



Jeremiah W. (Jay) Nixon, Governor

Sara Parker Pauley, Director

DEPARTMENT OF NATURAL RESOURCES

dnr.mo.gov

5.200 BCSD, Brown Station Wastewater Treatment Facility
Boone County
#MO-0135305

June 12, 2015

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

Dear Mr. Ratermann:

A routine compliance inspection of the Brown Station Wastewater Treatment Facility, located in Boone County, Missouri, was conducted on May 13, 2015. 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 **July 6, 2015**. Your cooperation in this matter will be appreciated.

At the time of the report the results of sample analysis 151097 and 151098 were not completed. Additional 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 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. Responses to any Required Actions may be sent via email.

Sincerely,

NORTHEAST REGIONAL OFFICE

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

Irene Crawford
Regional Director

IC/lml

Enclosures: Report of Compliance Inspection

**REPORT OF COMPLIANCE INSPECTION
BROWN STATION WASTEWATER TREATMENT FACILITY
BOONE COUNTY
#MO-0135305
June 12, 2015**

INTRODUCTION

Pursuant to Section 644.026.1 RSMo of the Missouri Clean Water Law, a routine compliance inspection of the Brown Station Wastewater Treatment Facility in Boone County, Missouri, was conducted by Mr. Leland Maize of the Missouri Department of Natural Resources' Northeast Regional Office on May 13, 2015. Mr. Dwayne Cooksey, Operations Manager, and Mr. Russell Palmer, Operator, participated in the inspection.

This inspection was conducted to determine the facility's compliance with Missouri State Operating Permit #MO-0135305, 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-0135305 was last issued on March 11, 2011, and expires on March 10, 2016. This permit sets forth effluent limitations, monitoring requirements, and permit conditions, both standard and specific, that the permittee is to follow.

The Brown Station Wastewater Treatment Facility is owned and operated by the Boone County Regional Sewer District. The facility consists of a STEP system and a recirculating sand filter. Sludge from the facility is hauled to another permitted facility. The design population equivalent for the facility is 19. The design flow for the facility is 1,850 gallons per day. The design sludge production for the facility is 0.37 dry tons per year.

The legal description of the Brown Station Wastewater Treatment Facility is listed on the permit as the NW ¼, NW ¼, Section 10, Township 49 North, Range 12 West, in Boone County. The receiving stream for this facility is Clays Fork. The first classified receiving stream for the facility is Rocky Fork.

The Northeast Regional Office previously conducted a water pollution inspection of the facility on March 26, 2014. 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 May 9, 2014, due to the following unsatisfactory features:

1. On June 2012 and December 2013, failed to comply with the effluent limits contained in Part "A" of Missouri State Operating Permit #MO-0135305 [Sections 644.051.1(3) and 644.076.1, RSMo].

Report of Compliance Inspection
Brown Station Wastewater Treatment Facility
June 12, 2015
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On May 28, 2014, the Northeast Regional Office received a letter from the facility in response to the May 9, 2014, inspection report. The letter stated that the recirculation valves would be replaced in the plant since they had not been functioning properly.

DISCUSSION OF INSPECTION AND OBSERVATIONS

Prior to the inspection, the files for the Brown Station Wastewater Treatment Facility were reviewed, including the Permit Conditions of Missouri State Operating Permit (MSOP) #MO-0135305, 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. Russell Palmer, Operator. 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 was surrounded by a perimeter fence with warning signs on each side of the fence. The gate at the entrance to the facility was locked at the time of the inspection.

The facility consists of a STEP system and a recirculating sand filter. Mr. Maize observed the sand filter as part of the inspection. Mr. Maize did not observe any water pooling in the sand filter. Mr. Maize observed the pumps turn on during the inspection. Water was observed shooting up through the rock a few inches above the sand filter. Mr. Maize did not observe any of the distribution lines uncovered at the time of the inspection. The area surrounding the sand filter had been riprapped. Mr. Maize did not observe any vegetation surrounding the sand filter.

The inspection then proceeded to the facility's outfall. The outfall was marked in the field with a sign. The outfall was discharging at the time of the inspection. Mr. Maize observed 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. Mr. Maize set up a composite sampler at the facility's sampling port. The composite sampler was set up to collect samples over a 24 hour period. Mr. Maize returned on May 14, 2015, to collect samples for laboratory analyses and conduct water quality field monitoring on the facility's effluent.

A review of the facility's records was conducted as part of the inspection. The facility's Discharge Monitoring Reports were complete and up to date. The facility has been submitting influent sampling and meeting the 85% removal efficiency requirement. The facility has been submitting a Form S annually.

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.

Mr. Maize observed 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.

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

Sample #151097 Composite Sample Outfall #001		
Parameter	Result	Units
pH	7.18	s.u.
Temperature	5.8	°C
Dissolved Oxygen	7.52	mg/L
Conductivity	994	Microsiemens

Sample #151098 Grab Sample Outfall #001		
Parameter	Result	Units
pH	7.36	s.u.
Temperature	16.4	°C
Dissolved Oxygen	8.37	mg/L
Conductivity	1066	Microsiemens

Sampling was conducted and submitted for laboratory analysis. The department's Environmental Services Program results of Sample Analysis 151097 and 151098 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 **non-compliance** with the Missouri Clean Water Law, the Clean Water Commission Regulations, and Missouri State Operating Permit #MO-0135305, based upon the observations made at the time of the inspection.

**Report of Compliance Inspection
Brown Station Wastewater Treatment Facility
June 12, 2015
Page 4**

At the time of the report the results of sample analysis 151097 and 151098 were not completed. Additional violations may be documented upon receipt of the sample analysis results.

UNSATISFACTORY FEATURES

1. Failed to provide sufficient gravel covering for media and distributors [10 CSR 20-8.020(13)(C)3.D. & E.].

REQUIRED ACTION: The facility must ensure that a sufficient amount of gravel is in place to ensure wastewater does not surface. By **July 6, 2015**, 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.

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

LM/lk



Photo #: 1
By: Leland Maize
Facility: Brown Station Wastewater Treatment Facility
Permit: #MO-0135305
Location: Boone County

Description: Wastewater treatment facility with fence surrounding the facility.

Date Taken: May 13, 2015
Program: WPC Unit



Photo #:
By: Leland Maize
Facility: Brown Station Wastewater Treatment Facility
Permit: #MO-0135305
Location: Boone County

Description: Sand filter. Wet spots can be observed where the water is surfacing. Mr. Maize did not observe any pooling.

Date Taken: May 13, 2015
Program: WPC Unit

Initial LM

Land Application of Sludge Checklist

Sludge handling checklist for wastewater treatment facilities

Facility Name: BCSD Brown Station WWTF	MSOP #: MO-0135305		
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.		<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?	2014		<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 Brown Station WWTF
Boone County
#MO-0135305

June 27, 2012

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

LETTER OF WARNING

Dear Permittee:

Missouri State Operating Permit #MO-0135305 was issued for the Brown Station WWTF 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 December 2011 Discharge Monitoring Report for the Brown Station WWTF. It was noted that the effluent data you reported from Outfall #001 exceeded the effluent limitation parameter of Ammonia as N. An Ammonia as N concentration of 12.6 mg/L was reported, whereas permit #MO-0135305 sets forth a daily maximum limit of 7.9 mg/L.

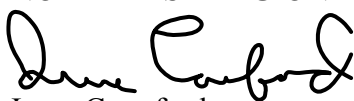
Please provide a written report by **July 18, 2012**, to the Department which explains the cause(s) for the non-compliance, the exact dates of non-compliance, the date anticipated to return to compliance, and what steps your operation will take to prevent a reoccurrence of the violation. Brown Station WWTF will be considered in non-compliance with this violation until the documentation is submitted to this office. Our files will reflect the continued non-compliance regarding this violation 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 Kathleen Halley at (660) 385-8000, in the Northeast Regional Office 1709 Prospect Drive, Macon, MO 63552.

Sincerely,

NORTHEAST REGIONAL OFFICE



Irene Crawford
Regional Director

IC/kha



Jeremiah W. (Jay) Nixon, Governor

Sara Parker Pauley, Director

DEPARTMENT OF NATURAL RESOURCES

dnr.mo.gov

CERTIFIED MAIL
70122210000150158159

5.200 Brown Station WWTF
Boone County
#MO-0135305
NOV #NER2014042113254830

May 9, 2014

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

NOTICE OF VIOLATION

Dear Mr. Cooksey:

A routine compliance inspection of the Boone County Regional Sewer District, Brown Station Wastewater Treatment Facility (WWTF), located in Boone County, Missouri, was conducted on March 26, 2014. The inspection was conducted by Mr. Michael Heaton, 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 Action for the Notice of Violation and Recommendations sections of the report. The information requested by the department is to be submitted to the Northeast Regional Office by **May 30, 2014**. 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

Dwayne Cooksey
Boone County Regional Sewer District
May 9, 2014
Page 2

compliance, please contact Mr. Heaton 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 the Required Action may be sent via email.

Sincerely,

NORTHEAST REGIONAL OFFICE

 *for*

Irene Crawford
Regional Director

IC/mhl

Enclosures: Report of Compliance Inspection
Results of Sample Analysis
NOV #NER2014042113254830

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To learn more about the Missouri Department of Natural Resources visit dnr.mo.gov.*

**REPORT OF COMPLIANCE INSPECTION
BROWN STATION WWTF
BOONE COUNTY
#MO-0135305
NOV #NER2014042113254830
May 9, 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, Brown Station Wastewater Treatment Facility (WWTF) in Boone County, Missouri, was conducted by Mr. Michael Heaton of the Missouri Department of Natural Resources' Northeast Regional Office on March 26, 2014. Mr. Russell Palmer, Operator, participated in the inspection.

This inspection was conducted to determine the facility's compliance with Missouri State Operating Permit #MO-0135305, 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-0135305 was issued on March 11, 2011, and expires on March 10, 2016. This permit sets forth effluent limitations, monitoring requirements, and permit conditions, both standard and specific, that the permittee is to follow.

The system consists of individual Septic Tank Effluent Pump (STEP) systems and a recirculating sand filter. The design flow is 1,850 gallons per day with a design population equivalent of 19.

The legal description of the Brown Station WWTF is listed on the permit as the NW $\frac{1}{4}$, NW $\frac{1}{4}$, Section 10, Township 49 North, Range 12 West, in Boone County. The receiving stream for this facility is Clays Fork.

A previous water pollution inspection has not been conducted by the Northeast Regional Office, Water Pollution Compliance Unit, at this facility.

A review of the Discharge Monitoring Reports from March 11, 2011 (issuance date of the current Missouri State Operating Permit) to February 2013 shows that the Effluent Limitations and Monitoring Requirements established in the Missouri State Operating Permit #MO-0135305 have been violated for the parameter of Ammonia as N. The review also found that the facility was routinely sampling the influent for Biochemical Oxygen Demand and Total Suspended Solids and is meeting the 85% removal efficiency for these parameters.

Report of Compliance Inspection
Brown Station WWTF
May 9, 2014
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Sample Collected	Parameter	Permitted Limitations	Reported Values
June 2011	Ammonia as N	4.5 mg/L Daily Max. 1.7 mg/L Monthly Ave.	2 mg/L
December 2011	Ammonia as N	7.9 mg/L Daily Max. 3.0 mg/L Monthly Ave.	12.6 mg/L
June 2012	Ammonia as N	4.5 mg/L Daily Max. 1.7 mg/L Monthly Ave.	2.5 mg/L
December 2013	Ammonia as N	7.9 mg/L Daily Max. 3.0 mg/L Monthly Ave.	9.5 mg/L

The table above lists the exceedences for Ammonia as N. The facility should determine if regular routine maintenance, which may be scheduled around the months of June and December, is contributing to these exceedences.

On June 27, 2012, the Boone County Regional Sewer District was issued a Letter of Warning for the exceedence of the effluent limitation for the parameter of Ammonia as N for the December 2011 Discharge Monitoring Report. The Boone County Regional Sewer District responded to the Letter of Warning with a letter dated July 5, 2012. The response letter stated that district staff has made some adjustments in the operation of this facility which they hoped would correct the issue.

On April 9, 2013, the Missouri Department of Natural Resources' Environmental Services Program collected a grab sample of the effluent from Outfall #001.

DISCUSSION OF INSPECTION AND OBSERVATIONS

Prior to the inspection, the files for the Brown Station WWTF were reviewed, including the Permit Conditions of Missouri State Operating Permit (MSOP) #MO-0135305, to familiarize Mr. Heaton with the requirements specific to this facility.

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

Mr. Heaton observed a fence around the parameter of the facility. Signs restricting access were observed on each side of the parameter fence. The facility had a sufficient gate which was locked prior to the inspection. A sign marking the outfall location was observed at the outfall.

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Brown Station WWTF
May 9, 2014
Page 3

Mr. Heaton observed the media in the sand filter. The media was level and vegetation was not observed growing on the media. Piping was not observed to be exposed in the media. Three areas had slight pooling of effluent on top of the media. Mr. Palmer stated that some of the media at the Fall Creek WWTF would be applied on top of the existing media.

Mr. Heaton observed the recirculating tank associated with the filter. The mechanical components of the system appeared to be maintained properly.

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 effluent being discharged at the time of the inspection was clear with no odor. Sludge deposits below the outfall location were not observed. The receiving stream contained no sludge deposits.

Composite Sample #140408, Outfall #001		
Parameter	Result	Units
pH	8.87	s.u.
Temperature	3.1	°C
Dissolved Oxygen	9.06	mg/L
Conductivity	1276	Microsiemens

Grab Sample #140409, Outfall #001		
Parameter	Result	Units
pH	7.75	s.u.
Temperature	8.0	°C
Dissolved Oxygen	9.88	mg/L
Conductivity	1303	Microsiemens

Grab Sample # 140410, Duplicate of Sample #140409		
Parameter	Result	Units
pH	7.67	s.u.
Temperature	8.1	°C
Dissolved Oxygen	9.82	mg/L
Conductivity	1302	Microsiemens

Report of Compliance Inspection
Brown Station WWTF
May 9, 2014
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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 the sample analysis are listed below and are enclosed with this report.

Composite Sample #140408, Outfall #001						
Results of Sample Analyses			Permit Limits			
Parameters	Sample Result	Units	Daily Max	Weekly Average	Monthly Average	Units
BOD ₅	2.92	mg/L		45	30	mg/L
Total Suspended Solids (TSS)	<5	mg/L		45	30	mg/L

Grab Sample #140409, Outfall #001						
Results of Sample Analyses			Permit Limits			
Parameters	Sample Result	Units	Daily Max	Weekly Average	Monthly Average	Units
Ammonia as N	0.14	mg/L	7.9		3.0	mg/L

Grab Sample # 140410, Duplicate of Sample #140409						
Results of Sample Analyses			Permit Limits			
Parameters	Sample Result	Units	Daily Max	Weekly Average	Monthly Average	Units
Ammonia as N	0.13	mg/L	7.9		3.0	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-0135305, based upon the observations made at the time of the inspection.

NOTICE OF VIOLATION

1. On June 2012 and December 2013, failed to comply with the effluent limits contained in Part "A" of Missouri State Operating Permit #MO-0135305 [Sections 644.051.1(3) and 644.076.1, RSMo].

REQUIRED ACTION: The effluent data reported from Outfall #001 for June 2012, and December 2013, exceeded the effluent limitation parameter of Ammonia as N. An Ammonia as N concentration of 2.5 mg/L was reported for June 2012, whereas Missouri State Operating Permit #MO-0135305 sets forth a monthly average limit of 1.7 mg/L for the reporting period of April 1 – September 30. An Ammonia as N concentration of 9.5 mg/L was reported for

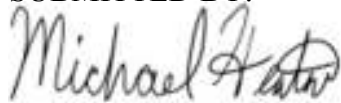
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Brown Station WWTF
May 9, 2014
Page 5

December 2013, whereas Missouri State Operating Permit #MO-0135305 sets forth a monthly average limit of 3.0 mg/L for the reporting period of October 1 – March 31. The facility shall submit a written statement to the Northeast Regional Office by **May 30, 2014**, 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. Ensure that additional media is placed in the sand filter to help reduce any pooling of effluent on top of the media.

SUBMITTED BY:



Michael Heaton
Environmental Specialist
Northeast Regional Office

MH/lk



Photo #: 01
By: Michael Heaton
Facility: Brown Station WWTF
Permit: #MO-0135305
Location: Boone County

Description: Perimeter fence with signs posted on all sides of the facility.

Date Taken: March 26, 2014
Program: WPC Unit



Photo #: 02
By: Michael Heaton
Facility: Brown Station WWTF
Permit: #MO-0135305
Location: Boone County

Description: Main entrance into the sand filter.

Date Taken: March 26, 2014
Program: WPC Unit



Photo #: 03
By: Michael Heaton
Facility: Brown Station WWTF
Permit: #MO-0135305
Location: Boone County

Description: Media in the sand filter.

Date Taken: March 26, 2014
Program: WPC Unit

Initial MH



Photo #: 04
By: Michael Heaton
Facility: Brown Station WWTF
Permit: #MO-0135305
Location: Boone County

Description: Media in the sand filter. No pipes were exposed. Some slight pooling of wastewater was occurring on top of the media.

Date Taken: March 26, 2014
Program: WPC Unit



Photo #: 05
By: Michael Heaton
Facility: Brown Station WWTF
Permit: #MO-0135305
Location: Boone County

Description: Control panel and recirculating tanks.

Date Taken: March 26, 2014
Program: WPC Unit



Photo #: 06
By: Michael Heaton
Facility: Brown Station WWTF
Permit: #MO-0135305
Location: Boone County

Description: Outfall location. Sign marking outfall location.

Date Taken: March 26, 2014
Program: WPC Unit

Initial MH



MISSOURI DEPARTMENT OF NATURAL RESOURCES
NOTICE OF VIOLATION

TRACKING NUMBER
NER 20140421 13254830

DATE ISSUED 05-09-2014	TIME ISSUED 8:00 AM	REGION/PROGRAM Northeast Regional Office (NERO)
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SOURCE (NAME, ADDRESS, PERMIT NUMBER, LOCATION)
 Brown Station WWTF

Boone County Regional Sewer District

MSOP #MO-0135305

Section 10, Township 49 North, Range 12 West, Boone County

MAILING ADDRESS 1314 North 7th Street	CITY Columbia	STATE MO	ZIP CODE 65201
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NAME OF OWNER OR MANAGER Dwayne Cooksey	TITLE OF OWNER OR MANAGER Operations Manager	COUNTY Boone
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LAW, REGULATION OR PERMIT VIOLATED

Sections 644.051.1(3) and 644.076.1, RSMo

NATURE OF VIOLATION	DATE(S):	TIME(S):
On June 2012 and December 2013, failed to comply with the effluent limits contained in Part "A" of Missouri State Operating Permit #MO-0135305.		

