regulations, and the Missouri Clean Water Law. This report presents the findings and observations made during the compliance inspection.

FACILITY DESCRIPTION/HISTORY

Missouri State Operating Permit (MSOP) #MO-0092002 was last issued on December 8, 2006, and expired on December 7, 2011. The department received a renewal application from the facility on May 2, 2011. This permit sets forth effluent limitations, monitoring requirements, and permit conditions, both standard and specific, that the permittee is to follow. The facility is to operate off the conditions of the expired permit until a permit is reissued.

The BCSD, Trails West Subdivision Wastewater Treatment Facility (WWTF) is owned and operated by the Boone County Regional Sewer District. The facility consists of a two cell lagoon with sludge retained in the lagoon. The primary cell is aerated using five aerators. The permit lists the design population equivalent for the facility as 644. The design flow for the facility is 57,500 gallons per day and the actual flow is 29,800 gallons per day. The design sludge production for the facility is 9.6 dry tons per year with an actual sludge production of 8.2 dry tons per year.

The legal description of the BCSD, Trails West Subdivision is listed on the permit as the NE ¼, SE ¼, Section 02, Township 48 North, Range 14 West, in Boone County. The receiving stream for this facility is an unnamed tributary to Sugar Branch.

The Northeast Regional Office previously conducted a water pollution inspection of the facility on June 9, 2009, and October 1, 2009. At the time of the previous inspection, the facility was found to be in non-compliance. The facility was issued a Notice of Violation on November 23, 2009, due to the following violations:

1. Failed to operate the facility so that there is no discharge of sludge to waters of the state as required by the Standard Conditions of Missouri State Operating Permit #MO-0092002 [Section 644.076.1, RSMo].

Report of Compliance Inspection
BCSD, Trails West Subdivision
April 4, 2014
Page 2

2. Caused pollution of an unnamed tributary to Sugar Branch, waters of the state, or placed or caused or permitted to be placed water contaminants in a location where it is reasonably certain to cause pollution of waters of the state [Sections 644.051.1(1) and 644.076.1, RSMo].
3. Since/On April 22 and April 29, 2009, failed to comply with the effluent limits contained in Part "A" of Missouri State Operating Permit #MO-0092002 [Sections 644.051.1(3) and 644.076.1, RSMo].

On December 11, 2009, the Northeast Regional Office received a letter from the facility in response to the November 23, 2009, inspection report. The letter from the facility stated that the facility did an evaluation of the sludge in the lagoon and stated that the cause for the high level of Total Suspended Solids was due to an algae bloom.

On January 14, 2010, the facility was referred to the Compliance and Enforcement Section of the Water Pollution Control Branch due to the following violations:

1. Failed to operate the facility so that there is no discharge of sludge to waters of the state as required by the Standard Conditions of Missouri State Operating Permit (MSOP) #MO-0092002 [Section 644.076.1, RSMo].
2. The facility discharged water contaminants into waters of the state, which reduced the quality of such water below the Water Quality Standards established by the Missouri Clean Water Commission [Sections 644.051.1(2) and 644.076.1, RSMo, and 10 CSR 20-7.031(A), (C), (D), (G), and (I)].
3. Caused pollution of an unnamed tributary to Sugar Branch, waters of the state, or placed or caused or permitted to be placed water contaminants in a location where it is reasonably certain to cause pollution of waters of the state [Sections 644.051.1(1) and 644.076.1, RSMo].

On July 27, 2011, a letter was sent by the department to the facility informing the facility that the Biochemical Oxygen Demand value reported on the facility's January 2011 Discharge Monitoring Report exceeded the effluent limitations outlined in Missouri State Operating Permit #MO-0092002.

On November 26, 2013, the department sent a letter to the facility stating that the facility had reported an exceedance of the Biochemical Oxygen Demand effluent limitation on the facility's January 2013 Discharge Monitoring Report.

On December 5, 2013, the Northeast Regional Office received a letter from the facility stating that they thought the Biochemical Oxygen Demand effluent exceedances were due to mechanical issues with aeration at the facility.

DISCUSSION OF INSPECTION AND OBSERVATIONS

Prior to the inspection, the files for the BCSD, Trails West Subdivision were reviewed, including the Permit Conditions of Missouri State Operating Permit (MSOP) #MO-0092002, to familiarize the inspector with the requirements specific to this facility.

The inspection was conducted during normal business hours. Prior notification of the inspection was provided to ensure timely access to the site. Upon arrival at the facility, the inspector met with Mr. Dwayne Cooksey, Operations Manager, and Mr. Virgil Farnen, Operations Supervisor. The purpose and scope of the inspection were outlined. Mr. Cooksey granted permission to access the site and accompanied the inspector throughout the tour of the facility.

As Mr. Maize approached the facility, an all-weather access road was observed leading to the general vicinity; however, the road did not go to the facility's entrance gate. The facility was surrounded by a perimeter fence with warning signs on each side of the fence. There was a locked gate at the entrance to the facility.

The inspection continued with observations of the facility. The facility consists of a two cell lagoon with sludge retained in the lagoon. The primary cell is aerated using five aerators. At the time of the inspection, all of the aerators were functioning. Mr. Maize walked around the perimeter of each of the lagoon cells. The inner berms of the lagoons had uneven slopes. The vegetation on the outer lagoon berms was short and well maintained. Mr. Maize observed some cattails in the second lagoon cell. Mr. Maize did not observe any signs of leaks in the lagoon berms.

Mr. Maize then proceeded to observe the facility's outfall. The outfall was marked in the field with a sign and was discharging at the time of the inspection. Mr. Maize observed the area below the outfall and the receiving stream both upstream and downstream from the facility's outfall. Mr. Maize did not observe any impact from the facility on the receiving stream. The receiving stream was dry upstream from the facility's outfall. Samples of the facility's effluent were collected for laboratory analyses. Mr. Maize also conducted water quality field monitoring on the facility's effluent.

A review of the facility's records was conducted as a part of the inspection. The facility exceeded the effluent limitation for Biochemical Oxygen Demand on the facility's January 2014 Discharge Monitoring Report. The remaining Discharge Monitoring Reports were complete and up to date.

WATER QUALITY MONITORING

The appropriate sampling materials were taken on the inspection, including a copy of the Missouri Department of Natural Resources' Standard Operating Procedures for Sampling. Instruments for field monitoring were taken on the inspection that are capable of testing pH,

Report of Compliance Inspection
BCSD, Trails West Subdivision
April 4, 2014
Page 4

temperature, conductivity, and dissolved oxygen. HACH® ammonia test strips for water quality monitoring were also taken on the inspection.

Mr. Maize observed the area below the outfall and the receiving stream both upstream and downstream from the facility's outfall during the inspection. Mr. Maize did not observe any impact from the facility on the receiving stream. The receiving stream was dry upstream from the facility's outfall.

Water quality field monitoring was conducted at the following location for the listed parameters.