SIGNATURE (PERSON RECEIVING NOTICE) <i>Sign Here</i>	SIGNATURE (PERSON ISSUING NOTICE) <i>Michael Heath</i>
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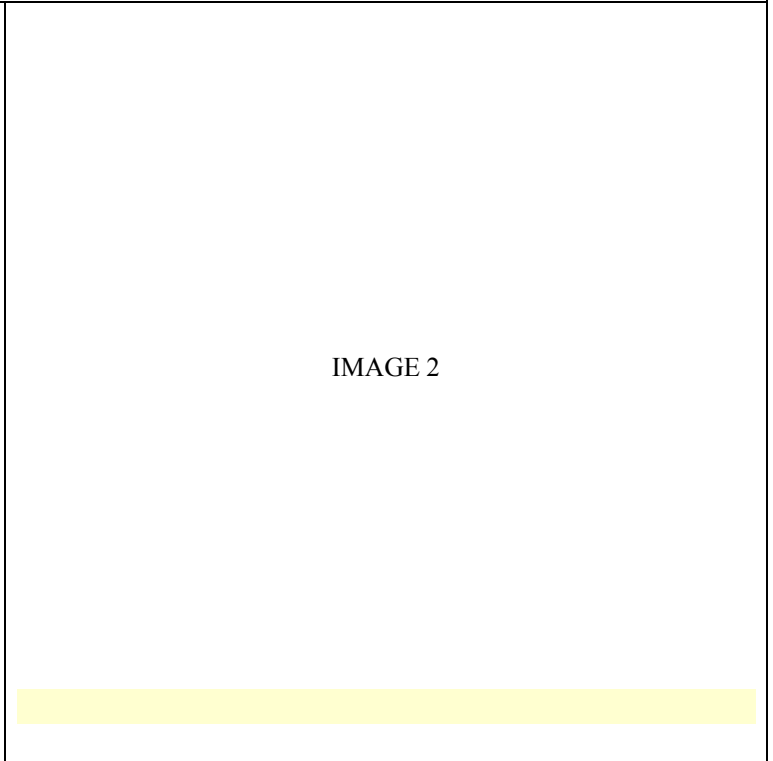
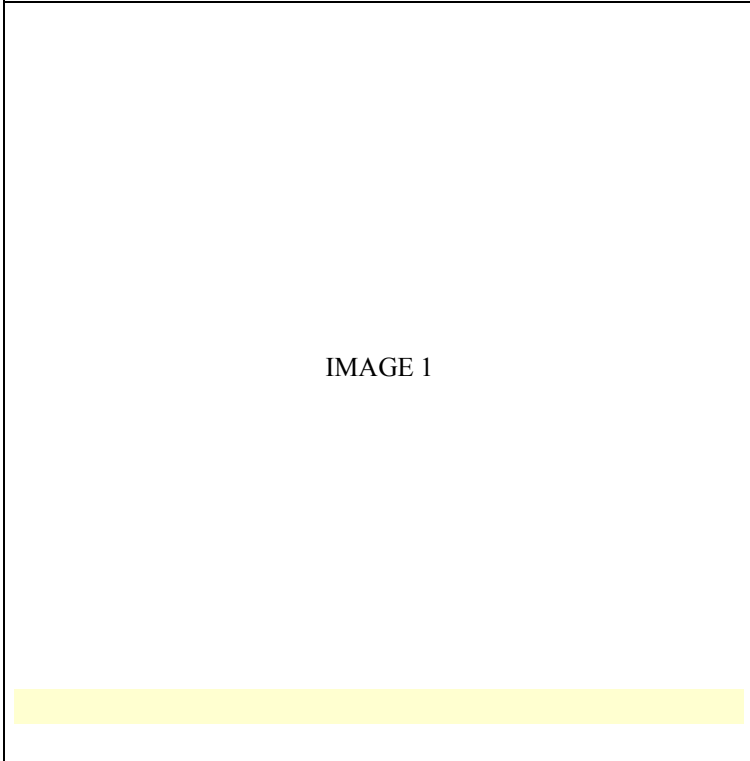
TITLE OR POSITION By Certified Mail	TITLE OR POSITION Environmental Specialist
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ADDENDUM

LOCATIONAL DATA

UTM EASTING	UTM NORTHING
HORIZONTAL COLLECTION METHOD	ESTIMATED POSITION ERROR OR PDOP
REFERENCE POINT	COORDINATE DATA SOURCE

ADDITIONAL COMMENTS





Jeremiah W. (Jay) Nixon, Governor

Sara Parker Pauley, Director

DEPARTMENT OF NATURAL RESOURCES

dnr.mo.gov

5.200 BCSD, Cedar Gate Subdivision
Boone County
#MO-0096415

July 20, 2016

Mr. 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 June 7, 2016. The enclosed report is being issued with a Letter of Warning (LOW) for the violations identified.

Violations include:

- In June 2016, failed to comply with the effluent limits contained in Part "A" of MSOP #MO-0096415
- Failed to carry out the minimum requirements for laboratory testing to ensure adequate wastewater systems in-plant operational control
- 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-0096415

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

Mr. Tom Ratermann, General Manager
July 20, 2016
Page 2

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
BCSD, Cedar Gate Subdivision
South of East Birch Street & North Branch Street
Hallsville, Missouri, 65255, Boone County
#MO-0096415
July 20, 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 (BCSD), Cedar Gate Subdivision in Boone County, Missouri, on June 7, 2016. The following people participated in the inspection:

BCSD, Cedar Gate Subdivision
Mr. Dwayne Cooksey Operations Manager

Department of Natural Resources
Mr. Leland Maize Environmental Specialist
Ms. Lori Gale Environmental Specialist
Ms. Sarah Wright-Aholt Environmental Specialist

This inspection was conducted to determine the facility's compliance with Missouri State Operating Permit #MO-0096415, 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-0096415 was last issued on November 9, 2007, and expired on November 8, 2012. The department received an application for renewal 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, Cedar Gate Subdivision Wastewater Treatment Facility is owned and operated by the Boone County Regional Sewer District. The facility is located south of the intersection of East Birch Street & North Branch Street, Hallsville, Missouri 65255. The facility consists of a two cell lagoon with aeration in the primary cell. Sludge is retained in the lagoon. The design population equivalent for the facility is 111. The design flow is 11,000 gallons per day and the actual flow is 4,348 gallons per day. The design sludge production for the facility is 1.6 dry tons per year.

The UTM coordinates for the BCSD, Cedar Gate Subdivision are listed on the permit as the 566317, 4328523 in Boone County. The receiving stream for this facility is a tributary to Varnon Branch and it is located in the 10300102 HUC 8 watershed.

Report of Inspection
BCSD, Cedar Gate Subdivision
July 20, 2016
Page 2

Prior to the inspection, I reviewed the files for the BCSD, Cedar Gate Subdivision, including the Permit Conditions of MSOP #MO-0096415, to familiarize myself with the requirements specific to this facility.

On August 8, 2008, the department sent a letter to the Boone County Regional Sewer District approving the facility's request to conduct operational monitoring at the facility twice per month.

The regional office performed the previous inspection on April 4, 2013. At the time of the previous inspection, the facility was found to be in non-compliance. The facility was issued a Letter of Warning on May 9, 2013, for: failed to submit complete Discharge Monitoring Reports; failed to maintain the inner berm slopes of the lagoon to be no less than three to one; failed to provide adequate fencing to prevent unauthorized access. On May 23, 2013, the Northeast Regional Office received a letter from the Boone County Regional Sewer District in response to the Letter of Warning. The letter stated staff had been instructed to obtain a measurement of flow instead of using trickle on Discharge Monitoring Reports. The letter also stated that staff made repairs to the lagoon berms and the perimeter fence on May 20, 2013.

On January 22, 2016, the owner was issued Notice of Violation #NER2015030509453510 for exceeding the effluent limits for Biochemical Oxygen Demand on the facility's 1st Quarter 2015 Discharge Monitoring Report. On February 4, 2016, the department received a letter from the owner in response to the January 22, 2016, Notice of Violation. The letter stated the exceedance of the Biochemical Oxygen Demand effluent limit was due to the aerator not running since the lagoon was frozen. The letter also stated staff would make every effort to keep the aerator in operation.

As part of the inspection, I conducted a review of the facility's records. I reviewed the facility's Discharge Monitoring Reports from 1st Quarter 2013 to 1st Quarter 2016. The facility's Discharge Monitoring Reports were up to date. I reviewed the operational monitoring from the facility. The facility has been submitting the required information except for in months when the primary lagoon cell is frozen, including December 2013, January 2014, February 2014, January 2015, February 2015, and March 2015 (Letter of Warning #2). When the primary lagoon cell is frozen, the facility must still record flow, ambient temperature, cloud cover, and precipitation. The facility has been conducting influent sampling and meeting a removal efficiency of 65% for Biochemical Oxygen Demand and Total Suspended Solids. The facility has a program for maintenance and repair of the collection system developed and has been submitting inflow and infiltration reports annually. Missouri State Operating Permit #MO-0096415 requires the facility to submit inflow and infiltration reports in April and October of each year (Letter of Warning #3).

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

Report of Inspection
BCSD, Cedar Gate Subdivision
June 20, 2016
Page 3

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. Ms. Lori Gale and Ms. Sarah Wright-Aholt, of the St. Louis Regional Office, were also present during the inspection for training purposes.

As I approached the facility, an all-weather access road was observed leading to the entrance of the facility. The facility was surrounded by a perimeter fence with a locked gate at the entrance (Photo #1). Warning signs were posted on each side of the perimeter fence.

The facility consists of a two cell lagoon with sludge retained in the lagoon. The primary cell of the lagoon is aerated (Photo #2). During the inspection, I walked around the perimeter of the lagoon cells. I did not observe any signs of leaks in the lagoon berms or any damage to the lagoon berms. The vegetation surrounding the lagoon was approximately 12 to 14 inches in height. I did not observe any deep rooted vegetation on the lagoon berms. The aerator in the primary cell was functioning during the inspection. Approximately two-thirds of the primary lagoon cell was covered with duckweed. The second lagoon cell was completely covered with duckweed (Photo #3). The inlet side of the discharge pipe had a t fitting to prevent the discharge of duckweed (Photo #4). Both lagoon cells had greater than two feet of storage remaining at the time of the inspection.

The inspection then proceeded with observations of the facility's outfall and the receiving stream. The outfall was marked in the field with a sign and was discharging during the inspection (Photo #5). Below the outfall, prior to the receiving stream, I observed a white film signifying the presence of sulfur bacteria (Photo #6). The effluent coming from the outfall had a strong sulfur odor at the time of the inspection. Samples were collected of the effluent for laboratory analyses. Water quality field monitoring was also conducted on the facility's effluent. Due to the low dissolved oxygen level in the facility's effluent, dissolved oxygen measurements were also taken in the receiving stream. Dissolved oxygen does not have water quality criteria in the receiving stream since the receiving stream does not have aquatic life as a designated use. The water quality field monitoring and laboratory results are provided in the Sampling and Monitoring section of this report. During the inspection I observed the receiving stream both upstream and downstream from the facility's outfall. I did not observe a visual impact from the facility on the receiving stream. I did not observe any duckweed in the receiving stream.

On July 6, 2016, the Boone County Regional Sewer District provided their sample results for the month of June 2016. The results obtained during the inspection were averaged with the results provided by the Boone County Regional Sewer District. The Boone County Regional Sewer District obtained a Biochemical Oxygen Demand value of 43 mg/L on June 15, 2016, and during the inspection a result of 57.8 mg/L was obtained, providing an average of 50.4 mg/L for the month of June 2016 (Letter of Warning #1). The Boone County Regional Sewer District also collected a sample for Biochemical Oxygen Demand on July 9, 2016, but stated the sample was unreadable.

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, conductivity, and dissolved oxygen. Ammonia test strips and a chlorine meter for water quality monitoring were also taken on the inspection.

I observed the receiving stream for the facility both upstream and downstream from the facility's outfall. I did not observe any visual impact to the receiving stream.

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

Sample #162351		
Outfall #001		
Parameter	Result	Units
Dissolved Oxygen	0.26	mg/L
pH	7.35	s.u.
Conductivity	1655	µS/cm
Temperature	21.7	°C

Upstream from Outfall #001		
Parameter	Result	Units
Dissolved Oxygen	1.82	mg/L
pH	6.70	s.u.
Conductivity	1617	µS/cm
Temperature	20.9	°C

Downstream from Outfall #001		
Parameter	Result	Units
Dissolved Oxygen	0.26	mg/L
pH	7.51	s.u.
Conductivity	1651	µS/cm
Temperature	22.5	°C

Report of Inspection
BCSD, Cedar Gate Subdivision
July 20, 2016
Page 5

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 #162351						
Outfall #001						
Results of Sample Analyses			Permit Limits			
Parameters	Sample Result	Units	Daily Max	Weekly Average	Monthly Average	Units
Biochemical Oxygen Demand (BOD ₅)	57.8	mg/L		65	45	mg/L
Total Suspended Solids (TSS)	28.0	mg/L		120	80	mg/L
Ammonia as N	22.0	mg/L	*		*	mg/L

*Monitoring requirement only

Compliance Determination and Required Actions

The facility was found to be **not in compliance** with Missouri State Operating Permit #MO-0096415, 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. In June 2016, failed to comply with the effluent limits contained in Part "A" of MSOP #MO-0096415 [Sections 644.051.1(3) and 644.076.1, RSMo].

REQUIRED ACTION: The facility exceeded the monthly average effluent limit for Biochemical Oxygen Demand in June 2016. The facility shall submit a written statement to the Northeast Regional Office by **August 22, 2016**, explaining what actions have been taken to correct the unsatisfactory feature and prevent a reoccurrence in the future.

2. Failed to carry out the minimum requirements for laboratory testing to ensure adequate wastewater systems in-plant operational control [Section 644.076.1 RSMo, and 10 CSR 20-9.010(5)].

REQUIRED ACTION: The facility has not been documenting any operational monitoring during months when the primary cell of the lagoon is frozen. When the primary lagoon cell is frozen, the facility must still record flow, ambient temperature, cloud cover, and precipitation. The facility shall submit a written statement to the Northeast Regional Office by **August 22, 2016**, explaining what actions have been taken to correct the unsatisfactory feature and prevent a reoccurrence in the future.

Report of Inspection
BCSD, Cedar Gate Subdivision
July 20, 2016
Page 6

3. 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-0096415 [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 **August 22, 2016**, explaining what actions have been taken to correct the unsatisfactory feature and prevent a reoccurrence in the future.

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:



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
BCSD, Cedar Gate Subdivision
July 20, 2016
Page 1



Photograph #: 1
Taken by: Leland Maize
Entity: BCSD, Cedar Gate Subdivision
Permit: #MO-0096415
Location: Boone County
Description: Entrance gate to the facility with a warning sign posted on the fence. Gate was locked prior to the inspection.
Date Taken: June 7, 2016
Program: WPC Unit



Photograph #: 2
Taken by: Leland Maize
Entity: BCSD, Cedar Gate Subdivision
Permit: #MO-0096415
Location: Boone County
Description: Primary lagoon cell with aerator functioning during the inspection. Duckweed covered approximately two-thirds of the primary cell.
Date Taken: June 7, 2016
Program: WPC Unit



Photograph #: 3
Taken by: Leland Maize
Entity: BCSD, Cedar Gate Subdivision
Permit: #MO-0096415
Location: Boone County
Description: Secondary cell of the lagoon. Duckweed was observed covering the entire cell.
Date Taken: June 7, 2016
Program: WPC Unit

Initial LM



Photograph #: 4
Taken by: Leland Maize
Entity: BCSD, Cedar Gate Subdivision
Permit: #MO-0096415
Location: Boone County
Description: Inlet side of the discharge pipe. A T fitting was in place on the inlet side.
Date Taken: June 7, 2016
Program: WPC Unit



Photograph #: 5
Taken by: Leland Maize
Entity: BCSD, Cedar Gate Subdivision
Permit: #MO-0096415
Location: Boone County
Description: Sign marking the location of the facility's outfall.
Date Taken: June 7, 2016
Program: WPC Unit



Photograph #: 6
Taken by: Leland Maize
Entity: BCSD, Cedar Gate Subdivision
Permit: #MO-0096415
Location: Boone County
Description: Outfall pipe with a white film in the area directly below the outfall pipe.
Date Taken: June 7, 2016
Program: WPC Unit

Initial LM



Sludge Handling Checklist for Wastewater Treatment Facilities

Facility Name: BCSD, Cedar Gate Subdivision	MSOP #: MO-0096415		
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?	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

CERTIFIED MAIL

7014 1200 0001 0386 8160

5.200 BCSD - Cedar Gate Subdivision
Boone County
#MO-0096415
NOV #NER 2015030509453510

January 22, 2016

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-0096415 was issued for the Boone County Regional Sewer District (BCSD) - Cedar Gate Subdivision 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 Quarter 2015 Discharge Monitoring Report (DMR) for the BCSD - Cedar Gate Subdivision. It was noted that the effluent data you reported from Outfall #001 exceeded the effluent limitation parameter of Biochemical Oxygen Demand (BOD). A BOD concentration of 116 mg/L was reported, whereas MSOP #MO-0096415 sets forth a monthly average limit of 45 mg/L.

Therefore, Notice of Violation #NER 2015030509453510 is hereby issued to BCSD - Cedar Gate Subdivision for failure to comply with the aforementioned effluent limitations. Per state regulation 10 CSR 20-7.015(9)(D)(4), please provide a written report by **February 15, 2016**, which explains the cause for the non-compliance, exact dates of non-compliance, date upon which you returned to compliance, and what steps your operation performed to prevent a reoccurrence of the violation. BCSD - Cedar Gate Subdivision will be considered in non-compliance with this violation until the documentation is submitted to this office. Our files will reflect the continued non-compliance regarding this violation until the required documentation is submitted for review.



Recycled Paper

BCSD - Cedar Gate Subdivision
January 22, 2016
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

A handwritten signature in black ink, appearing to read "Irene Crawford". The signature is fluid and cursive, with the first name "Irene" and last name "Crawford" clearly distinguishable.

Irene Crawford
Regional Director

IC/dsm

5.200 BCSD - Cedar Gate Subdivision
Boone County
#MO-0096415

May 9, 2013

Tom Ratermann, P.E., 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) - Cedar Gate Subdivision Wastewater Treatment Facility (WWTF), located in Boone County, Missouri, was conducted on April 4, 2013. 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 **May 30, 2013**. Your cooperation in this matter will be appreciated.

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

Sincerely,

NORTHEAST REGIONAL OFFICE



Irene Crawford
Regional Director

IC/msb

Enclosures: Report of Compliance Inspection

**REPORT OF COMPLIANCE INSPECTION
BCSD - CEDAR GATE SUBDIVISION
BOONE COUNTY
#MO-0096415
May 9, 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) - Cedar Gate Subdivision 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 April 4, 2013.

This inspection was conducted to determine the facility's compliance with Missouri State Operating Permit #MO-0096415, 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-0096415 was last issued on November 9, 2007, and expired on November 8, 2012. 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 March 19, 2012. The permittee is to follow the requirements of the expired permit until a new permit is issued.

The BCSD - Cedar Gate Subdivision WWTF consists of a two cell aerated lagoon. The facility is owned and operated by the BCSD. The permit specifies a design population equivalent of 111, and a design flow of 11,000 gallons per day. Actual flow is listed as 4,348 gallons per day.

The legal description of the BCSD - Cedar Gate Subdivision WWTF is listed on the permit as the SE ¼, SE ¼, NW ¼, Section 23, Township 50 North, Range 12 West, in Boone County. The receiving stream for this facility is an unnamed tributary to Varnon Branch (U).

A previous routine compliance inspection was conducted by the Northeast Regional Office's Water Pollution Compliance Unit on March 31, 2011. At the time of that inspection, the facility was found to be operating in compliance. However, one unsatisfactory feature was discovered that needed to be addressed. Deep-rooted vegetation was discovered growing on the lagoon berms.

DISCUSSION OF INSPECTION AND OBSERVATIONS

Prior to the inspection the files for the BCSD - Cedar Gate Subdivision WWTF were reviewed, including the Permit Conditions of Missouri State Operating Permit #MO-0096415, to familiarize the inspector with the requirements specific to this facility.

Report of Compliance Inspection
BCSD - Cedar Gate Subdivision
May 9, 2013
Page 2

The inspection was conducted during normal business hours. Prior notification was not provided to the facility. Upon arrival at the facility, the inspector spoke with Mr. Virgil Farnen, Operations Supervisor, via telephone and the purpose and scope of the inspection were outlined. Mr. Farnen granted permission to access the site but was unable to accompany the inspector throughout the tour of the facility.

Mr. Smith began the inspection by observing the facility's gate. The gate was locked at the time of inspection and a warning sign was observed posted on the gate (Photo #1). Mr. Smith observed the perimeter fencing surrounding the facility (Photo #2). Signs were observed posted on all four sides of the perimeter fence. Vines and trees were observed growing within the fencing on the south side of the facility (Photos #3 & 4). Mr. Smith observed a gap in the fencing in one area that could allow unauthorized access to the facility (Photo #5).

Mr. Smith then observed the two cell lagoon system, beginning with the primary cell. The primary lagoon cell is aerated and the aerator was running at the time of inspection (Photo #6). Duckweed and trash were observed on top of the lagoon (Photo #7). Erosion of the inner lagoon berms was observed (Photo #8). Approximately three to four feet of freeboard appeared available in the lagoon.

The secondary lagoon cell was then observed (Photo #9). Duckweed was observed on the secondary cell (Photos #10-12). Erosion damage of the inner lagoon berms was observed, including muskrat burrows and bank dens (Photo #10-12). A T-fitting was observed on the inlet side of the discharge pipe to prevent the discharge of duckweed (Photo #13). Approximately two to three feet of freeboard appeared available in the lagoon. No evidence of an unpermitted discharge through the lagoon berms of either cell was observed. No deep-rooted vegetation was observed growing on the lagoon berms of either cell.

Mr. Smith observed the facility's outfall location. A sign marking the outfall was observed (Photo #14). The facility was discharging at the time of inspection. The effluent appeared clear. No odor was observed at the outfall. Limited space below the discharge pipe was available for sampling (Photo #15). The facility may consider clearing additional space below the pipe to make sample collection easier. Mr. Smith observed the water in the receiving stream, which appeared clear (Photo #16). No impacts from the facility were observed in the receiving stream.

Mr. Smith conducted water quality monitoring of the facility's effluent from Outfall #001, the results of which can be found under the Water Quality Monitoring section of this report. Mr. Smith collected samples for Biochemical Oxygen Demand (BOD) and Total Suspended Solids (TSS) and submitted the samples to the Environmental Services Program lab in Jefferson City for analysis. The sample results can also be found under the Water Quality Monitoring section of this report.

Report of Compliance Inspection
BCSD - Cedar Gate Subdivision
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Mr. Smith reviewed the department records for the facility. Semi-annual inflow and infiltration reports have been received from the facility as required. Mr. Smith reviewed the facility's Discharge Monitoring Reports (DMRs). In-plant operation control monitoring is required twice per month for this facility and is being conducted as required. Annual influent monitoring is being conducted as required. The facility has been meeting the minimum removal efficiency of 65% for both BOD and TSS. No effluent violations have been reported on the facility's DMRs since the second quarter of 2008. Flow is required to be monitored once per month at the facility. Mr. Smith discovered that the monthly monitoring report for January of 2012 has not been received by the department. Mr. Smith also discovered that flow was not reported on the facility's monthly monitoring report for February of 2013.

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.

BCSD – Cedar Gate Subdivision, #MO-0096415 Outfall #001, Boone County		
Parameter	Result	Units
pH	8.22	s.u.
Temperature	12.7	°C
Dissolved Oxygen	7.96	mg/L
Conductivity	1114	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.

BCSD – Cedar Gate Subdivision, #MO-0096415 Outfall #001, Boone County						
Results of Sample Analyses			Permit Limits			
Parameters	Sample Result	Units	Daily Max	Weekly Average	Monthly Average	Units
BOD ₅	16.6	mg/L	-----	65	45	mg/L
Total Suspended Solids (TSS)	17.0	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-0096415, based upon the observations made at the time of the inspection.

UNSATISFACTORY FEATURES

1. Failed to submit complete Discharge Monitoring Report as required in part "A" of Missouri State Operating Permit (MSOP) #MO-0096415 [Section 644.076.1, RSMo, and 10 CSR 20-7.015(9)(A)1.].

REQUIRED ACTION: Flow is required to be monitored monthly at the facility. The monthly monitoring report for January of 2012 has not been received. Flow was not reported on the monthly monitoring report for February of 2013. The facility shall submit the missing report and flow information, if available, and a written statement to the Northeast Regional Office by **May 30, 2013**, 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 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. By **May 30, 2013**, the facility shall provide written 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 provide adequate fencing to prevent unauthorized access [10 CSR 20-8.020(11)(C)11.A.].

REQUIRED ACTION: The facility is to repair or construct adequate fencing in the damaged areas. By **May 30, 2103**, the facility shall provide written 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.

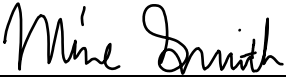
RECOMMENDATIONS – **Actions that are being recommended by the inspector but are not required to bring the facility into compliance at the time of the inspection.**

1. Ensure that the vegetation on the inner lagoon berms is routinely reduced in height; six inch height is recommended.

Report of Compliance Inspection
BCSD - Cedar Gate Subdivision
May 9, 2013
Page 5

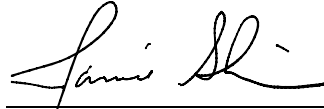
2. Remove deep-rooted vegetation from the lagoon berms as discovered.
3. Routinely inspect the effluent pipe for obstructions; clean out and repair the piping as needed.
4. Routinely examine the storm water diversion system to ensure that additional storm water is not entering the lagoon system or pooling and saturating the lagoon berms.
5. Consider clearing space below the outfall pipe to allow easier sampling.
6. Ensure trash in the lagoon cells is removed as discovered.

SUBMITTED BY:



Mike Smith
Environmental Specialist
Northeast Regional Office

REVIEWED BY:



Jamie Shinn
Environmental Specialist
Northeast Regional Office

MS/bb



Photo #: 1
By: Mike Smith
Facility: BCSD - Cedar Gate Subdivision WWTF
Permit: #MO-0096415
Location: Boone County

Description: View of facility gate. Warning sign posted on gate. Gate was locked at the time of inspection.

Date Taken: April 4, 2013
Program: WPC Unit



Photo #: 2
By: Mike Smith
Facility: BCSD - Cedar Gate Subdivision WWTF
Permit: #MO-0096415
Location: Boone County

Description: View of perimeter fencing.

Date Taken: April 4, 2013
Program: WPC Unit



Photo #: 3
By: Mike Smith
Facility: BCSD - Cedar Gate Subdivision WWTF
Permit: #MO-0096415
Location: Boone County

Description: View of trees and vines growing within the perimeter fencing on the south side of the facility.

Date Taken: April 4, 2013
Program: WPC Unit

Initial MDS



Photo #: 4
By: Mike Smith
Facility: BCSD - Cedar Gate Subdivision WWTF
Permit: #MO-0096415
Location: Boone County

Description: View of trees observed growing within the perimeter fencing on the south side of the facility.

Date Taken: April 4, 2013
Program: WPC Unit



Photo #: 5
By: Mike Smith
Facility: BCSD - Cedar Gate Subdivision WWTF
Permit: #MO-0096415
Location: Boone County

Description: Gap in the perimeter fencing observed that could allow unauthorized access to the facility.

Date Taken: April 4, 2013
Program: WPC Unit



Photo #: 6
By: Mike Smith
Facility: BCSD - Cedar Gate Subdivision WWTF
Permit: #MO-0096415
Location: Boone County

Description: View of primary lagoon cell. Aerator was running at the time of inspection.

Date Taken: April 4, 2013
Program: WPC Unit

Initial MDS



Photo #: 7
By: Mike Smith
Facility: BCSD - Cedar Gate Subdivision WWTF
Permit: #MO-0096415
Location: Boone County

Description: View of duckweed and trash observed in the primary lagoon cell.

Date Taken: April 4, 2013
Program: WPC Unit



Photo #: 8
By: Mike Smith
Facility: BCSD - Cedar Gate Subdivision WWTF
Permit: #MO-0096415
Location: Boone County

Description: View of eroded inner berms of the primary lagoon cell.

Date Taken: April 4, 2013
Program: WPC Unit



Photo #: 9
By: Mike Smith
Facility: BCSD - Cedar Gate Subdivision WWTF
Permit: #MO-0096415
Location: Boone County

Description: View of secondary lagoon cell.

Date Taken: April 4, 2013
Program: WPC Unit

Initial MDS



Photo #: 10
By: Mike Smith
Facility: BCSD - Cedar Gate Subdivision WWTF
Permit: #MO-0096415
Location: Boone County

Description: View of duckweed in secondary cell.
Eroded inner berms observed.

Date Taken: April 4, 2013
Program: WPC Unit



Photo #: 11
By: Mike Smith
Facility: BCSD - Cedar Gate Subdivision WWTF
Permit: #MO-0096415
Location: Boone County

Description: View of muskrat burrow in the lagoon
berm of the secondary cell. Duckweed also
observed.

Date Taken: April 4, 2013
Program: WPC Unit



Photo #: 12
By: Mike Smith
Facility: BCSD - Cedar Gate Subdivision WWTF
Permit: #MO-0096415
Location: Boone County

Description: View of additional muskrat damage
observed on the inner berm of the secondary cell.

Date Taken: April 4, 2013
Program: WPC Unit

Initial MDS



Photo #: 13
By: Mike Smith
Facility: BCSD - Cedar Gate Subdivision WWTF
Permit: #MO-0096415
Location: Boone County

Description: View of duckweed in secondary cell. T-fitting observed on the inlet side of the effluent pipe.

Date Taken: April 4, 2013
Program: WPC Unit



Photo #: 14
By: Mike Smith
Facility: BCSD - Cedar Gate Subdivision WWTF
Permit: #MO-0096415
Location: Boone County

Description: View of sign marking outfall location.

Date Taken: April 4, 2013
Program: WPC Unit



Photo #: 15
By: Mike Smith
Facility: BCSD - Cedar Gate Subdivision WWTF
Permit: #MO-0096415
Location: Boone County

Description: View of discharge pipe. Facility was discharging at the time of inspection. Effluent appeared clear. Limited space available below pipe for sampling.

Date Taken: April 4, 2013
Program: WPC Unit

Initial MDS



Photo #: 16

By: Mike Smith

Facility: BCSD - Cedar Gate Subdivision WWTF

Permit: #MO-0096415

Location: Boone County

Description: View of receiving stream. No impacts from the facility observed.

Date Taken: April 4, 2013

Program: WPC Unit

Initial MDS

Sludge handling checklist for wastewater treatment facilities

BCSD – Cedar Gate Subdivision, #MO-0096415, Boone County

- 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?

Never

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

Never

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

NA

- 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



Jeremiah W. (Jay) Nixon, Governor

Sara Parker Pauley, Director

DEPARTMENT OF NATURAL RESOURCES

dnr.mo.gov

5.200 BCRSD - Highfield Acres Wastewater Treatment Facility
Boone County
#MO-0053376

October 5, 2016

Mr. Dwayne Cooksey, Operations Manager
Boone County Regional Sewer District (BCRSD)
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 September 1, 2016. The enclosed report is being issued with a Letter of Warning (LOW) for the violations identified.

Violations Include:

- Caused pollution of the tributary to North Fork Grindstone Creek, 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 maintain inner berm slopes.

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 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.

Sincerely,

NORTHEAST REGIONAL OFFICE

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

Irene Crawford
Regional Director

IC/mwd

Enclosures: Report of Inspection

Missouri Department of Natural Resources
Northeast Regional Office
Report of Inspection
BCRSD - Highfield Acres Wastewater Treatment Facility
Wester Lane, Columbia, Missouri, 65201, Boone County
#MO-0053376
October 5, 2016

Introduction

Pursuant to Section 644.026.1 of the Missouri Clean Water Law, I, Michael Womack, conducted a routine inspection of the Boone County Regional Sewer District (BCRSD) - Highfield Acres Wastewater Treatment Facility in Boone County, Missouri, on September 1, 2016. The following people participated in the inspection:

Boone County Regional Sewer District
Mr. Dwayne Cooksey Operations Manager (573) 441-0098

Missouri Department of Natural Resources
Michael Womack Environmental Specialist

This inspection was conducted to determine the facility's compliance with Missouri State Operating Permit #MO-0053376, 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-0053376 was last issued on September 1, 2013, and expires on March 31, 2015. A permit renewal application was received on June 12, 2014. The facility is to follow the conditions of the expired permit until a new permit is issued. This permit sets forth effluent limitations, monitoring requirements, and permit conditions, both standard and specific, that the permittee is to follow.

The wastewater treatment facility serving the Highfield Acres Subdivision consists of two, single-celled lagoons. The Missouri State Operating Permit lists a design population equivalent of 200 for Outfall #001 and a population equivalent of 90 for Outfall #002. The design flow for Outfall #001 is 20,000 gallons per day with an actual flow of 5,566 gallons per day. The design flow for Outfall #002 is 9,000 gallons per day with an actual flow of 2,999 gallons per day. The Outfall #001 lagoon has a design sludge production of 3 dry tons per year and the Outfall #002 lagoon has a design sludge production of 1.4 dry tons per year. The sludge is retained in the lagoons.

The legal description of the BCRSD, Highfield Acres Subdivision WWTF is listed on the permit as the SW ¼, NE ¼, Section 11, Township 48 North, Range 12 West, in Boone County. The UTM Coordinates of the facility is east 566381, north 4312346. The address of the facility is Wester Lane, Columbia, Missouri 65201. The receiving stream for this facility is a tributary to North Fork Grindstone Creek and it is located in the 10300102 HUC 8 watershed.

Report of Inspection
BCRSD - Highfield Acres Wastewater Treatment Facility
October 5, 2016
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Prior to the inspection, I reviewed the files for the BCRSD - Highfield Acres Wastewater Treatment Facility, including the Permit Conditions of MSOP #MO-0053376, to familiarize myself with the requirements specific to this facility.

The regional office performed the previous inspection on October 24, 2013. The facility was issued a Letter of Warning on November 5, 2013, for causing pollution of an unnamed tributary to North Fork Grindstone Creek, waters of the state, or placing or causing or permitting to be placed water contaminants in a location where it is reasonably certain to cause pollution of waters of the state and failed to collect an influent sample at least once per quarter in order to ensure a removal efficiency of 65% was being met by the wastewater treatment system.

On December 5, 2013, the Northeast Regional Office received a letter from the owner. The letter stated that staff would reposition the T-fitting on the outfall pipe. The letter also stated that the facility's current permit, with the effective date September 1, 2013, to March 31, 2015, did indicate influent monitoring requirements and it is the District's goal to comply with all these requirements as indicated on the permit. The letter also stated that the permit prior to the current permit, which was effective on August 4, 2006, to August 3, 2011, did not indicate an influent monitoring requirement. On January 2, 2014, the Northeast Regional Office sent a return to compliance letter to the owner.

On September 10, 2014, the Northeast Regional Office received a letter from the owner for the Schedule of Compliance Progress Report. The letter stated that the facility would be eliminated and connected to the City of Columbia sanitary sewer system, with a facility plan completed in 2014. The letter stated the design would be completed in 2015, land acquisition would be completed in 2016, and a revenue bond election will take place in 2018 and construction will take place between 2023 and 2028.

On January 14, 2015, the Northeast Regional Office issued the owner a Letter of Warning due to the facility's 1st Quarter 2014 Discharge Monitoring Report (DMR) reporting an effluent limitation exceedance from Outfall #001 for Biochemical Oxygen Demand (BOD). On January 28, 2015, the Northeast Regional Office received a letter from the owner. The letter stated that the facility did have an aerator failure during that timeframe of the BOD exceedance which allowed one lagoon cell to freeze over before they were able to make the repair and put the aerator back in service.

On August 17, 2015, the Northeast Regional Office received a letter from the owner addressing the Schedule of Compliance Progress Report. The letter stated that the facility would be eliminated and connected to the City of Columbia sanitary sewer system, with a facility plan completed in 2016. The letter stated the design will be completed in 2017, land acquisition will be completed in 2018, a revenue bond election will take place in 2018 and construction will take place between 2019 and 2029.

On January 22, 2016, the Northeast Regional Office issued the owner a Notice of Violation. The facility's 1st Quarter 2015 DMR reported an effluent limitation exceedance from Outfall #001 for

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BCRSD - Highfield Acres Wastewater Treatment Facility
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Total Suspended Solids (TSS). On February 8, 2016, the Northeast Regional Office received a letter from the owner that stated a spike in the monthly monitoring record for February 2015 was found. The letter stated that TSS has dropped since the first quarter report and staff would evaluate further to see what steps were necessary for controlling TSS concentrations and keeping within the average monthly limit of 80 mg/L.

On June 24, 2016, the Northeast Regional Office sent the owner a letter. The letter stated that the facility's 1st Quarter 2016 DMR reported an effluent limitation exceedance from Outfall #001 for BOD. On July 13, 2016, the Northeast Regional Office received a letter from the owner. The owner stated that the lagoon is aerated, therefore there were no issues with aeration. The letter stated that there were, however, issues with ice buildup on the primary cell which tends to reduce the dissolved oxygen and staff would make every effort to operate the facility to achieve the best effluent water quality possible and to comply with the permit limits.

I conducted a file review back to October 2013. Upon review of the files, the facility failed to meet a removal efficiency of at least 65% for Biochemical Oxygen Demand (BOD) and Total Suspended Solids (TSS) on multiple occasions. The tables below show the removal efficiency for both Outfall #001 and Outfall #002.

Outfall #001 Removal Efficiency

Quarter	Influent BOD	Effluent BOD	BOD % Removal	Influent TSS	Effluent TSS	TSS % Removal
3rd 2016	81	17	79.01	64	26	59.38*
2nd 2016	111	57	48.65*	78	25.5	67.31
1st 2016	174	64	63.22*	184	60.5	67.12
4th 2015	294	18	93.88	26	7	73.08
3rd 2015	347	25	92.80	280	70	75.00
2nd 2015	70	24	65.71	52	37	28.85*
1st 2015	177	48	72.88	44	164.5	-273.86*
4th 2014	118	25	78.81	176	11	93.75
3rd 2014	133	16	87.97	72	10	86.11
2nd 2014	109	21	80.73	140	19	86.43
1st 2014	143	70	51.05*	148	22	85.14
4th 2013	106	8	92.45	112	14	87.50

*Removal Efficiency Violation

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BCRSD - Highfield Acres Wastewater Treatment Facility
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Outfall #002 Removal Efficiency

Quarter	Influent BOD	Effluent BOD	BOD % Removal	Influent TSS	Effluent TSS	TSS % Removal
3rd 2016	80	7	91.25	62	38	38.71*
2nd 2016	268	19	92.91	194	11	94.33
1st 2016	90	42	53.33*	58	13.5	76.72
4th 2015	228	24	89.47	168	22	86.90
3rd 2015	93	18	80.65	102	30	70.59
2nd 2015	145	7	95.17	103	12	88.35
1st 2015	137	41	70.07	269	69	74.35
4th 2014	159	10	93.71	120	6	95.00
3rd 2014	188.5	10	94.69	198	18.5	90.66
2nd 2014	194	13	93.30	214	18	91.59
1st 2014	144	14	90.28	154	22	85.71
4th 2013	104	8	92.31	106	7.5	92.92

*Removal Efficiency Violation

Discussion of Inspection and Observations

I conducted the inspection 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. 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 observed that the facility had an all-weather access road leading to the facility's access gate. The access gate was observed to be locked at the time of the inspection. I observed the perimeter fence around the facility to be in good condition to prevent any unwanted access. I also observed the facility to have warning signs posted on all sides of the perimeter fence.