Sample #140439		
Outfall #001		
Parameter	Result	Units
pH	7.83	s.u.
Temperature	3.9	°C
Dissolved Oxygen	2.40	mg/L
Conductivity	1235	Microsiemens

Sampling was conducted at the following location and submitted for laboratory analysis for the parameters listed below. The Environmental Services Program Results of Sample Analysis are listed below.

Sample #140439						
Outfall #001						
Results of Sample Analyses			Permit Limits			
Parameters	Sample Result	Units	Daily Max	Weekly Average	Monthly Average	Units
BOD ₅	33.2	mg/L		65	45	mg/L
Total Suspended Solids (TSS)	19.0	mg/L		120	80	mg/L

COMPLIANCE DETERMINATION

The facility was found to be in **non-compliance** with the Missouri Clean Water Law, the Clean Water Commission Regulations, and Missouri State Operating Permit #MO-0092002, based upon the observations made at the time of the inspection.

UNSATISFACTORY FEATURES

1. On January 15, 2014, failed to comply with the effluent limits contained in Part "A" of Missouri State Operating Permit (MSOP) #MO-0092002 [Sections 644.051.1(3) and 644.076.1, RSMo].

**Report of Compliance Inspection
BCSD, Trails West Subdivision
April 5, 2014
Page 5**

REQUIRED ACTIONS: The facility exceeded the effluent limitation for Biochemical Oxygen Demand during January 2014. The facility must coordinate the Required Actions with the Compliance and Enforcement Section of the Water Pollution Control Branch.

2. Deep-rooted vegetation was discovered growing on the lagoon berms [10 CSR 20-8.200(6)(A)7.A.].

REQUIRED ACTION: The operation is to remove all deep-rooted vegetation from the lagoon berms and within 100 feet of the toe of the lagoon berms if possible. By **April 25, 2014**, the facility shall provide documentation to the Northeast Regional Office, which may include photographs and/or receipts describing the actions taken, or intended to take, to correct the non-compliance. The facility must also coordinate any Required Actions with the Compliance and Enforcement Section of the Water Pollution Control Branch.

3. Failed to maintain the inner berm slopes of the lagoon to be no less than three to one (3:1) [10 CSR 20-8.200(6)(A)].

REQUIRED ACTIONS: The lagoon berms have developed erosion damage from wave erosion, bank dens and tunnels from muskrats. The owner must repair the damaged berms. Inner and outer slopes are to be no less than 3:1. Clay soil is to be compacted into the damaged areas. Riprap or vegetate the repaired areas. The department recommends the use of riprap to cover the repaired areas to prevent future damage to the site. By **April 25, 2014**, the facility shall provide documentation to the Northeast Regional Office, which may include photographs and/or receipts describing the actions taken, or intended to take, to correct the non-compliance. The facility must also coordinate any Required Actions with the Compliance and Enforcement Section of the Water Pollution Control Branch.

RECOMMENDATIONS – Actions that are being recommended by the inspector but are not required to bring the facility into compliance at the time of the inspection.

1. Routinely examine the wastewater collection system to determine if Inflow and Infiltration is allowing storm water to enter the system.

SUBMITTED BY:



Leland Maize
Environmental Specialist
Northeast Regional Office

REVIEWED BY:



Jamie Shinn
Environmental Specialist
Northeast Regional Office

LM/bb



Photo #: 1
By: Leland Maize
Facility: BCSD, Trails West Subdivision
Permit: #MO-0092002
Location: Boone County

Description: Primary lagoon cell with aerators.
Inner berm has an uneven slope.

Date Taken: February 27, 2014
Program: WPC Unit



Photo #: 2
By: Leland Maize
Facility: BCSD, Trails West Subdivision
Permit: #MO-0092002
Location: Boone County

Description: Second lagoon cell. Covered with ice.
Cattails in the corner of the lagoon.

Date Taken: February 27, 2014
Program: WPC Unit



Photo #: 3
By: Leland Maize
Facility: BCSD, Trails West Subdivision
Permit: #MO-0092002
Location: Boone County

Description: Facility's Outfall. Ice observed below
the outfall.

Date Taken: February 27, 2014
Program: WPC Unit

Initial LM

Sludge Handling Checklist for Wastewater Treatment Facilities

- 1) What method (land application, incineration, landfill, etc) is utilized for sludge management?**

Sludge is retained in the lagoon.

- 2) How often is sludge removed from the facility?**

Sludge has never been removed from the facility.

- 3) When is the last time that sludge was removed?**

Sludge has never been removed from the facility.

- 4) Has the Form S annual report been submitted?**

N/A

- 5) Is the monitoring frequency for metals, pathogens, and vectors (WQ 423) being met?**

N/A

- 6) Are the requirements for pathogens and vector attraction (WQ 424) being met?**

N/A

- 7) Are land applied biosolids below the ceiling concentration for metals (WQ 425)?**

N/A

- 8) Are the nitrogen, soil pH, and soil phosphorus limitations (WQ 426) being met?**

N/A



Jeremiah W. (Jay) Nixon, Governor

Sara Parker Pauley, Director

DEPARTMENT OF NATURAL RESOURCES

dnr.mo.gov

5.200 BCSD, Trails West Subdivision WWTF
Boone County
#MO-0092002

September 19, 2016

Tom Ratermann, General Manager
Boone County Regional Sewer District
1314 North 7th Street
Columbia, MO 65201

UNSATISFACTORY FINDINGS RESPONSE REQUIRED

Dear Mr. Ratermann:

An inspection was conducted by Department of Natural Resources staff pursuant to Section 644.026.1 of the Missouri Clean Water Law on September 1, 2016. The enclosed report is being issued with a Letter of Warning for the violations identified.

Violations include:

- Failed to maintain the inner berm slopes of the lagoon to be no less than three to one (3:1)

Please refer to the enclosed report for details on findings and required actions. **A written response documenting actions taken to correct the violations is required by the date specified in the report.**

If you have any questions or would like to schedule a time to meet with department staff to discuss compliance requirements, please contact Stephen Moss at (660) 385-8000 in the Northeast Regional Office, 1709 Prospect Drive, Macon, MO 63552-2602 or by email at NERO@dnr.mo.gov.

Sincerely,

NORTHEAST REGIONAL OFFICE

A handwritten signature in black ink, appearing to read "Irene Crawford".

Irene Crawford
Regional Director

IC/smj

Enclosures: Report of Inspection

c: Dwayne Cooksey, Boone County Regional Sewer District, Operations Manager
Paul Dickerson, Water Protection Program, Compliance and Enforcement Section



Recycled Paper

**Department of Natural Resources
Northeast Regional Office
Report of Inspection
BCSD, Trails West Subdivision WWTF
South Trails Court, Columbia, Missouri, 65202, Boone County
#MO-0092002
September 19, 2016**

Introduction

Pursuant to Section 644.026.1 of the Missouri Clean Water Law, I, Stephen Moss, conducted a routine inspection of the Boone County Regional Sewer District (BCSD), Trails West Subdivision Wastewater Treatment Facility (WWTF) in Boone County, Missouri, on September 1, 2016. The following people participated in the inspection:

BCSD, Trails West Subdivision WWTF
Dwayne Cooksey Operations Manager (573) 881-9912

Department of Natural Resources
Stephen Moss Environmental Specialist (660) 385-8000

This inspection was conducted to determine the facility's compliance with Missouri State Operating Permit #MO-0092002, the Missouri Clean Water Commission Regulations, and the Missouri Clean Water Law. This report presents the findings and observations made during the inspection.