Next I observed the Outfall #001 lagoon cell (photo #1). The grass around the lagoon was observed to have been well maintained in height. I observed duckweed to have covered approximately 90% of the surface area of the lagoon. I observed it appeared the aerator was functioning properly within the lagoon. Areas of erosion were observed to be present on all sides of the inner lagoon berms of the lagoon cell (photo #2). Mr. Cooksey stated that he would have his staff make sure those areas were corrected and filled in.

I then observed Outfall #001 (photo #3). The outfall was marked in the field with a sign that read, "Outfall #1." I observed the facility to be discharging at the time of the inspection. I also observed duckweed to be present below Outfall #001 for approximately 15 feet (photo #4). Mr. Cooksey stated that T-fittings could be placed on the effluent pipe to prevent the release of duckweed.

Next I observed the Outfall #002 lagoon cell (photo #5). The grass around the lagoon was observed to have been well maintained in height. I observed duckweed to have covered

Report of Inspection
BCRSD - Highfield Acres Wastewater Treatment Facility
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Page 5

approximately 90% of the surface area of the lagoon. I observed it appeared the aerator was functioning properly within the lagoon. Areas of erosion were observed to be present on all sides of the inner lagoon berms of the lagoon cell. Mr. Cooksey stated that he would have his staff make sure those areas were corrected and filled in.

I then observed Outfall #002 (photo #6 and #7). The outfall was marked in the field with a sign that read, "Outfall #." I observed the number 2 to be missing from the sign. The sun had bleached the sign enough to see a faint number 2 present on the sign, indicating the number used to be on the sign. I observed a yellow hose draped over the outfall sign, but the hose did not enter the lagoon (photo #6). I observed the facility to be discharging at the time of the inspection. I also observed duckweed to be present below Outfall #002 for approximately five feet (photo #7). Mr. Cooksey asked if it would be possible to place the effluent pipe below the water level to prevent a duckweed discharge. I stated that would work until the water level reached the same level as the effluent pipe and then duckweed would be able to discharge through the outfall location.

I conducted water quality field monitoring at Outfall #001 and Outfall #002 on the effluent that was being discharged. The results of the water quality field monitoring can be found in the Sampling and Monitoring section of the report. I collected samples for Biochemical Oxygen Demand (BOD) and Total Suspended Solids (TSS) at Outfall #001 and Outfall #002. The samples were delivered to the Environmental Services Program Lab in Jefferson City for analysis. I also collected duplicate samples from Outfall #002 for the purpose of Quality Assurance and Quality Control. The duplicate samples were also delivered to the Environmental Services Program Lab in Jefferson City for analysis.

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, 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(s) for the listed parameters. The water appeared to be clear and odorless at the time of the inspection.

Sample #161071		
Outfall #001		
Parameter	Result	Units
Dissolved Oxygen	4.17	mg/L
pH	7.58	s.u.
Conductivity	919	µS/cm
Temperature	24.6	°C

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BCRSD - Highfield Acres Wastewater Treatment Facility
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Sample #161072		
Outfall #002		
Parameter	Result	Units
Dissolved Oxygen	1.71	mg/L
pH	7.62	s.u.
Conductivity	666	μS/cm
Temperature	24.2	°C

Sample #161073		
Duplicate Sample from Outfall #002		
Parameter	Result	Units
Dissolved Oxygen	1.70	mg/L
pH	7.68	s.u.
Conductivity	664	μS/cm
Temperature	24.5	°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 #161071						
Outfall #001						
Results of Sample Analyses			Permit Limits			
Parameters	Sample Result	Units	Daily Max	Weekly Average	Monthly Average	Units
Biochemical Oxygen Demand (BOD ₅)	17.8	mg/L	*	65	45	mg/L
Total Suspended Solids (TSS)	28.0	mg/L	*	120	80	mg/L

Sample #161072						
Outfall #002						
Results of Sample Analyses			Permit Limits			
Parameters	Sample Result	Units	Daily Max	Weekly Average	Monthly Average	Units
Biochemical Oxygen Demand (BOD ₅)	21.2	mg/L	*	65	45	mg/L
Total Suspended Solids (TSS)	7.00	mg/L	*	120	80	mg/L

Sample #161073						
Duplicate Sample from Outfall #002						
Results of Sample Analyses			Permit Limits			
Parameters	Sample Result	Units	Daily Max	Weekly Average	Monthly Average	Units
Biochemical Oxygen Demand (BOD ₅)	24.4	mg/L	*	65	45	mg/L
Total Suspended Solids (TSS)	9.00	mg/L	*	120	80	mg/L

Compliance Determination and Required Actions

The facility was found to be **not in compliance** with Missouri State Operating Permit #MO-0053376, the Clean Water Commission Regulations, and the Missouri Clean Water Law, based upon the observations made at the time of the inspection and file review.

Unsatisfactory Findings

1. Caused pollution of the tributary to North Fork Grindstone Creek, waters of the state, or placed or caused or permitted to be placed water contaminants, duckweed, 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 ACTION: The owner shall submit a written statement to the Northeast Regional Office by **November 3, 2016**, explaining what actions have been taken to correct the unsatisfactory feature and prevent a reoccurrence in the future.

2. Failed to meet a removal efficiency of 65% for Biochemical Oxygen Demand and Total Suspended Solids, as required by the Influent Monitoring Requirements of MSOP #MO-0053376 [Section 644.076.1, RSMo].

REQUIRED ACTION: As displayed in the tables under the Entity Description and History section of this report, the facility has failed to meet a removal efficiency of at least 65% for Biochemical Oxygen Demand and Total Suspended Solids on multiple occasions. The facility must submit a written statement to the Northeast Regional Office by **November 3, 2016**, explaining what actions have been taken to correct this violation and prevent a reoccurrence in the future.

3. Failed to maintain the inner berm slopes of the lagoon to be no less than three to one (3:1), as required by Special Condition #18 of MSOP #MO-0053376 [644.076.1, RSMo and 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.

Report of Inspection
BCRSD - Highfield Acres Wastewater Treatment Facility
October 5, 2016
Page 8

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 3, 2016**, 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

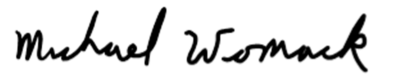
1. Consider installing a splash pad or riprap below the outfall pipe to prevent erosion of the drainage way.
2. Ensure the number 2 on the outfall sign is replaced.

Additional Comments/Conclusion

None

Signatures

SUBMITTED BY:



Michael Womack
Environmental Specialist
Northeast Regional Office

MW/dm

REVIEWED BY:



Jamie Shinn
Environmental Supervisor
Northeast Regional Office

Attachments

- Attachment # 1 – Photos 1 through 7**
- Attachment # 2 – Sludge Handling Checklist**
- Attachment # 3 – Aerial Map**

Attachment #1
BCRSD - Highfield Acres Wastewater Treatment Facility
October 5, 2016
Page 1



Photograph #: 1
Taken by: Michael Womack
Entity: BCRSD - Highfield Acres Wastewater Treatment Facility
Permit: #MO-0053376
Location: BOONE
Description: Observation of Outfall #001 lagoon cell. Duckweed is observed to be present and it appears the aerator is operating properly.
Date Taken: September 1, 2016
Program: WPC Unit



Photograph #: 2
Taken by: Michael Womack
Entity: BCRSD - Highfield Acres Wastewater Treatment Facility
Permit: #MO-0053376
Location: BOONE
Description: Observation of erosion damage on the northwest inner lagoon berm of the Outfall #001 lagoon cell.
Date Taken: September 1, 2016
Program: WPC Unit



Photograph #: 3
Taken by: Michael Womack
Entity: BCRSD - Highfield Acres Wastewater Treatment Facility
Permit: #MO-0053376
Location: BOONE
Description: Observation of Outfall #001.
Date Taken: September 1, 2016
Program: WPC Unit

Initial *MW*



Photograph #: 4
Taken by: Michael Womack
Entity: BCRSD - Highfield Acres Wastewater Treatment Facility
Permit: #MO-0053376
Location: Boone
Description: Observation of duckweed below Outfall #001.
Date Taken: September 1, 2016
Program: WPC Unit



Photograph #: 5
Taken by: Michael Womack
Entity: BCRSD - Highfield Acres Wastewater Treatment Facility
Permit: #MO-0053376
Location: Boone
Description: Observation of Outfall #002 lagoon cell. Duckweed is observed within the lagoon and erosion damage is observed at the southwest inner lagoon berm of the lagoon (bottom left corner). The aerator appears to be operating properly.
Date Taken: September 1, 2016
Program: WPC Unit



Photograph #: 6
Taken by: Michael Womack
Entity: BCRSD - Highfield Acres Wastewater Treatment Facility
Permit: #MO-0053376
Location: Boone
Description: Observation of Outfall #002 with the missing number 2. The hose was observed to be draped over the sign but was not observed to be entering the lagoon.
Date Taken: September 1, 2016
Program: WPC Unit

Initial *MW*

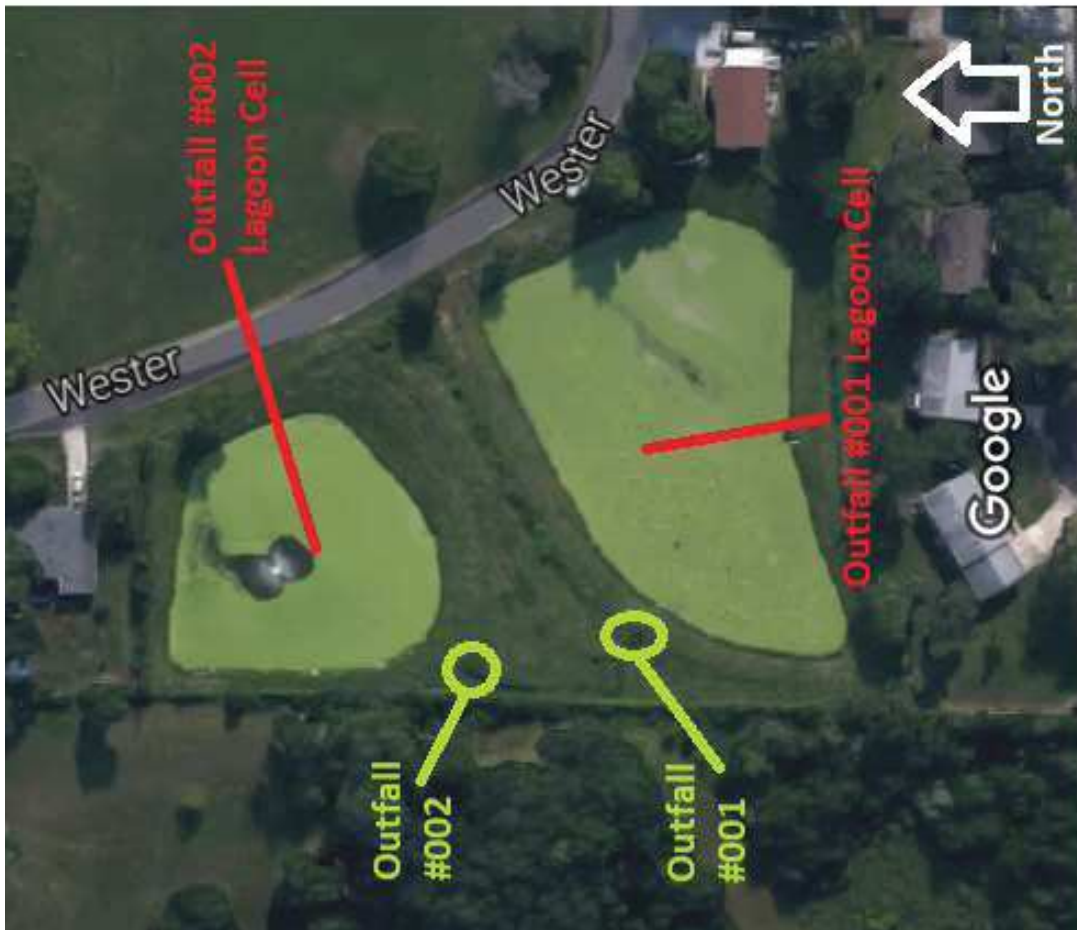


Photograph #: 7
Taken by: Michael Womack
Entity: BCRSD - Highfield Acres Wastewater Treatment Facility
Permit: #MO-0053376
Location: Boone
Description: Observation of Outfall #002 with duckweed present below the outfall location.
Date Taken: September 1, 2016
Program: WPC Unit

Initial MW

Sludge Handling Checklist for Wastewater Treatment Facilities

Facility Name: BCRSD - Highfield Acres Wastewater Treatment Facility	MSOP #: MO-0053376		
Issue to be addressed	Options		Not Inspected
What method (land application, incineration, landfill, etc) is used for sludge management?	Sludge retained in lagoon		<input type="checkbox"/>
	Date		
How often is sludge removed from the facility?	Not been removed		<input type="checkbox"/>
When was the last time sludge was removed?	Not been removed		<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:			





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:
 160901012



Report Date:
 9/22/2016

Sample: AC84995		Facility ID: MO0053376	Customer #: 161071	
		Site: BCRSD-Highfield Acres WWTF	County: Boone	
Collect Date: 9/1/2016 11:35:00 AM	Collector: MICHAEL WOMACK	Affiliation: NERO		
Sample Location: 161071				
Comments: Grab; Outfall #001				
Test	Parameter/Method	Result	Units	Qualifier(s)
Biochemical Oxygen Demand	Biochemical Oxygen Demand/SM 5210-B	17.8	mg/L	06
Field Dissolved Oxygen	Field Dissolved Oxygen/SM 4500-O-G	4.17	mg/L	
Field pH	Field pH/EPA 150.1	7.58	pH Units	
Field Specific Conductivity	Field Specific Conductivity/SM 2510	919 uS/cm		
Field Temperature	Field Temperature/EPA 170.1	24.6 C		
Total Suspended Solids (TSS) / NFR	Total Suspended Solids (TSS) / NFR/SM 2540-D	28.0	mg/L	
Sample: AC84996		Facility ID: MO0053376	Customer #: 161072	
		Site: BCRSD-Highfield Acres WWTF	County: Boone	
Collect Date: 9/1/2016 11:40:00 AM	Collector: MICHAEL WOMACK	Affiliation: NERO		
Sample Location: 161072				
Comments: Grab; Outfall #002				
Test	Parameter/Method	Result	Units	Qualifier(s)
Biochemical Oxygen Demand	Biochemical Oxygen Demand/SM 5210-B	21.2	mg/L	06
Field Dissolved Oxygen	Field Dissolved Oxygen/SM 4500-O-G	1.71	mg/L	
Field pH	Field pH/EPA 150.1	7.62	pH Units	
Field Specific Conductivity	Field Specific Conductivity/SM 2510	666 uS/cm		
Field Temperature	Field Temperature/EPA 170.1	24.2 C		
Total Suspended Solids (TSS) / NFR	Total Suspended Solids (TSS) / NFR/SM 2540-D	7.00	mg/L	

Sample: AC84997

Facility ID: MO0053376

Customer #: 161073



Site: BCRSD-Highfield Acres WWTF

County: Boone

Collect Date: 9/1/2016 11:45:00 AM

Collector: MICHAEL WOMACK

Affiliation: NERO

Sample Location: 161073

Comments: Grab; Outfall #002 Duplicate of sample #161072

Test	Parameter/Method	Result	Units	Qualifier(s)
Biochemical Oxygen Demand	Biochemical Oxygen Demand/SM 5210-B	24.4	mg/L	06
Field Dissolved Oxygen	Field Dissolved Oxygen/SM 4500-O-G	1.70	mg/L	
Field pH	Field pH/EPA 150.1	7.68	pH Units	
Field Specific Conductivity	Field Specific Conductivity/SM 2510	664 uS/cm		
Field Temperature	Field Temperature/EPA 170.1	24.5 C		
Total Suspended Solids (TSS) / NFR	Total Suspended Solids (TSS) / NFR/SM 2540-D	9.00	mg/L	

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

Data Qualifier(s)

06 Estimated value, QC data outside limits

Kevin Thoenen,
Laboratory Manager
Environmental Services Program
Division of Environmental Quality



Jeremiah W. (Jay) Nixon, Governor

Sara Parker Pauley, Director

DEPARTMENT OF NATURAL RESOURCES

dnr.mo.gov

5.200 BCRSD Highfield Acres WWTF
Boone County
#MO-0053376

January 14, 2015

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

LETTER OF WARNING

Dear Permittee:

Missouri State Operating Permit (MSOP) #MO-0053376 was issued for the Boone County Regional Sewer District Highfield Acres Wastewater Treatment Facility 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 Quarter 2014 Discharge Monitoring Report (DMR) for the Boone County Regional Sewer District Highfield Acres Wastewater Treatment Facility. It was noted that the effluent data you reported from Outfall #001 exceeded the effluent limitation parameter of Biochemical Oxygen Demand (BOD). A BOD concentration of 54.4 mg/L was reported, whereas permit MSOP #MO-0053376 sets forth a monthly average limit of 45 mg/L.

Please provide a written report by **February 4, 2015**, to the Department which explains the cause 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 this violation. Boone County Regional Sewer District Highfield Acres Wastewater Treatment Facility will be considered in non-compliance with this violation until the documentation is submitted to this office. Our files will reflect the continued non-compliance regarding this violation 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.

BCRSD Highfield Acres WWTF
January 14, 2015
Page 2

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

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/dsm



Jeremiah W. (Jay) Nixon, Governor

Sara Parker Pauley, Director

DEPARTMENT OF NATURAL RESOURCES

dnr.mo.gov

CERTIFIED MAIL

7012 2210 0001 5015 9859

5.200 BCRSD Highfield Acres WWTF
Boone County
#MO-0053376
NOV #NER 2015032717086168

January 22, 2016

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

NOTICE OF VIOLATION

Dear Mr. Cooksey:

Missouri State Operating Permit (MSOP) #MO-0053376 was issued for the Boone County Regional Sewer District (BCRSD) Highfield Acres Wastewater Treatment Facility (WWTF) 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 Quarter 2015 Discharge Monitoring Report (DMR) for the BCRSD Highfield Acres WWTF. It was noted that the effluent data you reported from Outfall #001 exceeded the effluent limitation parameter of Total Suspended Solids (TSS). A TSS concentration of 164.5 mg/L was reported, whereas permit MSOP #MO-0053376 sets forth a monthly average limit of 80 mg/L.

Therefore, Notice of Violation #NER 2015032717086168 is hereby issued to BCRSD Highfield Acres WWTF for failure to comply with the aforementioned effluent limitations. Per state regulation 10 CSR 20-7.015(9)(D)(4), please provide a written report by **February 15, 2016**, which explains the cause for the non-compliance, exact dates of non-compliance, date upon which you returned to compliance, and what steps your operation performed to prevent a

BCRSD Highfield Acres WWTF
January 22, 2016
Page 2

reoccurrence of the violation. BCRSD Highfield Acres WWTF will be considered in non-compliance with this violation until the documentation is submitted to this office. Our files will reflect the continued non-compliance regarding this violation 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, however printed copies of Discharge Monitoring Reports with the original signatures must be submitted.