Entity Description and History

Missouri State Operating Permit (MSOP) #MO-0092002 was last issued on December 8, 2006, and expired on December 7, 2011. The facility submitted a renewal application on May 2, 2011. This permit sets forth effluent limitations, monitoring requirements, and permit conditions, both standard and specific, that the permittee is to follow. The facility is required to follow the conditions of the expired permit until a new permit is issued.

The BCSD, Trails West Subdivision Wastewater Treatment Facility (WWTF) is owned and operated by the Boone County Regional Sewer District. The BCSD, Trails West Subdivision WWTF is located just off of South Trails Court in Columbia, Missouri. The facility consists of a two-cell lagoon with sludge retained in the lagoon. The facility's primary cell is equipped with five aerators. The design flow for the facility is 57,500 gallons per day. The actual flow is 29,800 gallons per day from a design population equivalent of 644. The design sludge production for the facility is 9.6 dry tons per year, with an actual sludge production of 8.2 dry tons per year.

The UTM coordinates of the BCSD, Trails West Subdivision WWTF is listed on the permit as 3858423/09227423, in Boone County. The receiving stream for this facility is a tributary to Sugar Branch and it is located in the 10300102 HUC 8 watershed.

Report of Inspection
BCSD, Trails West Subdivision WWTF
September 19, 2016
Page 2

Prior to the inspection, I reviewed the files for the BCSD, Trails West Subdivision WWTF, including the Permit Conditions of MSOP #MO-0092002, to familiarize myself with the requirements specific to this facility.

The regional office performed the previous inspection on February 27, 2014. At the time of the inspection, the facility was found to be operating in non-compliance for the following unsatisfactory features: failed to comply with the effluent limits, deep-rooted vegetation on the lagoon berms, and failed to maintain the inner berm slopes of the lagoon to be no less than three to one (3:1). The facility submitted a response to the inspection report on April 16, 2014. The response stated that the Biochemical Oxygen Demand (BOD) exceedance in January 2014 was due to the primary cell being completely ice covered, causing there to be a limited amount of oxygen transfer by the aerators. The response also stated that cattails would be removed and berm repairs would be conducted in the spring.

On August 11, 2015, the facility was issued a Notice of Violation for exceeding effluent limitations for Biochemical Oxygen Demand in December 2014 and January 2015. On August 28, 2015, the facility submitted a response to the Notice of Violation. The response stated that the facility added an aerator to the lagoon in order to assist the facility in meeting the effluent limitations. The response stated that the addition of the aerator was approved by the Water Protection Program in a letter dated January 2, 2014. The facility submitted a response to the Notice of Violation on April 8, 2015. The response stated that the BOD exceedances were due to the primary cell being completely ice covered, causing there to be a limited amount of oxygen transfer by the aerators. The response also stated that this facility is in the District's Master Plan to be taken out of service at a future date. The response stated that the facility is currently in the process of selecting an engineering consultant to provide planning and design for this project.

I conducted a file review of the department's files for the facility. I reviewed the facility's Discharge Monitoring Reports (DMRs) since the previous inspection in February 2014. I found that the facility has submitted each of the required monthly DMRs, along with the operational monitoring data that is required to be conducted at a frequency of twice per month.

Discussion of Inspection and Observations

I conducted the inspection during normal business hours. Prior notification of the inspection was provided while I was in route to ensure timely access to the site. Upon arrival at the facility, I met with Dwayne Cooksey and I outlined the purpose and scope of the inspection. Mr. Cooksey granted me permission to access the site and accompanied me throughout the tour of the facility.

I began the inspection with observations of the two-cell lagoon (Photo #1). I observed there was a perimeter fence surrounding the entire facility. I observed warning signs posted on the perimeter fence on each side of the facility. The entrance gate is located in the northwest corner of the facility, and was observed to be locked at the time of the inspection. A gravel lane off of

Report of Inspection
BCSD, Trails West Subdivision WWTF
September 19, 2016
Page 3

South Trails Court provides access to the facility. The facility has five aerators in the primary cell, and each of the five aerators was observed to be functional at the time of the inspection (Photo #1 and 2). I observed erosion damage and animal burrows on the inner berm slope of the primary cell (Photo #2). I observed a large amount of sludge accumulated on the north side of the primary cell. Mr. Cooksey stated that the primary cell contains large amounts of sludge. I observed duckweed covering a small portion of the primary cell (Photo #3) and the entire surface of the secondary cell (Photo #4). I observed that the facility had a T-fitting on the influent side of the outfall pipe to prevent the discharge of duckweed (Photo #4). The secondary cell was observed to have riprap lining the inner berm slope (Photo #4). Both cells were observed to have over two feet of available freeboard. I detected a strong sulfuric odor around the secondary cell while making observations.

I observed Outfall #001. The facility had a sign marking the location of Outfall #001 (Photo #5). The facility was observed to be discharging at the time of the inspection and samples of the effluent were collected for analysis. I collected a duplicate sample as a part of the department's Quality Assurance/Quality Control program. I observed the effluent to be light brown in color with a strong sulfuric odor. I observed hydrogen sulfide bacteria below the outfall pipe (Photo #6). I observed the receiving stream, which is located approximately 30 feet from the outfall pipe. I did not observe any bacterial growth in the receiving stream. I did not observe any water quality impacts caused by previous discharges in the receiving stream.

Following the inspection, I discussed the facility with Mr. Cooksey. I asked Mr. Cooksey what the future plan is for the facility. Mr. Cooksey stated the primary cell contains a lot of sludge and the facility is planning to have sludge removed from the lagoon system. Mr. Cooksey also stated that there is a possibility that the wastewater flows to the Trails West Subdivision WWTF could be rerouted to the Midway Crossing WWTF. Mr. Cooksey stated that the Midway Crossing WWTF is under loaded, so it would be able to handle the flows. Mr. Cooksey stated that no plans are currently in the works for that connection. I asked Mr. Cooksey if the Trails West WWTF was included in the Boone County Regional Sewer District's program for repair and maintenance of the collection system. Mr. Cooksey stated that this facility was included in the plan. I stated that erosion damage on the inner berm slopes of the lagoon must be addressed.

Sampling and Monitoring

The appropriate sampling materials were taken on the inspection, including a copy of the Department of Natural Resources' Standard Operating Procedures for Sampling. Instruments for field monitoring were taken on the inspection that are capable of testing pH, temperature, conductivity, and dissolved oxygen. Ammonia test strips for water quality monitoring were also taken on the inspection.