Sincerely,

NORTHEAST REGIONAL OFFICE

A handwritten signature in black ink, appearing to read "Irene Crawford". The signature is fluid and cursive, with the first name "Irene" and last name "Crawford" clearly distinguishable.

Irene Crawford
Regional Director

IC/dsm



Jeremiah W. (Jay) Nixon, Governor

Sara Parker Pauley, Director

DEPARTMENT OF NATURAL RESOURCES

dnr.mo.gov

5.200 BCRSD - Highfield Acres WWTF
Boone County
#MO-0053376

November 25, 2013

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

LETTER OF WARNING

Dear Mr. Cooksey:

A routine compliance inspection of the Boone County Regional Sewer District (BCRSD) Highfield Acres Wastewater Treatment Facility (WWTF), located in Boone County, Missouri, was conducted on October 24, 2013. 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 **December 16, 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 Stephen Moss 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. Response 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/smb

Enclosures: Report of Compliance Inspection 

**REPORT OF COMPLIANCE INSPECTION
BCRSD HIGHFIELD ACRES WWTF
BOONE COUNTY
#MO-0053376
November 25, 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 (BCRSD) Highfield Acres Wastewater Treatment Facility (WWTF) in Boone County, Missouri, was conducted by Stephen Moss of the Missouri Department of Natural Resources' Northeast Regional Office on October 24, 2013. Kevin Sublett, Operator, participated in the inspection.

This inspection was conducted to determine the facility's compliance with Missouri State Operating Permit #MO-0053376, 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-0053376 was last issued on September 1, 2013, and expires on March 31, 2015. This permit sets forth effluent limitations, monitoring requirements, and permit conditions, both standard and specific, that the permittee is to follow.

The wastewater treatment facility serving the Highfield Acres Subdivision consists of two, single-celled lagoons. The Missouri State Operating Permit lists a design population equivalent of 200 for Outfall #001 and a population equivalent of 90 for Outfall #002. The design flow for Outfall #001 is 20,000 gallons per day with an actual flow of 5,566 gallons per day. The design flow for Outfall #002 is 9,000 gallons per day with an actual flow of 2,999 gallons per day. The Outfall #001 lagoon has a design sludge production of 3 dry tons/ year and the Outfall #002 lagoon has a design sludge production of 1.4 dry tons/ year. The sludge is retained in the lagoons.

The legal description of the BCRSD, Highfield Acres Subdivision WWTF is listed on the permit as the SW $\frac{1}{4}$, NE $\frac{1}{4}$, Section 11, Township 48 North, Range 12 West, in Boone County. The receiving stream for this facility is the North Fork Grindstone Creek.

A previous compliance inspection was conducted at the facility on April 17, 2012. At the time of the inspection the facility was found to be operating in non-compliance and a Letter of Warning was issued for the following unsatisfactory features: failed to apply for renewal of the Missouri State Operating Permit, failed to clearly mark the outfall, and deep-rooted vegetation was discovered on the lagoon berms.

DISCUSSION OF INSPECTION AND OBSERVATIONS

Prior to the inspection, the files for the BCRSD Highfield Acres WWTF were reviewed, including the Permit Conditions of Missouri State Operating Permit (MSOP) #MO-0053376, 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 while the inspector was in route to ensure timely access to the site. 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 began the inspection of the Highfield Acres WWTF by observing the perimeter fence and warning signs. Warning signs were posted on the fence on each side of the lagoon. The facility was observed to have a locked gate and a warning sign posted on the gate. The vegetation around the lagoons needed to be mowed. A paved city street, Wester Lane, provides access to the lagoons.

Mr. Moss observed Highfield Acres Outfall #001 and #002 lagoons. Mr. Moss observed that each lagoon had an aerator and both were functional at the time of the inspection. Both lagoons were observed to be almost completely covered with duckweed, other than the areas where aeration activity was taking place. The west side of the Outfall #002 lagoon was observed to have rip rap on it to prevent wave erosion. Both of the lagoons were observed to have no deep-rooted vegetation. Both lagoons were observed to have over two (2) feet of available freeboard.

The inspector observed the outfall locations. Mr. Moss observed signs marking each outfall. Mr. Moss observed duckweed below the outfall at the outfall #001 and #002 locations. Mr. Moss asked Mr. Sublett if the facility had T-fittings installed on the influent side of the outfall pipes. Mr. Sublett stated that it appeared that the T-fitting for Outfall #001 had rotated, which would allow duckweed to be discharged. Mr. Sublett stated that the Outfall #002 lagoon did have a T-fitting installed, but could not be observed because it was completely submerged in the lagoon. Mr. Moss observed Outfall #001 discharging and samples were taken of the effluent for analysis. The effluent from Outfall #001 was relatively clear with no odors noted. Outfall #002 was not discharging at the time of the inspection.

Following the inspection, Mr. Moss discussed the findings with Mr. Sublett. Mr. Moss stated that the facility needs to ensure that duckweed is not discharged into the stream. Mr. Sublett stated that he would address the issue immediately. Mr. Moss asked if this facility was going to hook up to the City of Columbia at the same time as the Sunrise Estates NW. Mr. Sublett stated that he was unsure of when this facility would be connected. Mr. Sublett stated that there is a problem at the site because of a gas line that runs through the facility.

Report of Compliance Inspection
BCRSD Highfield Acres WWTF
November 25, 2013
Page 3

According to the Schedule of Compliance section of Missouri State Operating Permit #MO-0053376, the BCRSD Highfield Acres WWTF is required to be in compliance with the final ammonia limits no later than six years of the effective date of the facility's Missouri State Operating Permit. By **March 1, 2014**, and **September 1, 2014**, the facility is required to submit a report detailing the progress made in attaining compliance with the final effluent limits. The final effluent limits become effective on September 1, 2019.

Upon review of the files, Mr. Moss found that the facility is conducting operational monitoring twice per month. Mr. Moss found that the facility has not conducted influent monitoring once per quarter as required by Missouri State Operating Permit #MO-0053376. The facility has submitted all required Inflow and Infiltration reports.

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. The effluent was relatively clear in color with no odors noted.

Outfall #001		
Parameter	Result	Units
pH	8.09	s.u.
Temperature	8.5	°C
Dissolved Oxygen	7.59	mg/L
Conductivity	1077	Microsiemens

Sampling was conducted and submitted for laboratory analysis. The department's Environmental Services Program results of Sample Analysis #132259 are listed below.

Outfall #001						
Results of Sample Analyses			Permit Limits			
Parameters	Sample Result	Units	Daily Max	Weekly Average	Monthly Average	Units
BOD ₅	26.8	mg/L	-----	65	45	mg/L
Total Suspended Solids (TSS)	6.00	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-0053376, based upon the observations made at the time of the inspection.

UNSATISFACTORY FEATURES

1. Caused pollution of an unnamed tributary to North Fork Grindstone Creek, 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 ACTION: The facility must reposition the T-fitting on the influent side of the outfall pipe in order to prevent a discharge of duckweed. The facility shall submit a written statement to the Northeast Regional Office by **December 16, 2013**, explaining what actions have been taken to correct the unsatisfactory feature and prevent a reoccurrence in the future.

2. Failed to collect an influent sample at least once per quarter 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-0053376 [Section 644.076.1, RSMo].

REQUIRED ACTIONS: The facility failed to collect an influent sample in 2011 and 2012. The facility is required to collect a wastewater influent sample, at least once per quarter, 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 plant. Influent testing should occur in conjunction with the quarterly effluent tests as the facility discharges. By **December 16, 2013**, submit a written report to the Northeast Regional Office explaining what steps the facility has taken to correct this unsatisfactory feature and prevent a reoccurrence in the future.

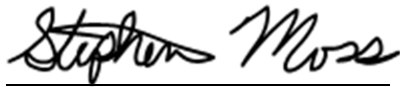
RECOMMENDATIONS – **Actions that are being recommended by the inspector but are not required to bring the facility into compliance at the time of the inspection.**

1. Ensure that routine mowing of the lagoon berms is conducted on a regular schedule.
2. Consider installing a splash pad or riprap below the outfall pipe to prevent erosion of the drainage way.

**Report of Compliance Inspection
BCRSD Highfield Acres WWTF
November 25, 2013
Page 5**

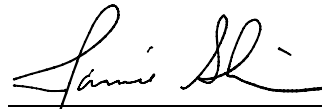
3. Ensure that the facility submits a report detailing the progress made in attaining compliance with the final effluent limits by **March 1, 2014**, and **September 1, 2014**.

SUBMITTED BY:



Stephen Moss
Environmental Specialist
Northeast Regional Office

REVIEWED BY:



Jamie Shinn
Environmental Specialist
Northeast Regional Office

SM/bb



Photo #: 1
 By: Stephen Moss
 Facility: BCRSD Highfield Acres WWTF
 Permit: #MO-0053376
 Location: Boone County

Description: View of the outfall #002 lagoon.

Date Taken: October 24, 2013
 Program: WPC Unit



Photo #: 2
 By: Stephen Moss
 Facility: BCRSD Highfield Acres WWTF
 Permit: #MO-0053376
 Location: Boone County

Description: View of the duckweed in the receiving stream below Outfall #002.

Date Taken: October 24, 2013
 Program: WPC Unit



Photo #: 3
 By: Stephen Moss
 Facility: BCRSD Highfield Acres WWTF
 Permit: #MO-0053376
 Location: Boone County

Description: View of Outfall #002.

Date Taken: October 24, 2013
 Program: WPC Unit

Initial SM



Photo #: 4
By: Stephen Moss
Facility: BCRSD Highfield Acres WWTF
Permit: #MO-0053376
Location: Boone County

Description: View of the Outfall #001 lagoon.

Date Taken: October 24, 2013
Program: WPC Unit



Photo #: 5
By: Stephen Moss
Facility: BCRSD Highfield Acres WWTF
Permit: #MO-0053376
Location: Boone County

Description: View of the riprapped section of Outfall #001.

Date Taken: October 24, 2013
Program: WPC Unit



Photo #: 6
By: Stephen Moss
Facility: BCRSD Highfield Acres WWTF
Permit: #MO-0053376
Location: Boone County

Description: View of Outfall #001. Duckweed can be observed below the outfall.

Date Taken: October 24, 2013
Program: WPC Unit

Initial SM



5.200 BCSD, Highfield Acres
Boone County
#MO-0053376

May 4, 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 BCSD, Highfield Acres wastewater 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.

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

A handwritten signature in black ink that reads "Irene Crawford".

Irene Crawford
Regional Director

IC/sma

Enclosures: Report of Compliance Inspection
Sample Analysis 1202154

**REPORT OF COMPLIANCE INSPECTION
BCSD, HIGHFIELD ACRES
BOONE COUNTY
#MO-0053376
May 4, 2012**

INTRODUCTION

Pursuant to Section 644.026.1 RSMo of the Missouri Clean Water Law, a routine compliance inspection of the BCSD, Highfield Acres wastewater 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-0053376, 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-0053376 was last issued on August 4, 2006, and expired on August 3, 2011. This permit sets forth effluent limitations, monitoring requirements, and permit conditions, both standard and specific, that the permittee is to follow. A renewal application was received by the Northeast Regional Office on February 28, 2011.

The wastewater treatment facility serving the Highfield Acres Subdivision consists of two, single-celled lagoons. The expired state operating permit lists a design population equivalent of 200 for Outfall #001 and a population equivalent of 90 for Outfall #002. The design flow for Outfall #001 is 20,000 gallons per day with an actual flow of 8,640 gallons per day. The design flow for Outfall #002 is 9,000 gallons per day with an actual flow of 4,325 gallons per day. Outfall #001 lagoon has a design sludge production of 3 dry tons/ year and Outfall #002 lagoon has a design sludge production of 1.4 dry tons/ year. The sludge is retained in the lagoons.

The legal description of the BCSD, Highfield Acres Subdivision is listed on the permit as the SW ¼, NE ¼, Section 11, Township 48 North, Range 12 West, in Boone County. The receiving stream for this facility is North Fork Grindstone Creek.

A previous compliance inspection of the wastewater treatment facility was conducted on July 10, 2007. The facility was found to be in non-compliance at the time of the inspection. The following unsatisfactory features were listed in the report: failed to submit complete Discharge Monitoring Reports and deep rooted vegetation was observed growing on the lagoon berms.

DISCUSSION OF INSPECTION AND OBSERVATIONS

Prior to the inspection the files for BCSD, Highfield Acres were reviewed, including the Permit Conditions of Missouri State Operating Permit #MO-0053376, 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 not provided. 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 began the inspection of the Highfield Acres wastewater treatment facility by observing the perimeter fence and warning signs. Warning signs were posted on the fence on each side of the lagoon. The facility was observed to have a locked gate and a warning sign posted on the gate. The vegetation around the lagoons needed to be mowed. A paved city street, Wester Lane, provides access to the lagoons.

Mr. Moss observed Highfield Acres Outfall #002 Lagoon. Mr. Moss observed an aerator in the lagoon, which was functional at the time of the inspection. The lagoon was observed to be completely covered with duckweed, other than the areas where aeration activity was taking place. The west side of the lagoon was observed to have rip rap on it to prevent wave erosion. The lagoon berms were observed to have no deep-rooted vegetation. The lagoon was observed to have over two (2) feet of available freeboard.

Mr. Moss then observed Highfield Acres Outfall #001 Lagoon. Mr. Moss observed an aerator in the lagoon. The aerator was functioning properly at the time of the inspection. The lagoon was observed to be completely covered with duckweed other than the areas where aeration activity was taking place. A tree was observed growing on the inner berm on the south side of the lagoon. A pine tree was also noted growing on the west side of the lagoon. The lagoon was observed to have over two (2) feet of available freeboard.

The inspector observed the outfall location. Mr. Moss noted that the facility did not have a sign to mark either outfall. Mr. Moss observed Outfall #001 and Outfall #002 discharging and samples were taken of the effluent from both outfalls. The receiving streams were observed to be clear with no signs of impacts caused by previous discharges in the receiving stream.

Mr. Sublett stated that Boone County Regional Sewer District is setting up a new sewage treatment facility to serve the area. Once the new sewer treatment facility is functional Highfield Acres Subdivision will connect to the facility. Mr. Sublett said that the plan is to have the wastewater treatment facility installed and Highfield Acres Subdivision connected to the line sometime in 2013.

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 water was light brown in color and no odors were noted at the time of the inspection.

Outfall #001		
Parameter	Result	Units
pH	7.48	s.u.
Temperature	17.6	°C
Dissolved Oxygen	3.17	mg/L
Conductivity	726	Microsiemens

Outfall #002		
Parameter	Result	Units
pH	7.60	s.u.
Temperature	16.8	°C
Dissolved Oxygen	4.68	mg/L
Conductivity	663	Microsiemens

Outfall #001						
Results of Sample Analyses #1202140			Permit Limits			
Parameters	Sample Result	Units	Daily Max	Weekly Average	Monthly Average	Units
BOD ₅	17.7	mg/L	-----	65	45	mg/L
Total Suspended Solids (TSS)	14	mg/L	-----	120	80	mg/L

Outfall #002						
Results of Sample Analyses #1202154			Permit Limits			
Parameters	Sample Result	Units	Daily Max	Weekly Average	Monthly Average	Units
BOD ₅	12	mg/L	-----	65	45	mg/L
Total Suspended Solids (TSS)	6	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-0053376, based upon the observations made at the time of the inspection.

UNSATISFACTORY FEATURES

1. Failed to apply for renewal of the Missouri State Operating Permit (MSOP) at least one hundred and eighty (180) days before expiration of the Missouri State Operating Permit (MSOP) #MO-0053376 [Sections 644.051.9 and 644.076.1, RSMo, and 10 CSR 20-6.010(5)(C)].

REQUIRED ACTIONS: MSOP #MO-0053376 expired on August 3, 2011. Form B was received on February 28, 2011. No further action is required.

2. Failed to clearly mark the outfall in the field, as required by Special Conditions of Missouri State Operating Permit (MSOP) #MO-0053376 [Section 644.076.1, RSMo].

REQUIRED ACTIONS: The facility is to clearly mark the outfall locations. The facility must ensure that the Unsatisfactory Feature will be addressed by **May 25, 2012**.


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

REQUIRED ACTIONS: 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. The facility must ensure that the Unsatisfactory Feature will be addressed by **May 25, 2012**.

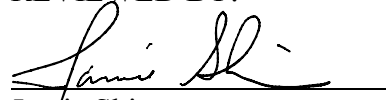
RECOMMENDATIONS – **Actions that are being recommended by the inspector but are not required to bring the facility into compliance at the time of the inspection.**

1. Ensure that the vegetation on the inner lagoon berms is routinely reduced in height; six inch height is recommended.
2. Ensure routine mowing and brush clearing takes place around Outfall #001 and Outfall #002, so sampling can be easily accomplished

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, Highfield Acres
Permit: #MO-0053376
Location: Boone County

Description: View of the gate with a warning sign posted on it.

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



Photo #: 2
By: Stephen Moss
Facility: BCSD, Highfield Acres
Permit: #MO-0053376
Location: Boone County

Description: View of the Outfall #002 aerator and lagoon.

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



Photo #: 3
By: Stephen Moss
Facility: BCSD, Highfield Acres
Permit: #MO-0053376
Location: Boone County

Description: View of the rip rap on the west side of the Outfall #002 lagoon.

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

Initial SM



Photo #: 4
 By: Stephen Moss
 Facility: BCSD, Highfield Acres
 Permit: #MO-0053376
 Location: Boone County

Description: View of a tree growing on the inner berm slope of the Outfall #001 lagoon.

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



Photo #: 56
 By: Stephen Moss
 Facility: BCSD, Highfield Acres
 Permit: #MO-0053376
 Location: Boone County

Description: View of the aerator in the Outfall #001 Lagoon.

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



Photo #: 6
 By: Stephen Moss
 Facility: BCSD, Highfield Acres
 Permit: #MO-0053376
 Location: Boone County

Description: View of Outfall #001.

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

Initial SM



Photo #: 7
By: Stephen Moss
Facility: BCSD, Highfield Acres
Permit: #MO-0053376
Location: Boone County

Description: View of Outfall #002.

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



Photo #: 8
By: Stephen Moss
Facility: BCSD, Highfield Acres
Permit: #MO-0053376
Location: Boone County

Description: View of a warning sign posted on the perimeter fence.

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?

Sludge is retained in the lagoon.

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

Never

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

NA

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

NA

- 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

120417006

Program, Contact: WPC Paul Dickerson

Report Date:

04/27/2012

LDPR/JobCode: FEINS

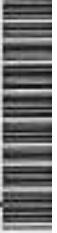
APR 30 2012



MAIL FAX



Sample: AB70531



Facility ID: MO0053376

Site: BCSD, Highfield Acres

County: Boone

Sample Reference ID:

Collector: STEPHEN MOSS

Affiliation: NERO

Entry Point:

Collect Date: 4/17/2012 11:50:00AM

Customer #: 1202140

Sample Comment: Grab, outfall #001

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Biochemical Oxygen Demand	Biochemical Oxygen Demand	17.7		mg/L	15,800	SM 5210-C
Field Dissolved Oxygen	Field Dissolved Oxygen	3.17		mg/L		SM 4500-O-G
Field pH	Field pH	7.48		pH Units		EPA 150.1
Field Specific Conductivity	Field Specific Conductivity	726		µS/cm		SM 2510
Field Temperature	Field Temperature	17.6		°C		EPA 170.1
Non Filterable Residue	Non Filterable Residue	14.0		mg/L	15,754	SM 2540-D

Sample: AB70532



Facility ID: MO0053376

Site: BCSD, Highfield Acres

County: Boone

Sample Reference ID:

Collector: STEPHEN MOSS

Affiliation: NERO

Entry Point:

Collect Date: 4/17/2012 12:00:00PM

Customer #: 1202154

Sample Comment: Grab, outfall #002

Test	Parameter	Result	Qualifier	Units	QC Batch ID	Method
Biochemical Oxygen Demand	Biochemical Oxygen Demand	12.0		mg/L	15,800	SM 5210-C
Field Dissolved Oxygen	Field Dissolved Oxygen	4.68		mg/L		SM 4500-O-G
Field pH	Field pH	7.60		pH Units		EPA 150.1
Field Specific Conductivity	Field Specific Conductivity	663		µS/cm		SM 2510
Field Temperature	Field Temperature	16.8		°C		EPA 170.1
Non Filterable Residue	Non Filterable Residue	6.00		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.



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

Qualifier Descriptions

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



Missouri Department of dnr.mo.gov

NATURAL RESOURCES

Eric R. Greitens, Governor

Carol S. Comer, Director

5.200 BCRSD, Lee Heights Wastewater Treatment Facility
Boone County
#MO-0102113

May 23, 2018

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

UNSATISFACTORY FINDINGS NO RESPONSE REQUIRED

Dear Mr. Cooksey:

Staff from the Missouri Department of Natural Resources conducted an inspection on May 2, 2018, of the Boone County Regional Sewer District, Lee Heights Wastewater Treatment Facility, located south of Route Z at St. Charles Road, Columbia, Missouri, in Boone County. The entity operates under the authority of Missouri State Operating Permit #MO-0102113.

Compliance with the Missouri Clean Water Law was evaluated. The enclosed report is being issued with Unsatisfactory Findings for the violations identified. Please refer to the enclosed report for details on findings and required actions. A written response is not required at this time as you have corrected the unsatisfactory findings. Your corrective actions show that you recognize our mutual goal in providing a quality of life for Missouri's citizens through environmental compliance. The Department appreciates your voluntary efforts to comply with the laws of Missouri and your continued efforts to work with us to improve protection of Missouri citizens and our natural resources.

Fact sheets are available on the Department's website to assist entities with understanding and following environmental requirements.

If you have any questions or would like to schedule a time to meet with Department staff to discuss compliance requirements, please contact Michael Heaton 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/mhd

Enclosures: Report of Inspection

Missouri Department of Natural Resources
Northeast Regional Office
Report of Inspection
BCRSD, Lee Heights Wastewater Treatment Facility
South of Route Z and St. Charles Road, Columbia,
Missouri, 65201, Boone County
#MO-0102113
May 23, 2018

Introduction

Pursuant to Section 644.026.1 of the Missouri Clean Water Law, I, Michael Heaton, conducted a routine inspection of the Boone County Regional Sewer District (BCRSD), Lee Heights Wastewater Treatment Facility (WWTF) in Boone County, Missouri, on May 2, 2018. The following people participated in the inspection:

BCRSD, Lee Heights WWTF

Virgil Farnen	Operations Supervisor	(573) 881-9913
Jason Horton	Wastewater Operator	(573) 881-9918

Missouri Department of Natural Resources

Michael Heaton	Environmental Scientist	(660) 385-8000
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This inspection was conducted to determine the facility's compliance with Missouri State Operating Permit #MO-0102113, the Missouri Clean Water Law, and the Missouri Clean Water Commission Regulations. This report presents the findings and observations made during the inspection.

Entity Description and History

Missouri State Operating Permit (MSOP) #MO-0102113 was last issued on September 1, 2013, and expired on March 31, 2015. This permit sets forth effluent limitations, monitoring requirements, and permit conditions, both standard and specific, that the permittee is to follow. A renewal application was received by the Department on May 12, 2014. The facility must continue to follow the conditions of the MSOP that expired on March 31, 2015, until the facility is closed and the MSOP is terminated or the MSOP is renewed.

The Lee Heights WWTF is owned and operated by BCRSD. The facility consists of a single cell lagoon. Sludge from the facility is retained in the lagoon. The facility has a design flow of 5,000 gallons per day with an actual flow of 2,492 gallons per day. The design population equivalent is listed on the permit as 50. Design sludge production is .65 dry tons per year.

The UTM Coordinates of the BCRSD, Lee Heights WWTF are listed on the permit as the Easting 568900 and Northing 4314020, in Boone County. The receiving stream for this facility is a tributary to Little Cedar Creek and it is located in the 10300102 HUC 8 watershed.

Report of Inspection
BCRSD, Lee Heights WWTF
May 23, 2018
Page 2

Prior to the inspection, I reviewed the files for the BCRSD, Lee Heights WWTF, including the Permit Conditions of MSOP #MO-0102113, to familiarize myself with the requirements specific to this facility.

The regional office performed a previous inspection on December 18, 2013. At the time of the inspection, the facility was found to be operating in non-compliance and a Notice of Violation (NOV), dated February 10, 2014, was sent to the facility. The unsatisfactory finding detailed in the February 10, 2014, NOV, was the facility exceeded effluent limits on various dates, failed to maintain an O & M manual, and failed to maintain the inner berm slopes.

The file review also found several letters from the Department to the BCRSD for exceedances for the effluent limitations. The most recent letter was a Letter of Warning dated March 30, 2018, for effluent limitation violations for E-coli for the reporting periods ending on September 30, 2017, and December 31, 2017. The facility is not required to collect E-coli samples in the non-recreational season. April 1, 2018, was the beginning of the recreational season for 2018. A response to the Letter of Warning and was received by the Northeast Regional Office on April 16, 2018. The response included timelines for the closing of the lagoon.

Discussion of Inspection and Observations

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

As I arrived at the facility, I observed that an all-weather access road to the lagoon system was available. The facility gate was equipped with a lock to prevent unauthorized access. A perimeter fence around the facility was observed and appeared to be in good condition. Warning signs were observed posted on all four sides of the perimeter fence (Photograph #1).

I then observed the one cell lagoon system. An operational aerator was observed near the center of the lagoon (Photograph #2). No woody vegetation was observed on the lagoon berms. Sludge deposits were observed on the outer edges of the lagoon (Photograph #3). Mr. Farnen stated that the lagoon is planned to be closed and a pump station installed to transfer the wastewater to the City of Columbia WWTF. I explained that a closure plan will need to be submitted and approved prior to closing the lagoon. Mr. Farnen stated that they are working through the calculations to determine the amount of sludge and what to do with the sludge.

I then observed the outfall location. A sign marking the outfall was observed (Photograph #6). Effluent was not discharging at the time of the inspection (Photograph #4). The area below the outfall pipe was relatively dry with no pooling of water observed. The effluent that is discharged would flow to the road ditch and then through a culvert (Photograph #5).

Report of Inspection
BCRSD, Lee Heights WWTF
May 23, 2018
Page 3

We then traveled across the road to a house that has a small individual pump station. Mr. Farnen stated that the pump station was installed for the residence because of the elevation of the house and backup problems. The pump station was observed and was operational (Photograph #7).

Mr. Farnen stated that the small individual pump station will be removed when the pump station for the entire system is constructed.

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, conductivity, and dissolved oxygen. Ammonia test strips for water quality monitoring were also taken on the inspection.

Water quality field monitoring was not conducted since a discharge was not occurring at the time of the inspection.

Based upon information received from BCRSD, E-coli was sampled on April 11, 2018, and the result for the E-coli was 30,655 mpn/100ml. Based on the result of the sample collected on April 11, 2018, the facility exceeded the effluent limitation for E-coli, which is 206 mpn/100ml for the monthly average and 1030 mpn/100ml for the weekly average.

Compliance Determination and Required Actions

The facility was found to be in **non-compliance** with Missouri State Operating Permit #MO-0102113, the Missouri Clean Water Law, and Missouri Clean Water Commission Regulations, based upon the observations made at the time of the inspection.

Unsatisfactory Findings

1. Failed to attain compliance with the final effluent limitation for E-coli by December 31, 2013, as required in part "D" Standard Conditions, and part "E", Schedule of Compliance of MSOP #MO-0117323 [Sections 644.076.1 RSMo, and 10 CSR 20-6.010(7)(A)].

NO FURTHER ACTION REQUIRED: On April 16, 2018, the facility submitted a written response to the March 30, 2018, Letter of Warning notifying the facility of previous E-coli exceedances. The April 16, 2018, response stated that BCRSD will be closing the facility and connecting to the City of Columbia WWTF. The April 16, 2018, response also had projected timelines for completion of each step of the project.

2. Since/On April 11, 2018, failed to comply with the effluent limits contained in Part "A" of MSOP #MO-0117323 [Sections 644.051.1(3) and 644.076.1, RSMo].

Report of Inspection
BCRSD, Lee Heights WWTF
May 23, 2018
Page 4

NO FURTHER ACTION REQUIRED: On April 16, 2018, the facility submitted a written response to the March 30, 2018, Letter of Warning which notified the facility of previous exceedances. The April 16, 2018, response stated that BCRSD will be closing the facility and connecting to the City of Columbia WWTF. The response also had projected timelines for completion of each step of the project.

Recommendations

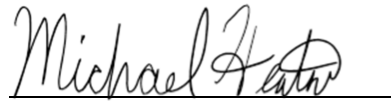
None

Additional Comments/Conclusion

None

Signatures

SUBMITTED BY:



Michael Heaton
Environmental Scientist
Northeast Regional Office

REVIEWED BY:



Jamie Shinn
Environmental Supervisor
Northeast Regional Office

MH/dm

Attachments

- Attachment # 1 – Photos 1 - 7**
- Attachment # 2 -- Sludge Checklist**
- Attachment # 3 -- Aerial Photo**



Photograph #: 1
Taken by: Michael Heaton
Entity: BCRSD, Lee Heights Wastewater Treatment Facility
Permit: #MO-0102113
Location: Boone County
Description: Front entrance to the facility with a sign restricting access.
Date Taken: May 2, 2018
Program: WPC Unit



Photograph #: 2
Taken by: Michael Heaton
Entity: BCRSD, Lee Heights Wastewater Treatment Facility
Permit: #MO-0102113
Location: Boone County
Description: Overview of the lagoon. Aerator was operational in the lagoon.
Date Taken: May 2, 2018
Program: WPC Unit



Photograph #: 3
Taken by: Michael Heaton
Entity: BCRSD, Lee Heights Wastewater Treatment Facility
Permit: #MO-0102113
Location: Boone County
Description: View of the discharge pipe in the lagoon. Sludge accumulation is visible around the bank.
Date Taken: May 2, 2018
Program: WPC Unit

Initial *MH*



Photograph #: 4
Taken by: Michael Heaton
Entity: BCRSD, Lee Heights Wastewater Treatment Facility
Permit: #MO-0102113
Location: Boone County
Description: Outfall #001. Outfall was not discharging at the time of the inspection.
Date Taken: May 2, 2018
Program: WPC Unit



Photograph #: 5
Taken by: Michael Heaton
Entity: BCRSD, Lee Heights Wastewater Treatment Facility
Permit: #MO-0102113
Location: Boone County
Description: Flow from the outfall flows to the roadside ditch and through the culvert.
Date Taken: May 2, 2018
Program: WPC Unit



Photograph #: 6
Taken by: Michael Heaton
Entity: BCRSD, Lee Heights Wastewater Treatment Facility
Permit: #MO-0102113
Location: Boone County
Description: Sign marking the outfall location.
Date Taken: May 2, 2018
Program: WPC Unit

Initial *MH*

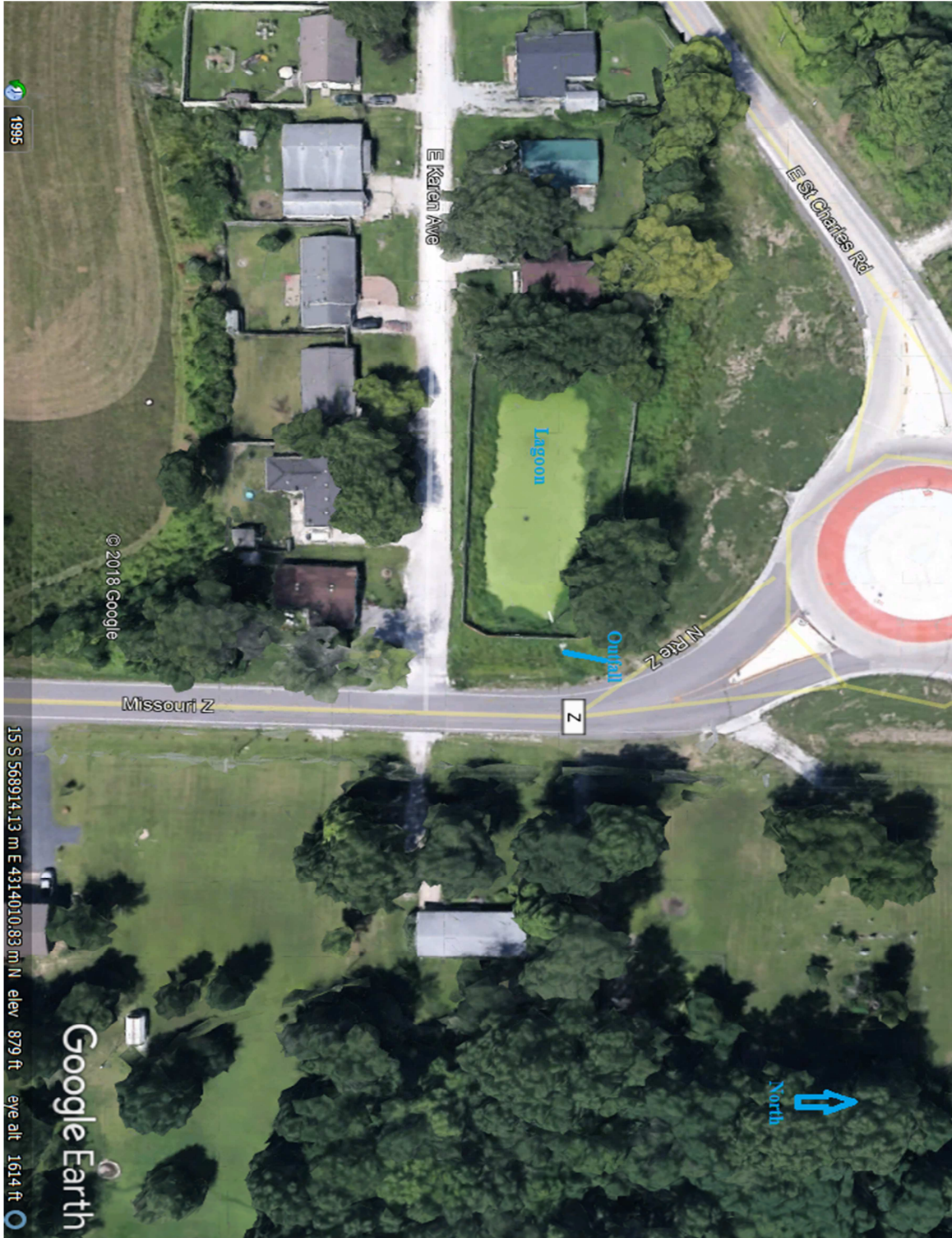


Photograph #: 7
Taken by: Michael Heaton
Entity: BCRSD, Lee Heights Wastewater
Treatment Facility
Permit: #MO-0102113
Location: Boone County
Description: Small pump station for single family
residence.
Date Taken: May 2, 2018
Program: WPC Unit

Initial *MH*

Sludge Handling Checklist for Wastewater Treatment Facilities

Facility Name: BCRSD, Lee Heights Wastewater Treatment Facility	MSOP #: #MO-0102113		
Issue to be addressed	Options		Not Inspected
What method (land application, incineration, landfill, etc) is used for sludge management?	Sludge retained in 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?			<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:			





Missouri Department of dnr.mo.gov

NATURAL RESOURCES

Eric R. Greitens, Governor

Carol S. Comer, Director

5.200 BCRSD Lee Heights WWTF
Boone County
MO0102113

March 30, 2018

Boone County Regional Sewer District
1314 North 7th Street
Columbia, MO 65201 3902

LETTER OF WARNING

Dear Permittee:

The Missouri Department of Natural Resources' Northeast Regional Office is issuing you Letter of Warning (LOW) for significant violations of Missouri State Operating Permit (MSOP) MO0102113 and the Missouri Clean Water Law (MCWL) at BCRSD Lee Heights WWTF. The Department requests that you take immediate action to correct the violations found on the attached list.

MSOP MO0102113 sets forth specific effluent limitations, monitoring requirements, and permit conditions regarding your facility. Failure to comply with effluent limitations established in part "A" of the MSOP is a violation of Sections 644.051.1(3) and 644.076.1, RSMo. **Failure to address the violation(s) may result in heightened enforcement action.**

By **April 30, 2018**, please submit a written response, to the Northeast Regional Office, 1709 Prospect Drive, Macon, MO 63552-2602, addressing the violations and explaining what steps you have taken or will take to prevent future violations. Your facility will be considered not in compliance until the violation(s) is/are addressed. If you have any questions or would like to schedule a meeting in person, please contact the Water Pollution Technical Services Unit at 660-385-8000, NERO@dnr.mo.gov or the address above. Thank you for your cooperation in this matter.

If you have already provided this information, the Department appreciates your efforts to return your facility to compliance.

Sincerely,

NORTHEAST REGIONAL OFFICE

Irene Crawford
Regional Director

IC/rmm

Enclosure

5.200 BCRSD Lee Heights WWTF
Boone County
MO0102113

Issue	Permitted Feature	Monitoring Period End Date or Event Due Date	Parameter or Event Type
Effluent Violation	001	9/30/2017	E. coli, colony forming units (CFU)
Effluent Violation	001	12/31/2017	E. coli, colony forming units (CFU)

CERTIFIED MAIL
7012 2210 0001 5016 0015

5.200 BCSD - Lee Heights WWTF
Boone County
#MO-0102113
NOV# NER2014011313464956

February 10, 2014

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

NOTICE OF VIOLATION

Dear Mr. Ratermann:

A routine compliance inspection of the Boone County Regional Sewer District (BCSD) - Lee Heights Wastewater Treatment Facility (WWTF), located in Boone County, Missouri was conducted on December 18, 2013. 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.

Based upon the findings of the inspection, Notice of Violation (NOV) #NER2014011313464956 is being issued to the BCSD - Lee Heights WWTF. Please direct your attention to the Required Actions for the Notice of Violation and Unsatisfactory Features sections of the report. The report is being forwarded to the Compliance and Enforcement Section of the Water Pollution Control Branch for possible progressive enforcement actions. The information requested by the department is to be submitted to the Northeast Regional Office by **March 3, 2014**. 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. 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



Irene Crawford
Regional Director

IC/msa

Enclosures: Report of Compliance Inspection
NOV# NER2014011313464956

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

**REPORT OF COMPLIANCE INSPECTION
BCSD - LEE HEIGHTS WWTF
BOONE COUNTY
#MO-0102113
NOV# NER2014011313464956
February 10, 2014**

INTRODUCTION

Pursuant to Section 644.026.1 RSMo of the Missouri Clean Water Law, a routine compliance inspection of the Boone County Sewer District (BCSD) - Lee Heights 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 December 18, 2013. Mr. Dwayne Cooksey, Operations Manager, and Mr. Kevin Sublet, Operator, participated in the inspection.