Report of Inspection
BCSD, Trails West Subdivision WWTF
September 19, 2016
Page 4

Water quality field monitoring was conducted at the following location for the listed parameters. The effluent was observed to be light brown in color with a strong sulfuric odor.

Outfall #001		
Parameter	Result	Units
Dissolved Oxygen	1.40	mg/L
pH	7.38	s.u.
Conductivity	1468	µS/cm
Temperature	23.5	°C

Sampling was conducted and submitted for laboratory analysis. The department's Environmental Services Program results of Sample Analysis #162433 and #162434 were not completed at the time of the report. The results will be provided to the facility when they are available. Additional violations may be documented upon receipt of the sample analysis results.

Compliance Determination and Required Actions

The facility was found to be **not in compliance** with Missouri State Operating Permit #MO-0092002, the Clean Water Commission Regulations, and the Missouri Clean Water Law, based upon the observations made at the time of the inspection.

Unsatisfactory Findings

1. Failed to maintain the inner berm slopes of the lagoon to be no less than three to one (3:1) [10 CSR 20-8.200(6)(A)3].

REQUIRED ACTIONS: The lagoon berms have developed erosion damage from wave erosion, bank dens and tunnels from muskrats. The owner must repair the damaged berms. Inner and outer slopes are to be no less than 3:1. Clay soil is to be compacted into the damaged areas. Riprap or vegetate the repaired areas. The department recommends the use of riprap to cover the repaired areas to prevent future damage to the site. By **October 19, 2016**, the facility shall provide documentation to the Northeast Regional Office, which may include photographs and/or receipts describing the actions taken, or intended to take, to correct the non-compliance.

**Report of Inspection
BCSD, Trails West Subdivision WWTF
September 19, 2016
Page 5**

Recommendations


1. Consider monitoring the sludge levels in the lagoon to ensure that the lagoon has enough wastewater treatment holding time.
2. Ensure that routine mowing of the lagoon berms is conducted on a regular schedule.

Additional Comments/Conclusion

None

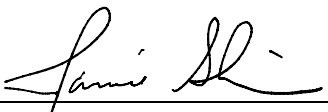
Signatures

SUBMITTED BY:



Stephen Moss
Environmental Specialist
Northeast Regional Office

REVIEWED BY:



Jamie Shinn
Environmental Supervisor
Northeast Regional Office

SM/jb

Attachments

- Attachment # 1 – Photos #1 - 6**
- Attachment # 2 – Sludge Checklist**
- Attachment # 3 – Aerial Photo**

Attachment # 1
BCSD, Trails West Subdivision WWTF
September 19, 2016
Page 1



Photograph #: 1
Taken by: Stephen Moss
Entity: BCSD, Trails West Subdivision
Permit: #MO-0092002
Location: BOONE
Description: View of the primary cell. The facility's aerators can all be observed in the picture and appear to be functioning properly.
Date Taken: September 1, 2016
Program: WPC Unit



Photograph #: 2
Taken by: Stephen Moss
Entity: BCSD, Trails West Subdivision
Permit: #MO-0092002
Location: BOONE
Description: View of the primary cell. Erosion damage can be observed on the inner berm slope of the lagoon. The aerators can also be observed in the picture and they appear to be functioning properly.
Date Taken: September 1, 2016
Program: WPC Unit



Photograph #: 3
Taken by: Stephen Moss
Entity: BCSD, Trails West Subdivision
Permit: #MO-0092002
Location: BOONE
Description: View of the south side of the primary cell. The transfer pipe between the primary and secondary cell can be observed in the picture.
Date Taken: September 1, 2016
Program: WPC Unit

Initial SM



Photograph #: 4
Taken by: Stephen Moss
Entity: BCSD, Trails West Subdivision
Permit: #MO-0092002
Location: BOONE
Description: View of the secondary cell. The outfall pipe can be observed at the bottom of the picture and a T-fitting can be observed on the influent end of the outfall pipe.
Date Taken: September 1, 2016
Program: WPC Unit



Photograph #: 5
Taken by: Stephen Moss
Entity: BCSD, Trails West Subdivision
Permit: #MO-0092002
Location: BOONE
Description: View of the facility's outfall sign.
Date Taken: September 1, 2016
Program: WPC Unit



Photograph #: 6
Taken by: Stephen Moss
Entity: BCSD, Trails West Subdivision
Permit: #MO-0092002
Location: BOONE
Description: View of Outfall #001. Hydrogen sulfide bacteria can be observed below the outfall pipe.
Date Taken: September 1, 2016
Program: WPC Unit

Initial SM

Sludge Handling Checklist for Wastewater Treatment Facilities

Facility Name: BCSD, Trails West Subdivision WWTF	MSOP #: MO-0092002		
Issue to be addressed	Options		Not Inspected
What method (land application, incineration, landfill, etc) is used for sludge management?	Sludge is retained the lagoon		<input type="checkbox"/>
	Date		
How often is sludge removed from the facility?	Never		<input type="checkbox"/>
When was the last time sludge was removed?	Never		<input type="checkbox"/>
	Yes	No	Not Applicable
Has the Form S annual report been submitted?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Have the applicable additional sections been submitted? <small>(If not, please describe deficiencies below in the comments field)</small>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Is the form filled out correctly? <small>(If not, please describe deficiencies below in the comments field)</small>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Is the monitoring frequency for metals, pathogens and vectors (WQ 423) being met?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Are the requirements for pathogens and vector attraction (WQ 424) being met?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Are land applied biosolids below the ceiling concentration for metals (WQ 425)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Are the nitrogen, soil pH and soil phosphorus limitations (WQ426) being met?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other Comments:			





Jeremiah W. (Jay) Nixon, Governor

Sara Parker Pauley, Director

DEPARTMENT OF NATURAL RESOURCES

dnr.mo.gov

5.200 BCSD Twin Lakes Subdivision
Boone County
#MO-0101885

October 23, 2015

Mr. Dwayne Cooksey
Boone County Regional Sewer District (BCSD)
1314 North Seventh Street
Columbia, MO 65201

Dear Mr. Cooksey:

A routine compliance inspection of the Boone County Regional Sewer District (BCSD) Twin Lakes Subdivision, located in Boone County, Missouri, was conducted on September 24, 2015. The inspection was conducted by Mr. Michael Womack, with the Missouri Department of Natural Resources' Northeast Regional Office. Enclosed is a copy of the inspection report.

Please direct your attention to the Required Actions for the Unsatisfactory Features section of the report. The information requested by the department is to be submitted to the Northeast Regional Office by **November 13, 2015**. Your cooperation in this matter will be appreciated. The facility must continue to coordinate with the Water Pollution Control Branch, Compliance and Enforcement Section, to resolve the first unsatisfactory feature. Your cooperation in this matter will be appreciated.

If you have any questions regarding the enclosed inspection report, please contact Mr. Michael Womack at (660) 385-8000 in the Northeast Regional Office, 1709 Prospect Drive, Macon, MO 63552-2602 or by email at NERO@dnr.mo.gov. Responses to any Required Actions may be sent via email.

Sincerely,

NORTHEAST REGIONAL OFFICE

A handwritten signature in cursive script, appearing to read "Irene Crawford".

Irene Crawford
Regional Director

IC/mwl

Enclosures: Report of Compliance Inspection

c: Mr. Paul Dickerson, Water Pollution Control Branch, Compliance and Enforcement

**Missouri Department of Natural Resources
Northeast Regional Office
Report of Compliance Inspection
BCSD Twin Lakes Subdivision
Boone County
#MO-0101885
October 23, 2015**

INTRODUCTION

Pursuant to Section 644.026.1 of the Missouri Clean Water Law, I, Michael Womack, of the Missouri Department of Natural Resources' Northeast Regional Office conducted a routine compliance inspection of the Boone County Regional Sewer District (BCSD), Twin Lakes Subdivision in Boone County, Missouri on September 24, 2015. Mr. Jason Horton, BCSD Operator, participated in the inspection.

This inspection was conducted to determine the facility's compliance with Missouri State Operating Permit #MO-0101885, the Missouri Clean Water Commission Regulations, and the Missouri Clean Water Law. This report presents the findings and observations made during the compliance inspection.

FACILITY DESCRIPTION/HISTORY

Missouri State Operating Permit (MSOP) #MO-0101885 was last issued on February 15, 2008, and expired on February 14, 2013. This permit sets forth effluent limitations, monitoring requirements, and permit conditions, both standard and specific, that the permittee is to follow. The facility applied for permit renewal on April 20, 2012. Until a new permit is issued, the facility is to operate under the conditions of the expired permit.

The BCSD, Twin Lakes Subdivision's wastewater treatment facility consists of a two cell lagoon with sludge retained in the lagoon. The primary cell of the lagoon is aerated. Missouri State Operating Permit #MO-0101885 lists the design population equivalent as 194. The permit lists the design flow as 19,400 gallons per day with an actual flow of 11,100 gallons per day. The design sludge production for the facility is 3.0 dry tons per year.

The legal description of the BCSD, Twin Lakes Subdivision is listed on the permit as the SE ¼, NW ¼, NW ¼, Section 08, Township 49 North, Range 13 West, in Boone County. The address of the facility is just south of 8600 North Cedar Court, Columbia, Missouri. The receiving stream for this facility is a tributary to Perche Creek.

A previous compliance inspection was conducted on August 30, 2012. At the time of the inspection, the facility was found to be in non-compliance. The following Unsatisfactory Feature was cited: failed to submit a construction permit application and activity schedule as required in part "B" Standard Conditions, and part "E", Schedule of Compliance of Missouri State Operating Permit (MSOP) #MO-0101885.

**Report of Compliance Inspection
BCSD Twin Lakes Subdivision
October 23, 2015
Page 2**

On April 30, 2014, the facility was issued a Letter of Warning. The Letter of Warning was issued due to exceedances in effluent limitations during the 2nd Quarter 2013, 3rd Quarter 2013, and 1st Quarter 2014. On May 19, 2014, the Northeast Regional Office received a letter from the BCSD stating that the facility is not designed to meet disinfection requirements and enclosed with the letter was a copy of the Twin Lakes Wastewater Facility Plan to eliminate the lagoon and replace it with an extended aeration plant, including disinfection. The plan stated a project completion date of October 2013.

A file review back to the previous effluent violation issued on April 30, 2014, was conducted and it was observed that the facility failed to meet the effluent limitation for Fecal Coliform during the 2nd Quarter 2014, 3rd Quarter 2014, and 2nd Quarter 2015. Below is a table outlining the exceedances. The facility has been conducting and submitting their influent monitoring reports on a timely basis. Mr. Dwayne Cooksey has previously informed staff of the Northeast Regional Office that each facility owned by the Boone County Regional Sewer District has a program for maintenance and repair of the collection system developed and implemented.

Outfall	Monitoring Period	Parameter	Permitted Limitations	Reported Values
001	2 nd Quarter 2014	Fecal Coliform	400 #/100 mL Monthly Average 1000 #/100 mL Daily Average	995 #/100 mL
001	3 rd Quarter 2014	Fecal Coliform	400 #/100 mL Monthly Average 1000 #/100 mL Daily Average	7400 #/100 mL
001	2 nd Quarter 2015	Fecal Coliform	400 #/100 mL Monthly Average 1000 #/100 mL Daily Average	640 #/100 mL

DISCUSSION OF INSPECTION AND OBSERVATIONS

Prior to the inspection, I reviewed the files for the BCSD Twin Lakes Subdivision, including the Permit Conditions of Missouri State Operating Permit (MSOP) #MO-0101885, to familiarize myself with the requirements specific to this facility.

The inspection was conducted during normal business hours. Prior notification of the inspection was provided by telephone call to ensure timely access to the site. Upon arrival at the facility, I met with Mr. Jason Horton, BCSD Operator, and the purpose and scope of the inspection were outlined. Mr. Horton granted permission to access the site and accompanied me throughout the tour of the facility.

Report of Compliance Inspection
BCSD Twin Lakes Subdivision
October 23, 2015
Page 3

As I approached the facility, I observed an all-weather access road. I also observed a perimeter fence with warning signs on each side of the perimeter fence surrounding the facility. The facility had one entrance gate and I observed it to be shut and locked at the time of the inspection.

I first observed the primary lagoon cell (Photo 1). Approximately 70% of the surface area of the primary lagoon cell was observed to be covered in duckweed. I observed the aerator to be functioning at the time of the inspection. I asked Mr. Horton if he had observed any problems with the aerator and he stated that he has not had any issues with the aerator at the facility. I lastly observed erosion damage to be present along the inner lagoon berms of the primary cell (Photo 1 & 2).

I observed the secondary lagoon cell next (Photo 3). I observed duckweed to be covering the entire surface area of the secondary cell. I also observed areas of erosion damage on the inner lagoon berms of the secondary cell.

I lastly observed the facility's outfall location. I observed a sign that read "Outfall #1" next to the facility's outfall pipe. I observed rip rap to be placed below the outfall pipe. Duckweed was present on the surface of the rip rap below the outfall pipe for approximately five feet. I also observed that the facility was discharging at the time of the inspection. The tributary that flows to Perche Creek was observed to be dry at the time of the inspection and there were no observations of an environmental impact.

I conducted water quality field monitoring at Outfall #001 and the results of the monitoring can be found in the Water Quality Monitoring section of this report. I observed the discharge to be clear and odorless at the time of the inspection. Sampling was also conducted and sent to the department's Environmental Services Program for analysis.

After the inspection, I went over the observations made during the inspection with Mr. Horton. I asked him about the facility's schedule of compliance and he stated that the facility might be doing an extended aeration plant. He stated that it was more like a four year plan.