This inspection was conducted to determine the facility's compliance with Missouri State Operating Permit (MSOP) #MO-0102113, 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-0102113 was last issued on September 1, 2013, and expires on March 31, 2015. This permit sets forth effluent limitations, monitoring requirements, and permit conditions, both standard and specific, that the permittee is to follow.

The BCSD – Lee Heights WWTF consists of a single-cell lagoon system with sludge retained in the lagoon. The design population equivalent is listed on the permit as 50, with a design flow of 5,000 gallons per day. Actual flow is listed as 2,492 gallons per day. Design sludge production is 0.65 dry tons year.

The legal description of the BCSD - Lee Heights WWTF is listed on the permit as the NW ¼, SE ¼, NW ¼, Section 06, Township 48 North, Range 11 West, in Boone County. The receiving stream for this facility is an unnamed tributary to Little Cedar Creek.

A previous routine compliance inspection was conducted at the facility by the Northeast Regional Office on October 1, 2009. At the time of that inspection, the facility was found to be operating in compliance.

DISCUSSION OF INSPECTION AND OBSERVATIONS

Prior to the inspection, the files for the BCSD - Lee Heights WWTF, were reviewed, including the Permit Conditions of MSOP #MO-0102113, to familiarize the inspector with the requirements specific to this facility.

Report of Compliance Inspection

BCSD - Lee Heights WWTF

February 10, 2014

Page 2

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

Mr. Smith asked if any sludge has ever been removed from the lagoon. Mr. Cooksey stated that no sludge has been removed. Mr. Cooksey stated that in three or four years they hope to be able to close the lagoon. Mr. Smith asked if an Operation and Maintenance (O&M) Manual has been developed for the facility. Mr. Cooksey stated they don't currently have an O&M Manual for lagoons.

Mr. Smith and Mr. Sublet then took a tour of the facility and Mr. Cooksey left the facility at that time. The perimeter fence around the facility was observed (Photo #1). The fence appeared to be in good condition, with no damaged areas observed. Warning signs were observed posted on all four sides of the perimeter fence (Photo #2). The facility gate had a lock to prevent unauthorized access.

Mr. Smith then observed the single-cell aerated lagoon. The surface of the lagoon was mostly frozen at the time of inspection (Photo #3). The aerator was running and appeared to be functioning properly (Photo #4). Erosion damage on the inner lagoon berms was observed, resulting in a slope steeper than three to one (Photos #5-7). The inlet side of the discharge pipe was observed and had a T-fitting on the end of the pipe (Photo #8).

Mr. Smith then observed the facility's outfall location. A sign marking the outfall was observed on the perimeter fence (Photo #9). The facility was discharging at the time of inspection (Photo #10). The effluent appeared clear and no odor was detected. The effluent from the facility enters a small drainage that flows into a road culvert under Highway Z (Photo #11). No evidence of a discharge of sludge was observed below the outfall.

Mr. Smith then gathered materials and collected samples for Biochemical Oxygen Demand (BOD) and Total Suspended Solids (TSS). The samples were delivered to the Environmental Services Program lab in Jefferson City, Missouri for analysis. The sample results can be found under the Water Quality Monitoring section of this report. Mr. Smith also conducted water quality monitoring on the facility's effluent, the results of which can also be found under the Water Quality Monitoring section of this report.

Mr. Smith reviewed the department's records for the facility. Mr. Smith observed that Discharge Monitoring Reports (DMRs) have been submitted as required. Mr. Smith discovered that the 4th Quarter 2013 DMR reported a monthly average limit for BOD of 50 mg/L, in exceedance of the facility's permitted limit. The facility's permit establishes a monthly average limit for BOD of 45 mg/L. Mr. Smith observed that influent monitoring has been conducted as required and

Report of Compliance Inspection
BCSD - Lee Heights WWTF
February 10, 2014
Page 3

Inflow and Infiltration (I&I) reports have been submitted as required. A progress report towards meeting the facility's Schedule of Compliance for Ammonia has been received by the department.

The facility's permit contains a Schedule of Compliance to attain compliance with final effluent limitations for E. Coli no later than December 31, 2013. The facility reported an E. Coli level of 1,260,000 #/100mL in the 4th Quarter 2013. No disinfection equipment has been installed at the facility.

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 – Lee Heights WWTF, #MO-0102113		
Outfall #001, Sample #131445		
Parameter	Result	Units
pH	7.87	s.u.
Temperature	2.7	°C
Dissolved Oxygen	3.39	mg/L
Conductivity	1577	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.

BCSD – Lee Heights WWTF, #MO-0102113						
Outfall #001, Sample #131445						
Results of Sample Analyses			Permit Limits			
Parameters	Sample Result	Units	Daily Max	Weekly Average	Monthly Average	Units
BOD ₅	78.9*	mg/L	-----	65	45	mg/L
Total Suspended Solids (TSS)	32.0	mg/L	-----	120	80	mg/L

* Exceeded weekly average and monthly average limit

COMPLIANCE DETERMINATION

The facility was found to be in **non-compliance** with the Missouri Clean Water Law, the Clean Water Commission Regulations, and MSOP #MO-0102113, based upon the observations made at the time of the inspection.

NOTICE OF VIOLATION

1. Failed to attain compliance with final effluent limitations for E. Coli by December 31, 2013, as required in part "B", Standard Conditions, and part "F", Schedule of Compliance, of MSOP #MO-0102113 [Section 644.076.1 RSMo and 10 CSR 20-6.010(7)(A)].

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

UNSATISFACTORY FEATURES

1. In October and December of 2013, failed to comply with the effluent limits contained in Part "A" of MSOP #MO-0102113 [Sections 644.051.1(3) and 644.076.1, RSMo].

REQUIRED ACTION: The facility's 4th Quarter 2013 DMR reported a monthly average BOD of 50 mg/L. The sample results from the December 18, 2013, inspection showed a BOD of 78.9 mg/L. MSOP #MO-0102113 sets a weekly average limit for BOD of 65 mg/L and a monthly average limit for BOD of 45 mg/L. The facility shall submit a written statement to the Northeast Regional Office by **March 3, 2014**, explaining what actions have been taken to correct the unsatisfactory feature and prevent a reoccurrence in the future.

2. Failed to maintain an O&M Manual that includes key operating procedures and a brief summary of the operation of the facility, as required by Special Conditions #13 of MSOP #MO-0102113 [Section 644.076.1, RSMo].

REQUIRED ACTION: The facility must develop and maintain an O&M Manual that meets the requirements of MSOP #MO-0102113. The facility shall submit a written statement to the Northeast Regional Office by **March 3, 2014**, explaining what actions have been taken to correct the unsatisfactory feature.

3. Failed to maintain the inner berm slopes of the lagoon to be no less than three to one (3:1) as required by Special Conditions #17 of MSOP #MO-0102113 [Section 644.076.1, RSMo and 10 CSR 20-8.020(13)(A)3.C.].

Report of Compliance Inspection
BCSD - Lee Heights WWTF
February 10, 2014
Page 5

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 **March 3, 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.

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. Remove deep-rooted vegetation from the lagoon berms as discovered.
2. Routinely inspect the effluent pipe for obstructions; clean out and repair the piping as needed.
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.

SUBMITTED BY:



Mike Smith
Environmental Specialist
Northeast Regional Office

MS/aa



Photo #: 1
 By: Mike Smith
 Facility: BCSD - Lee Heights WWTF
 Permit: #MO-0102113
 Location: Boone County

Description: View of perimeter fence around the facility. Fence appeared to be in good condition.

Date Taken: December 18, 2013
 Program: WPC Unit



Photo #: 2
 By: Mike Smith
 Facility: BCSD - Lee Heights WWTF
 Permit: #MO-0102113
 Location: Boone County

Description: View of warning sign posted on the perimeter fence. Warning signs observed on all four sides of the fence.

Date Taken: December 18, 2013
 Program: WPC Unit



Photo #: 3
 By: Mike Smith
 Facility: BCSD - Lee Heights WWTF
 Permit: #MO-0102113
 Location: Boone County

Description: View of lagoon surface. Surface mostly frozen at the time of inspection.

Date Taken: December 18, 2013
 Program: WPC Unit

Initial MDS



Photo #: 4
By: Mike Smith
Facility: BCSD - Lee Heights WWTF
Permit: #MO-0102113
Location: Boone County

Description: View of aerator. Aerator running at the time of inspection and appeared to be functioning properly.

Date Taken: December 18, 2013
Program: WPC Unit



Photo #: 5
By: Mike Smith
Facility: BCSD - Lee Heights WWTF
Permit: #MO-0102113
Location: Boone County

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

Date Taken: December 18, 2013
Program: WPC Unit



Photo #: 6
By: Mike Smith
Facility: BCSD - Lee Heights WWTF
Permit: #MO-0102113
Location: Boone County

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

Date Taken: December 18, 2013
Program: WPC Unit

Initial MDS



Photo #: 7
By: Mike Smith
Facility: BCSD - Lee Heights WWTF
Permit: #MO-0102113
Location: Boone County

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

Date Taken: December 18, 2013
Program: WPC Unit



Photo #: 8
By: Mike Smith
Facility: BCSD - Lee Heights WWTF
Permit: #MO-0102113
Location: Boone County

Description: View of inlet side of the discharge pipe. T-fitting observed.

Date Taken: December 18, 2013
Program: WPC Unit



Photo #: 9
By: Mike Smith
Facility: BCSD - Lee Heights WWTF
Permit: #MO-0102113
Location: Boone County

Description: View of sign on the perimeter fence marking the outfall location.

Date Taken: December 18, 2013
Program: WPC Unit

Initial MDS



Photo #: 10
By: Mike Smith
Facility: BCSD - Lee Heights WWTF
Permit: #MO-0102113
Location: Boone County

Description: View of discharge pipe. Small discharge occurring at the time of inspection. Effluent appeared clear and no odor was observed.

Date Taken: December 18, 2013
Program: WPC Unit



Photo #: 11
By: Mike Smith
Facility: BCSD - Lee Heights WWTF
Permit: #MO-0102113
Location: Boone County

Description: View of drainage below the outfall. Drainage flows into a road culvert under Highway Z. No concerns noted.

Date Taken: December 18, 2013
Program: WPC Unit

Initial MDS

Sludge handling checklist for wastewater treatment facilities

BCSD – Lee Heights WWTF, #MO-0102113, Boone County

- 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?

Never

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

Never

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

NA

- 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
NOTICE OF VIOLATION

TRACKING NUMBER
NER 20140113 13464956

DATE ISSUED 02-10-2014	TIME ISSUED	REGION/PROGRAM Northeast Regional Office (NERO)	
SOURCE (NAME, ADDRESS, PERMIT NUMBER, LOCATION) BCSD - Lee Heights WWTF			
Route Z and St. Charles Road Intersection			
#MO-0102113			
Boone County			
MAILING ADDRESS 1314 North Seventh Street	CITY Columbia	STATE MO	ZIP CODE 65201
NAME OF OWNER OR MANAGER Tom Ratermann	TITLE OF OWNER OR MANAGER General Manager	COUNTY Boone	
LAW, REGULATION OR PERMIT VIOLATED Section 644.076.1 RSMo and 10 CSR 20-6.010(7)(A)			
NATURE OF VIOLATION			
1. Failed to attain compliance with final effluent limitations for E. Coli by		DATE(S):	TIME(S):
December 31, 2013, as required in part "B", Standard Conditions, and			
part "F", Schedule of Compliance, of Missouri State Operating Permit			
#MO-0102113.			
SIGNATURE (PERSON RECEIVING NOTICE) <i>Sign Here</i>		SIGNATURE (PERSON ISSUING NOTICE) <i>Mica Smith</i>	
TITLE OR POSITION Sent by Certified Mail		TITLE OR POSITION Environmental Specialist	

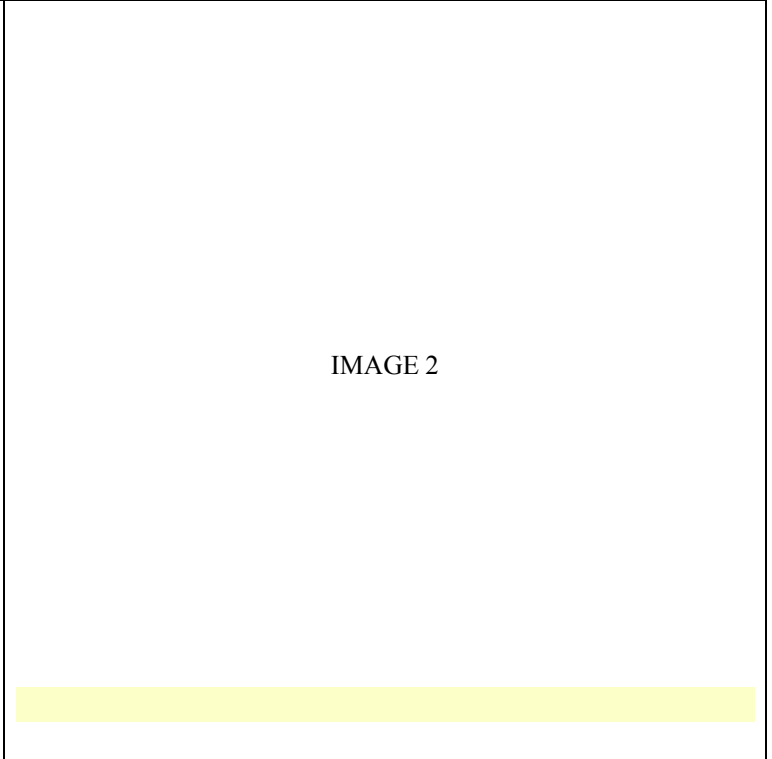
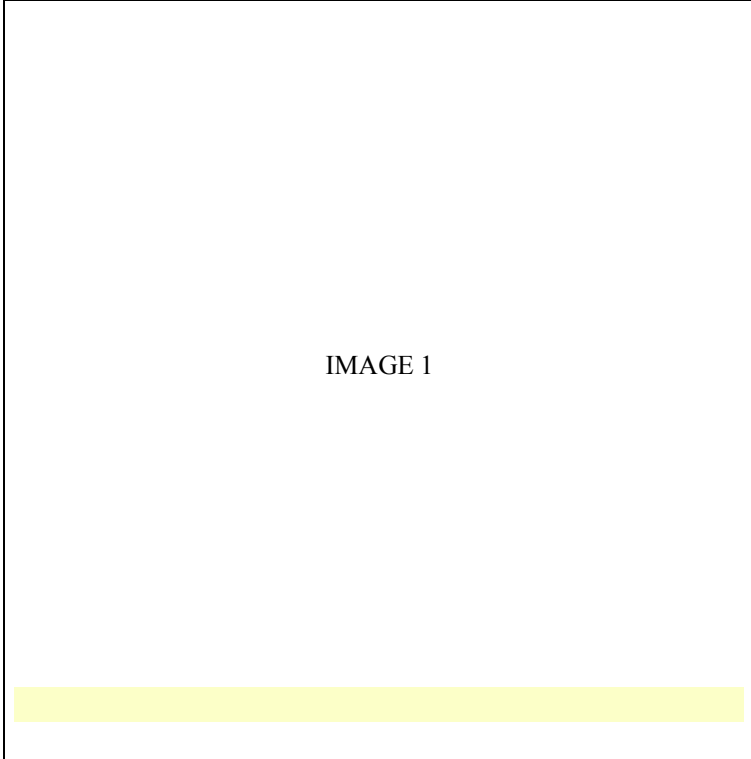
ADDENDUM

LOCATIONAL DATA

UTM EASTING	UTM NORTHING
HORIZONTAL COLLECTION METHOD	ESTIMATED POSITION ERROR OR PDOP
REFERENCE POINT	COORDINATE DATA SOURCE

ADDITIONAL COMMENTS

Large empty rectangular area for additional comments.





Jeremiah W. (Jay) Nixon, Governor

Sara Parker Pauley, Director

DEPARTMENT OF NATURAL RESOURCES

dnr.mo.gov

CERTIFIED MAIL

7012 2210 0001 5015 7541

5.200 BCSD - Lee Heights WWTF

Boone County

#MO-0102113

NOV #NER2015010907452790

January 21, 2015

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

NOTICE OF VIOLATION

Dear Mr. Ratermann:

A routine compliance inspection of the Boone County Regional Sewer District (BCSD) - Lee Heights Wastewater Treatment Facility (WWTF), located in Boone County, Missouri, was conducted on December 30, 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.

Based upon the findings of the inspection, Notice of Violation (NOV) #NER2015010907452790 is being issued to the BCSD - Lee Heights WWTF. Please direct your attention to the Required Actions for the Notice of Violation and Unsatisfactory Features sections of the report. The information requested by the department is to be submitted to the Northeast Regional Office by **February 11, 2015**. 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



Recycled Paper

Tom Ratermann, General Manager
Boone County Regional Sewer District
January 21, 2015
Page 2

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. Responses to any Required Actions may be sent via email.

Sincerely,

NORTHEAST REGIONAL OFFICE



Irene Crawford
Regional Director

IC/msb

Enclosures: Report of Compliance Inspection
NOV #NER2015010907452790

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

**REPORT OF COMPLIANCE INSPECTION
BCSD - LEE HEIGHTS WWTF
BOONE COUNTY
#MO-0102113
NOV #NER2015010907452790
January 21, 2015**

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) - Lee Heights 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 December 30, 2014. 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-0102113, 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-0102113 was last issued on September 1, 2013, and expires on March 31, 2015. 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 by the department on May 12, 2014.

The BCSD – Lee Heights WWTF consists of a single-cell lagoon system with sludge retained in the lagoon. The design population equivalent is listed on the permit as 50, with a design flow of 5,000 gallons per day. Actual flow is listed as 2,492 gallons per day. Design sludge production is 0.65 dry tons year.

The legal description of the BCSD - Lee Heights WWTF is listed on the permit as the NW ¼, SE ¼, NW ¼, Section 06, Township 48 North, Range 11 West, in Boone County. The receiving stream for this facility is an unnamed tributary to Little Cedar Creek.

A previous routine compliance inspection was conducted at the facility by the Northeast Regional Office on December 18, 2013. At the time of that inspection, the facility was found to be operating in non-compliance and a Notice of Violation was issued to the facility. The following Violation was cited in the inspection report: 1. Failed to attain compliance with final effluent limitations for E. Coli by December 31, 2013, as required in part “B”, Standard Conditions, and part “F”, Schedule of Compliance, of MSOP #MO-0102113. The following Unsatisfactory Features were cited in the report: 1: In October and December of 2013, failed to comply with the effluent limits contained in Part “A” of MSOP #MO-0102113; 2. Failed to maintain an Operation and Maintenance Manual that includes key operating procedures and a brief summary of the operation of the facility, as required by Special Conditions #13 of MSOP #MO-0102113; and 3. Failed to maintain the inner berm slopes of the lagoon to be no less than three to one (3:1) as required by Special Conditions #17 of MSOP #MO-0102113.

Report of Compliance Inspection
BCSD - Lee Heights WWTF
January 21, 2015
Page 2

On March 4, 2014, the department received a response letter from the facility. The facility's response stated they will coordinate with the Compliance and Enforcement Section of the Water Pollution Control Branch regarding not meeting the schedule of compliance for E. coli. The response stated that the aerator is in service and should reduce the numbers for Biochemical Oxygen Demand. The facility stated that the damage to the inner berm slopes would be addressed when the weather allows and that an Operation and Maintenance manual for the lagoon would be put together.