WATER QUALITY MONITORING

The appropriate sampling materials were taken on the inspection, including a copy of the Missouri Department of Natural Resources' Standard Operating Procedures for Sampling. Instruments for field monitoring were taken on the inspection that are capable of testing pH, temperature, conductivity, and dissolved oxygen. HACH® ammonia test strips for water quality monitoring were also taken on the inspection.

Water quality field monitoring was conducted at the following location for the listed parameters. The discharge from the facility was observed to be clear and odorless.

Report of Compliance Inspection
BCSD Twin Lakes Subdivision
October 23, 2015
Page 4

Sample #151171 Outfall #001		
Parameter	Result	Units
pH	7.37	s.u.
Temperature	20.8	°C
Dissolved Oxygen	3.90	mg/L
Conductivity	897	Microsiemens

Sampling was conducted at the following location and submitted for laboratory analysis for the parameters listed below. The Environmental Services Program Results of Sample Analysis 151171 are listed below.

Sample #151171 Outfall #001						
Results of Sample Analyses			Permit Limits			
Parameters	Sample Result	Units	Daily Max	Weekly Average	Monthly Average	Units
Biochemical Oxygen Demand BOD ₅	4.85	mg/L	*	65	45	mg/L
Total Suspended Solids (TSS)	<5	mg/L	*	120	80	mg/L
Fecal Coliform	230	cfu/100 mL	1000	*	400	cfu/100 mL

COMPLIANCE DETERMINATION

The facility was found to be in **non-compliance** with the Missouri Clean Water Law, the Clean Water Commission Regulations, and Missouri State Operating Permit #MO-0101885, based upon the observations made at the time of the inspection.

UNSATISFACTORY FEATURES

1. On June 18, 2014, September 10, 2014, and June 18, 2015, failed to comply with the effluent limits contained in Part "A" of Missouri State Operating Permit (MSOP) #MO-0101885 [Sections 644.051.1(3) and 644.076.1, RSMo].

REQUIRED ACTION: The facility must continue to coordinate with the Water Pollution Control Branch, Compliance and Enforcement Section, to resolve the unsatisfactory feature.

**Report of Compliance Inspection
BCSD Twin Lakes Subdivision
October 23, 2015
Page 5**

2. Failed to maintain the inner berm slopes of the lagoons to be no less than three to one (3:1) [10 CSR 20-8.020(13)(A)3.C.].

REQUIRED ACTION: The lagoon berms have developed erosion damage from wave erosion. The owner must repair the damaged berms. Inner and outer slopes are to be no less than 3:1. Clay soil is to be compacted into the damaged areas. Riprap or vegetate the repaired areas. The department recommends the use of riprap to cover the repaired areas to prevent future damage to the site. By **November 13, 2015**, the owner shall provide documentation to the Northeast Regional Office, which may include photographs and/or receipts describing the actions taken, or intended to take, to correct the non-compliance.

RECOMMENDATIONS – Actions that are being recommended by the inspector but are not required to bring the facility into compliance at the time of the inspection.


1. Maintain a sufficient spare parts inventory so that effective maintenance may occur in a timely manner.

SUBMITTED BY:



Mr. Michael Womack
Environmental Specialist
Northeast Regional Office

REVIEWED BY:



Jamie Shinn
Environmental Supervisor
Northeast Regional Office

MW/lk



Photo #: 1
By: Mr. Michael Womack
Facility: BCSD Twin Lakes Subdivision
Permit: #MO-0101885
Location: Boone County

Description: Primary lagoon cell with aerator functioning. Inner lagoon berm damage on the north side of the primary lagoon cell is observed at the bottom of the photo.

Date Taken: September 24, 2015
Program: WPC Unit



Photo #: 2
By: Mr. Michael Womack
Facility: BCSD Twin Lakes Subdivision
Permit: #MO-0101885
Location: Boone County

Description: Erosion damage is observed on the east side of the primary lagoon cell.

Date Taken: September 24, 2015
Program: WPC Unit



Photo #: 3
By: Mr. Michael Womack
Facility: BCSD Twin Lakes Subdivision
Permit: #MO-0101885
Location: Boone County

Description: Secondary lagoon cell that is covered with duckweed.

Date Taken: September 24, 2015
Program: WPC Unit

Initial *MW*

Land Application of Sludge Checklist

Sludge handling checklist for wastewater treatment facilities

Facility Name: BCSD Twin Lakes Subdivision	MSOP #: #MO-0101885		
Issue to be addressed	Options		Not Inspected
What method (land application, incineration, landfill, etc) is used for sludge management?	Sludge is retained in the lagoon.		<input type="checkbox"/>
	Date		
How often is sludge removed from the facility?	As needed		<input type="checkbox"/>
When was the last time sludge was removed?	Sludge has not been removed.		<input type="checkbox"/>
	Yes	No	Not Applicable
Has the Form S annual report been submitted?	<input type="checkbox"/>	<input type="checkbox"/>	X
Have the applicable additional sections been submitted? <small>(If not, please describe deficiencies below in the comments field)</small>	<input type="checkbox"/>	<input type="checkbox"/>	X
Is the form filled out correctly? <small>(If not, please describe deficiencies below in the comments field)</small>	<input type="checkbox"/>	<input type="checkbox"/>	X
Is the monitoring frequency for metals, pathogens and vectors (WQ 423) being met?	<input type="checkbox"/>	<input type="checkbox"/>	X
Are the requirements for pathogens and vector attraction (WQ 424) being met?	<input type="checkbox"/>	<input type="checkbox"/>	X
Are land applied biosolids below the ceiling concentration for metals (WQ 425)?	<input type="checkbox"/>	<input type="checkbox"/>	X
Are the nitrogen, soil pH and soil phosphorus limitations (WQ426) being met?	<input type="checkbox"/>	<input type="checkbox"/>	X
Other Comments:			

Primary Lagoon Cell



Secondary Lagoon Cell



Outfall #001





STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES

PO Box 176 Jefferson City MO 65102-0176

**Environmental Services Program
 RESULTS OF SAMPLE ANALYSES**

LDPR/Job Code:
 FEINS

Program, Contact:
 WPC Linda Mebruer




Order ID:
 150924009



Report Date:
 10/6/2015

Linda Mebruer
 Water Pollution Control Branch

Sample: AC60990	Facility ID: MO0101885	Customer #: 151171		
	Site: BCSD Twin Lakes Subdivision	County: Boone		
Collect Date: 9/24/2015 10:15:00 AM	Collector: MICHAEL WOMACK	Affiliation: NERO		
Sample Location: 151171				
Comments: Grab; Outfall #001.				
Test	Parameter/Method	Result	Units	Qualifier(s)
Biochemical Oxygen Demand	Biochemical Oxygen Demand/SM 5210-B	4.85	mg/L	
Fecal Coliform	Fecal Coliform/SM 9222D	230	cfu/100ml	
Field Dissolved Oxygen	Field Dissolved Oxygen/SM 4500-O-G	3.90	mg/L	
Field pH	Field pH/EPA 150.1	7.37	pH Units	
Field Specific Conductivity	Field Specific Conductivity/SM 2510	897 uS/cm		
Field Temperature	Field Temperature/EPA 170.1	20.8 C		
Total Suspended Solids (TSS) / NFR	Total Suspended Solids (TSS) / NFR/SM 2540-D	<5	mg/L	ND

The analysis of this sample was performed in accordance with procedures approved or recognized by the U. S. Environmental Protection Agency.

Data Qualifier(s)
ND Not detected at reported value

Chris Boldt

Chris Boldt, Laboratory Manager
 Environmental Services Program
 Division of Environmental Quality



DEPARTMENT OF NATURAL RESOURCES

5.200 BCSD Twin Lakes Subdivision
Boone County
#MO-0101885

April 30, 2014

Mr. Dwayne Cooksey
Boone County Regional Sewer District
1314 North Seventh Street
Columbia, MO 65201

LETTER OF WARNING

Dear Permittee:

Missouri State Operating Permit (MSOP) #MO-0101885 was issued for the BCSD Twin Lakes Subdivision in Boone County. This permit sets forth specific effluent limitations, monitoring requirements, and specific permit conditions regarding the facility.

A review of your Discharge Monitoring Reports (DMRs) for the 2nd Quarter 2013, 3rd Quarter 2013, and 1st Quarter 2014 monitoring periods shows that the effluent limitations established in your MSOP have been exceeded. The effluent limits and the values that have exceeded those effluent limits are listed below.

Outfall	Monitoring Period	Parameter	Permitted Limitations	Reported Values
001	2 nd Quarter 2013	Fecal Coliform	400 #/100 mL Monthly Average	410 #/100 mL
001	3 rd Quarter 2013	Fecal Coliform	400 #/100 mL Monthly Average	790 #/100 mL

Please provide a written report by **May 20, 2014**, to the department which explains the cause(s) for the non-compliance, the exact dates of non-compliance, the date anticipated to return to compliance, and what steps your operation will take to prevent a reoccurrence of these violations. BCSD Twin Lakes Subdivision will be considered in non-compliance with these violations until the documentation is submitted to this office. Our files will reflect the continued non-compliance regarding these violations until the required documentation is submitted for review.



BCSD Twin Lakes Subdivision
April 30, 2014
Page 2

Be advised that violation of your State Operating Permit conditions, including effluent limits, schedules of compliance, or standard and special conditions, is a serious matter. It is our hope that through conference, conciliation, and persuasion, violations can be corrected. We ask for your urgent cooperation.

If you have any questions, please contact Mr. David See at (660) 385-8000, in the Northeast Regional Office 1709 Prospect Drive, Macon, MO 63552 or by email at NERO@dnr.mo.gov. Responses to this letter may be sent via email, however printed copies of Discharge Monitoring Reports with the original signatures must be submitted.

Sincerely,

NORTHEAST REGIONAL OFFICE


for

Irene Crawford
Regional Director

IC/dsm

*Celebrating 40 years of taking care of Missouri's natural resources.
To learn more about the Missouri Department of Natural Resources visit dnr.mo.gov.*



Jeremiah W. (Jay) Nixon, Governor

Sara Parker Pauley, Director

DEPARTMENT OF NATURAL RESOURCES

dnr.mo.gov

5.200 BCSD Twin Lakes Subdivision
Boone County
#MO-0101885

October 16, 2012

Mr. Tom Ratermann, General Manager
Boone County Regional Sewer District
1314 North Seventh Street
Columbia, MO 65201

Dear Mr. Ratermann:

A routine compliance inspection of the Boone County Regional Sewer District (BCSD), Twin Lakes Subdivision, located in Boone County, Missouri was conducted on August 30, 2012. The inspection was conducted by Mr. Leland Maize, with the Missouri Department of Natural Resources' Northeast Regional Office. Enclosed is a copy of the inspection report.

The BCSD, Twin Lakes Subdivision is required to meet the final daily maximum and monthly average Fecal Coliform limits by February 13, 2013, in accordance with the compliance schedule outlined in Missouri State Operating Permit #MO-0101885. The facility must continue to coordinate with the Water Pollution Control Branch, Compliance and Enforcement Section, to address this matter.

If you have any questions, please contact Mr. Maize or me at (660) 385-8000 in the Northeast Regional Office, 1709 Prospect Drive, Macon, MO 63552-2602.

Sincerely,

NORTHEAST REGIONAL OFFICE

A handwritten signature in black ink, appearing to read "Irene Crawford".

Irene Crawford
Regional Director

IC/lma

Enclosures: Report of Compliance Inspection

c: Mr. Graham Freeman, Water Pollution Control Branch, Compliance and Enforcement

**REPORT OF COMPLIANCE INSPECTION
BCSD, TWIN LAKES SUBDIVISION
BOONE COUNTY
#MO-0101885
October 16, 2012**

INTRODUCTION

Pursuant to Section 644.026.1 RSMo of the Missouri Clean Water Law, a routine compliance inspection of the Boone County Regional Sewer District (BCSD), Twin Lakes Subdivision in Boone County, Missouri, was conducted by Mr. Leland Maize of the Missouri Department of Natural Resources' Northeast Regional Office on August 30, 2012. Mr. Dwayne Cooksey, Operations Manager, participated in the inspection.

This inspection was conducted to determine the facility's compliance with Missouri State Operating Permit #MO-0101885, the Missouri Clean Water Commission Regulations, and the Missouri Clean Water Law. This report presents the findings and observations made during the compliance inspection.

FACILITY DESCRIPTION/HISTORY

Missouri State Operating Permit #MO-0101885 was last issued on February 15, 2008, and expires on February 14, 2013. An application for renewal of the permit was received by the Department on April 20, 2012. This permit sets forth effluent limitations, monitoring requirements, and permit conditions, both standard and specific, that the permittee is to follow.

The BCSD, Twin Lakes Subdivision's wastewater treatment facility consists of a two cell lagoon with sludge retained in the lagoon. The primary cell of the lagoon is aerated. Missouri State Operating Permit #MO-0101885 lists the design population equivalent as 194. The permit lists the design flow as 19,400 gallons per day with an actual flow of 11,100 gallons per day. The design sludge production for the facility is 3.0 dry tons per year.

The legal description of the BCSD, Twin Lakes Subdivision is listed on the permit as the SE ¼, NW ¼, NW ¼, Section 08, Township 49 North, Range 13 West, in Boone County. The receiving stream for this facility is an unnamed tributary to Perche Creek.

The Northeast Regional Office previously conducted a water pollution inspection at the site on April 26, 2007. As a result of the previous inspection, a Letter of Warning was issued to the facility on June 14, 2007, for the following Unsatisfactory Features:

1. Failed to submit complete Discharge Monitoring Reports (DMRs) as required in part "A" of Missouri State Operating Permit (MSOP) #MO-0101885 [Section 644.076.1, RSMo, and 10 CSR 20-7.015(9)(A)1.].
2. Failed to collect an influent sample at least once per year in order to ensure a removal efficiency of 65% is being met by the wastewater treatment system, as required by the

Report of Compliance Inspection
BCSD Twin Lakes Subdivision
October 16, 2012
Page 2

effluent limitations and monitoring requirements of MSOP #MO-0101885 [Section 644.076.1, RSMo].

3. Failed to provide proper warning signs on all sides of the perimeter [10 CSR 20-8.020(11)(C)11.G.].
4. Failed to clearly mark the outfall in the field as required by the special conditions of MSOP #MO-0101885 [Sections 644.076.1, RSMo].
5. The inner lagoon berms have developed erosion damage, which has caused the inner berm slopes to be less than three to one (3:1) [10 CSR 20-8.020 (13)(A)3.C.].
6. Failed to apply for renewal of MSOP at least one hundred and eighty (180) days before expiration of the MSOP #MO-0101885 [Sections 644.051.9 and 644.076.1, RSMo, and 10 CSR 20-6.010(5)(C)].

DISCUSSION OF INSPECTION AND OBSERVATIONS

Prior to the inspection the files for the BCSD, Twin Lakes Subdivision were reviewed, including the Permit Conditions of Missouri State Operating Permit #MO-0101885, to familiarize the inspector with the requirements specific to this facility.

The inspection was conducted during normal business hours. Prior notification of the inspection was provided to ensure timely access to the site. Upon arrival at the facility, the inspector met with Mr. Dwayne Cooksey, Operations Manager, and the purpose and scope of the inspection were outlined. Mr. Cooksey granted permission to access the site and accompanied the inspector throughout the tour of the facility.

As Mr. Maize approached the facility, an all-weather access road was observed. The facility had a perimeter fence surrounding the facility with warning signs on each side and on the facility's gate. The facility had one gate, which was locked prior to the inspection.

The facility consists of a two cell lagoon with sludge being retained in the lagoon. The primary cell of the lagoon is aerated. The aerator appeared to be functioning properly at the time of the inspection. Mr. Maize observed that the entire second cell of the lagoon was covered with duckweed and that approximately 60% of the primary cell was covered with duckweed. The vegetation around the lagoon cells was short in height. No deep rooted vegetation was observed on the lagoon berms. On the east side of the primary cell, Mr. Maize observed where wildlife had dug holes on the outer berm. Mr. Maize pointed out the holes to Mr. Cooksey. The holes should be filled and compacted with clay to prevent further damage to the lagoon berms.

Report of Compliance Inspection
BCSD Twin Lakes Subdivision
October 16, 2012
Page 3

Mr. Maize observed the facility's outfall. The facility had a sign to mark the outfall in the field. The outfall was discharging at the time of the inspection. Mr. Maize conducted water quality field monitoring and collected samples for laboratory analyses. The facility had placed rip rap below the outfall. Mr. Maize did not observe any residue or odors below the outfall.

Mr. Maize discussed the facility's Schedule of Compliance with Mr. Cooksey. Mr. Cooksey stated that the facility plans to put in a wastewater treatment plant to replace the lagoon. Mr. Cooksey was unsure of a timeline when the project would be completed. As of the date of this report, the Northeast Regional Office has not received a construction permit application and an activity schedule as required by the Schedule of Compliance found in Missouri State Operating Permit #MO-0101885. Mr. Cooksey stated that he would provide the Department with a timeline when he finds out more about the project. The Boone County Regional Sewer District has been in contact with the Water Pollution Control Branch's Compliance and Enforcement Section in order to develop a schedule for meeting the Fecal Coliform limits. The facility must continue to coordinate efforts with the Water Pollution Control Branch, Compliance and Enforcement Section.

WATER QUALITY MONITORING

The appropriate sampling materials were taken on the inspection, including a copy of the Missouri Department of Natural Resources' Standard Operating Procedures for Sampling. Instruments for field monitoring were taken on the inspection that are capable of testing pH, temperature, conductivity, and dissolved oxygen. A HACH® ammonia test kit for water quality monitoring was also taken on the inspection.

Water quality field monitoring was conducted at the following location for the listed parameters.

Sample #1203451		
Outfall #001		
Parameter	Result	Units
pH	7.30	s.u.
Temperature	22.2	°C
Dissolved Oxygen	1.23	mg/L
Conductivity	1331	Microsiemens

Sampling was conducted at the following location and submitted for laboratory analysis for the parameters listed below. The Environmental Services Program Results of Sample Analyses are listed below.

Sample #1203451 Outfall #001						
Results of Sample Analyses			Permit Limits			
Parameters	Sample Result	Units	Daily Max	Weekly Average	Monthly Average	Units
BOD ₅	< 2	mg/L		65	45	mg/L
Total Suspended Solids (TSS)	< 5	mg/L		120	80	mg/L

COMPLIANCE DETERMINATION

The facility was found to be in **non-compliance** with the Missouri Clean Water Law, the Clean Water Commission Regulations, and Missouri State Operating Permit #MO-0101885, based upon the observations made at the time of the inspection.

UNSATISFACTORY FEATURES

1. Failed to submit a construction permit application and activity schedule as required in part "B" Standard Conditions, and part "E", Schedule of Compliance of Missouri State Operating Permit (MSOP) #MO-0101885 [Sections 644.076.1 RSMo, and 10 CSR 20-6.010(7)(A)].

REQUIRED ACTION: The facility was required to submit a construction permit application and an activity schedule toward meeting the disinfection requirement no later than 30 months from permit issuance. The facility must continue to coordinate with the Water Pollution Control Branch, Compliance and Enforcement Section, to resolve the unsatisfactory feature.

RECOMMENDATIONS – Actions that are being recommended by the inspector but are not required to bring the facility into compliance at the time of the inspection.

1. Consider contacting the Missouri Department of Conservation for information about removing wildlife from the lagoon system.

SUBMITTED BY:



Leland Maize
 Environmental Specialist
 Northeast Regional Office

REVIEWED BY:



Jamie Shinn
 Environmental Specialist
 Northeast Regional Office

LM/ah



Photo #: 1
By: Leland Maize
Facility: BCSD, Twin Lakes Subdivision
Permit: #MO-0101885
Location: Boone County

Description: Primary lagoon cell with aerator functioning.

Date Taken: August 30, 2012
Program: WPC Unit



Photo #: 2
By: Leland Maize
Facility: BCSD, Twin Lakes Subdivision
Permit: #MO-0101885
Location: Boone County

Description: Hole observed on the outer lagoon berm.

Date Taken: August 30, 2012
Program: WPC Unit



Photo #: 3
By: Leland Maize
Facility: BCSD, Twin Lakes Subdivision
Permit: #MO-0101885
Location: Boone County

Description: Second cell of lagoon. Covered with duckweed.

Date Taken: August 30, 2012
Program: WPC Unit

Initial *LM*