DISCUSSION OF INSPECTION AND OBSERVATIONS

Prior to the inspection, the files for the BCSD - Lee Heights WWTF were reviewed, including the Permit Conditions of Missouri State Operating Permit (MSOP) #MO-0102113, 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 in route to the facility 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.

Mr. Smith asked if any sludge had been removed from the facility since the previous inspection and Mr. Farnen stated no. Mr. Smith asked if anything had been done in regards to disinfection at the facility and Mr. Farnen stated nothing had been installed yet. Mr. Smith asked if the facility has an Operation and Maintenance manual. Mr. Farnen stated yes and provided a binder with a short description and operation of the facility.

Mr. Smith then made observations of the lagoon system. The facility was observed to be discharging (Photo #1). The effluent appeared light green in color. No evidence of a sludge discharge was observed. A small pool of water was observed downstream of the outfall prior to a road culvert that travels under Highway Z (Photo #2). A layer of ice was observed on top of the water. The water beneath the ice appeared greenish in color. A sign stating "OUTFALL #1" was observed posted on the fence in the area (Photo #3).

Mr. Smith gathered materials to collect samples of effluent from the facility. Grab samples were collected for Biochemical Oxygen Demand and Total Suspended Solids. Mr. Smith collected duplicate samples for Quality Assurance/Quality Control purposes. The samples were delivered to the Environmental Services Program laboratory in Jefferson City, Missouri for analysis. The samples results can be found under the Water Quality Monitoring section of this report. Mr. Smith also conducted water quality field monitoring on the facility's effluent, the results of which can also be found under the Water Quality Monitoring section of this report.

Report of Compliance Inspection
BCSD - Lee Heights WWTF
January 21, 2015
Page 3

After collecting samples, Mr. Smith proceeded to make observations of the facility. A perimeter fence was observed surrounding the lagoon system (Photo #4). The fence appeared adequate to prevent unauthorized access into the facility. Warning signs were observed posted on all sides of the perimeter fence. The facility's entrance gate was locked upon arrival.

The single cell lagoon was then observed (Photo #5). The surface of the lagoon was largely frozen. The wastewater in the lagoon appeared dark green in color. The facility's aerator was not functioning at the time of the inspection (Photo #6). Mr. Farnen stated he contacted someone to have it fixed. Erosion damage of the inner lagoon berms was observed (Photo #7). Over two feet of freeboard appeared available in the lagoon, however, a lower area in the berm was observed on the east side of the lagoon (Photo #8). Mr. Smith stated that the berm should be built up to ensure an overflow over the berm does not occur in the future. The influent side of the facility's discharge pipe was observed to have a T-fitting (Photo #9). No deep-rooted vegetation was observed growing on the lagoon berms. No holes through the berms or signs of an unpermitted discharge were observed at the time of the inspection

A review of the department's records for the facility was conducted by Mr. Smith. The facility's Discharge Monitoring Reports (DMRs) were reviewed since the previous inspection. The DMRs have been received by the department within 28 days of the end of the monitoring period as required. In the 2nd Quarter of 2014, the facility reported an E. coli. concentration of 57,940 #/100mL, exceeding the weekly average limit of 1,030 #/100mL and the monthly average limit of 206 #/100mL for E.coli. In the 2nd Quarter of 2014, the facility reported a monthly average Biochemical Oxygen Demand (BOD) of 50.5 mg/L, exceeding the monthly average limit of 45 mg/L for BOD. In the 3rd Quarter of 2014, the facility reported an E. coli. concentration of 3,230 #/100mL, exceeding the weekly average limit of 1,030 #/100mL and the monthly average limit of 206 #/100mL for E.coli. In the 3rd Quarter of 2014, the facility reported a BOD of 49 mg/L, exceeding the monthly average limit of 45 mg/L for BOD. In the 4th Quarter of 2014, the facility reported an E. coli. concentration of 129,970 #/100mL, exceeding the weekly average limit of 1,030 #/100mL and the monthly average limit of 206 #/100mL for E.coli.

Mr. Smith reviewed the facility's influent data reported on the Discharge Monitoring Reports. The facility is required to collect influent samples at least once per quarter for BOD and TSS to ensure a removal efficiency of at least 65% is being met by the lagoon. In the 1st Quarter of 2014, no influent data was reported. The facility met the required removal efficiencies in the 2nd Quarter, 3rd Quarter and 4th Quarter of 2014.

Annual Inflow and Infiltration (I & I) reports have been received from the facility. The next I & I report is due by January 28, 2015. The facility's permit contains a Schedule of Compliance to attain compliance with final effluent limitations for E. Coli no later than December 31, 2013. No disinfection equipment has been installed at the facility. The Schedule of Compliance also requires the facility to meet final effluent limits for ammonia by September 1, 2019. The facility has submitted the following schedule to the department: "The following are schedules that will eliminate this facility and connect to the City of Columbia sanitary sewer system. A facility plan

Report of Compliance Inspection
BCSD - Lee Heights WWTF
January 21, 2015
Page 4

will be completed in 2014. The design will be completed in 2015. Land acquisition will be completed in 2016. A revenue bond election will take place in 2018. Construction will take place between 2023 and 2028.”

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 – Lee Heights WWTF, #MO-0102113		
Outfall #001		
Parameter	Result	Units
pH	7.59	s.u.
Temperature	7.0	°C
Dissolved Oxygen	8.54	mg/L
Conductivity	1519	Microsiemens

Sampling was conducted and submitted for laboratory analysis. The department's Environmental Services Program results of Sample Analysis are listed below.

BCSD – Lee Heights WWTF, #MO-0102113					
Outfall #001, Sample 1410964					
Results of Sample Analyses			Permit Limits		
Parameters	Sample Result	Units	Weekly Average	Monthly Average	Units
BOD ₅	51.2*	mg/L	65	45	mg/L
Total Suspended Solids (TSS)	88.0*	mg/L	120	80	mg/L

* Exceeded monthly average limitation

BCSD – Lee Heights WWTF, #MO-0102113					
Outfall #001, Sample 1410965					
Results of Sample Analyses			Permit Limits		
Parameters	Sample Result	Units	Weekly Average	Monthly Average	Units
BOD ₅	49.4*	mg/L	65	45	mg/L
Total Suspended Solids (TSS)	85.0*	mg/L	120	80	mg/L

* Exceeded monthly average limitation

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-0102113, based upon the observations made at the time of the inspection.

NOTICE OF VIOLATION

1. In the 2nd Quarter and 3rd Quarter of 2014, and on December 30, 2014, failed to comply with the effluent limits contained in Part "A" of Missouri State Operating Permit (MSOP) #MO-0102113 [Sections 644.051.1(3) and 644.076.1, RSMo].

REQUIRED ACTION: The facility exceeded effluent limits for Biochemical Oxygen Demand (BOD) in the 2nd Quarter and 3rd Quarter of 2014. The sample results from the December 30, 2014, inspection exceeded the monthly average limits for Biochemical Oxygen Demand and Total Suspended Solids. The facility shall submit a written statement to the Northeast Regional Office by **February 11, 2015**, explaining what actions have been taken to correct the violation and prevent a reoccurrence in the future.

UNSATISFACTORY FEATURES

1. Failed to attain compliance with final effluent limitations for E. coli. by December 31, 2013, as required in part "B" Standard Conditions, and part "F", Schedule of Compliance of Missouri State Operating Permit (MSOP) #MO-0102113 [Sections 644.076.1 RSMo, and 10 CSR 20-6.010(7)(A)].

REQUIRED ACTION: The facility exceeded effluent limits for E. coli. in the 2nd Quarter, 3rd Quarter, and 4th Quarter of 2014. The facility must coordinate with the Water Pollution Control Branch, Compliance and Enforcement Section to resolve this violation.

2. 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-0102113 [Section 644.076.1, RSMo].

REQUIRED ACTION: No influent data was reported for the 1st Quarter of 2014. The facility must collect an influent sample at least once per quarter, 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 shall submit a written statement to the Northeast Regional Office by **February 11, 2015**, explaining what actions have been taken to correct the unsatisfactory feature and prevent a reoccurrence in the future.

Report of Compliance Inspection
BCSD - Lee Heights WWTF
January 21, 2015
Page 6

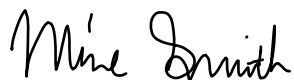
3. Failed to maintain the inner berm slopes of the lagoon to be no less than three to one (3:1) [10 CSR 20-8.020(13)(A)3.C.].

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 **February 11, 2015**, 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.

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. Ensure the annual Inflow and Infiltration report due January 28, 2015, is submitted timely.
2. Ensure the aerator is repaired and properly maintained.
3. Ensure that any damage to the security fence is repaired as discovered.
4. Remove deep-rooted vegetation from the lagoon berms as discovered.
5. 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.
6. Ensure that routine mowing of the lagoon berms is conducted on a regular schedule.
7. Maintain a sufficient spare parts inventory so that effective maintenance may occur in a timely manner.

SUBMITTED BY:



Mike Smith
Environmental Specialist
Northeast Regional Office

MS/bb



Photo #: 1
By: Mike Smith
Facility: BCSD - Lee Heights WWTF
Permit: #MO-0102113
Location: Boone County

Description: View of the facility's discharge pipe. Effluent discharging at the time of the inspection. Effluent appeared light green in color.

Date Taken: December 30, 2014
Program: WPC Unit



Photo #: 2
By: Mike Smith
Facility: BCSD - Lee Heights WWTF
Permit: #MO-0102113
Location: Boone County

Description: View of pooled water observed downstream of the outfall, just prior to the road culvert that travels under Highway Z. Ice observed on top of the water. Water appeared greenish in color.

Date Taken: December 30, 2014
Program: WPC Unit



Photo #: 3
By: Mike Smith
Facility: BCSD - Lee Heights WWTF
Permit: #MO-0102113
Location: Boone County

Description: View of outfall sign posted on the perimeter fence.

Date Taken: December 30, 2014
Program: WPC Unit

Initial MDS



Photo #: 4
By: Mike Smith
Facility: BCSD - Lee Heights WWTF
Permit: #MO-0102113
Location: Boone County

Description: View of perimeter fence and warning sign posted on the fence. Warning signs observed on all sides of the fence.

Date Taken: December 30, 2014
Program: WPC Unit



Photo #: 5
By: Mike Smith
Facility: BCSD - Lee Heights WWTF
Permit: #MO-0102113
Location: Boone County

Description: View of the single cell lagoon. Lagoon surface largely frozen. Wastewater in the lagoon appeared dark green in color.

Date Taken: December 30, 2014
Program: WPC Unit



Photo #: 6
By: Mike Smith
Facility: BCSD - Lee Heights WWTF
Permit: #MO-0102113
Location: Boone County

Description: View of facility's aerator. Aerator was not functioning at the time of the inspection.

Date Taken: December 30, 2014
Program: WPC Unit

Initial MDS



Photo #: 7
By: Mike Smith
Facility: BCSD - Lee Heights WWTF
Permit: #MO-0102113
Location: Boone County

Description: View of eroded inner lagoon berms.

Date Taken: December 30, 2014
Program: WPC Unit



Photo #: 8
By: Mike Smith
Facility: BCSD - Lee Heights WWTF
Permit: #MO-0102113
Location: Boone County

Description: View of eroded inner lagoon berms. Low area in the berm observed. Mr. Smith recommended the berm be built up to prevent a possible overflow in the future.

Date Taken: December 30, 2014
Program: WPC Unit



Photo #: 9
By: Mike Smith
Facility: BCSD - Lee Heights WWTF
Permit: #MO-0102113
Location: Boone County

Description: View of influent side of the discharge pipe. T-fitting on the end of the pipe observed.

Date Taken: December 30, 2014
Program: WPC Unit

Initial MDS



MISSOURI DEPARTMENT OF NATURAL RESOURCES
NOTICE OF VIOLATION

TRACKING NUMBER
NER 20150109 07452790

DATE ISSUED 01-21-2015	TIME ISSUED	REGION/PROGRAM Northeast Regional Office (NERO)	
SOURCE (NAME, ADDRESS, PERMIT NUMBER, LOCATION) BCSD - Lee Heights WWTF			
0.05 miles south of Route Z and St. Charles Road intersection, Columbia, MO			
#MO-0102113			
Boone County			
MAILING ADDRESS 1314 North Seventh Street	CITY Columbia	STATE MO	ZIP CODE 65201
NAME OF OWNER OR MANAGER Tom Ratermann	TITLE OF OWNER OR MANAGER General Manager	COUNTY Boone	
LAW, REGULATION OR PERMIT VIOLATED MSOP #MO-0102113, Sections 644.051.1(3) and 644.076.1, RSMo			
NATURE OF VIOLATION			
1. In the 2nd Quarter and 3rd Quarter of 2014, and on December 30,		DATE(S):	TIME(S):
2014, failed to comply with the effluent limits contained in Part "A" of			
Missouri State Operating Permit (MSOP) #MO-0102113.			
SIGNATURE (PERSON RECEIVING NOTICE) <i>Sign Here</i>		SIGNATURE (PERSON ISSUING NOTICE) <i>Mike Inial</i>	
TITLE OR POSITION Sent by Certified Mail		TITLE OR POSITION Environmental Specialist	

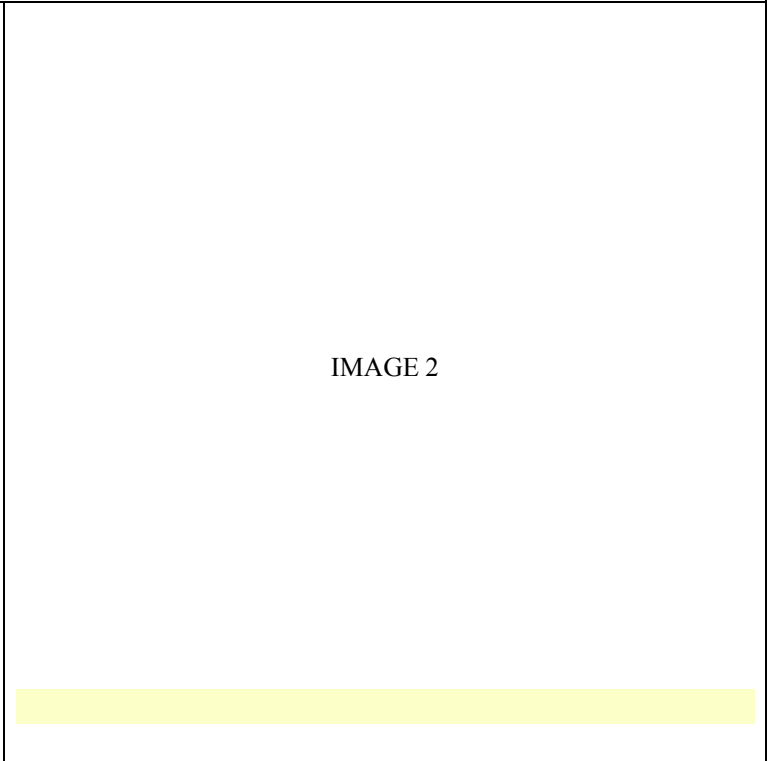
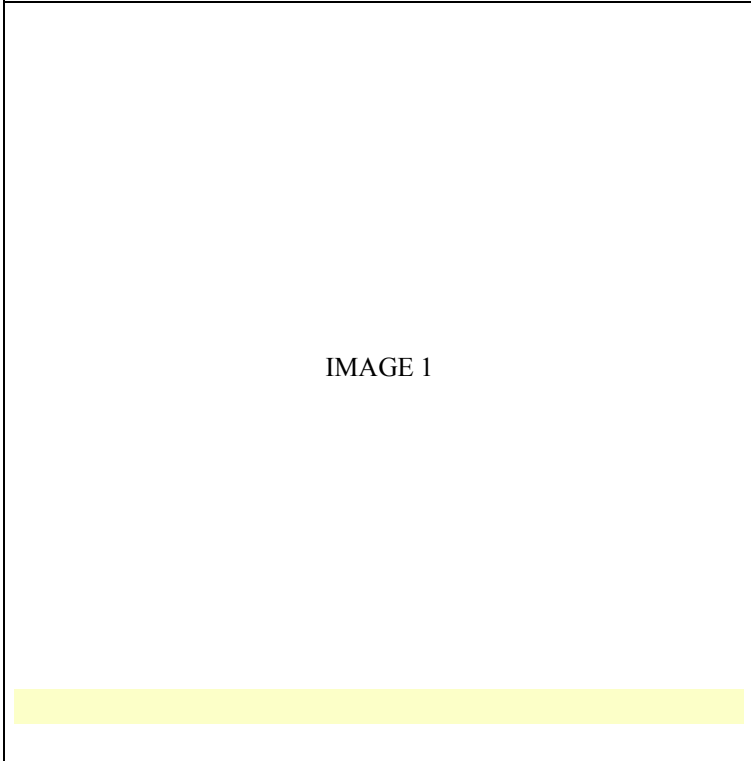
ADDENDUM

LOCATIONAL DATA

UTM EASTING	UTM NORTHING
HORIZONTAL COLLECTION METHOD	ESTIMATED POSITION ERROR OR PDOP
REFERENCE POINT	COORDINATE DATA SOURCE

ADDITIONAL COMMENTS

Empty space for additional comments.



Land Application of Sludge Checklist

Sludge handling checklist for wastewater treatment facilities

Facility Name: BCSD – Lee Heights WWTF	MSOP #: MO-0102113		
Issue to be addressed	Options		Not Inspected
What method (land application, incineration, landfill, etc) is used for sludge management?	Sludge retained in 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"/>	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:			



Jeremiah W. (Jay) Nixon, Governor

Sara Parker Pauley, Director

DEPARTMENT OF NATURAL RESOURCES

dnr.mo.gov

CERTIFIED MAIL

7015 0640 0004 7838 3233

5.200 BCSD, Lee Heights
Boone County
MO0102113
NOV #NE160055

March 22, 2016

Boone County Regional Sewer District
1314 North 7th Street
Columbia, MO 65201 3902

NOTICE OF VIOLATION

Dear Permittee:

The Missouri Department of Natural Resources' Northeast Regional Office is issuing you Notice of Violation (NOV) number NE160055 for significant violations of Missouri State Operating Permit (MSOP) MO0102113 and the Missouri Clean Water Law (MCWL) at BCSD, Lee Heights. The department requests that you take immediate action to correct the following violation(s):

Issue	Permitted Feature	Monitoring Period End Date or Event Due Date	Parameter or Event Type
Effluent Violation	001	9/30/2015	E. coli, colony forming units (CFU)
Effluent Violation	001	12/31/2015	E. coli, colony forming units (CFU)
Effluent Violation	001	12/31/2015	E. coli, colony forming units (CFU)

MSOP MO0102113 sets forth specific effluent limitations, monitoring requirements, and permit conditions regarding your facility. Failure to comply with effluent limitations established in part "A" of the MSOP is a violation of Sections 644.051.1(3) and 644.076.1, RSMo. **Failure to address the violation(s) may result in heightened enforcement action.**



Recycled Paper

BCSD, Lee Heights
March 22, 2016
Page 2

By **April 26, 2016**, please submit a written response, to the Northeast Regional Office, 1709 Prospect Drive, Macon, MO 63552-2602, addressing the above violations and explaining what steps you have taken or will take to prevent future violations. Your facility will be considered in noncompliance and the department's records will continue to reflect noncompliance until the violation(s) is/are addressed. If you have any questions or would like to schedule a meeting in person, please contact the Water Pollution Technical Services Unit at 660-385-8000, NERO@dnr.mo.gov or the address above. Thank you for your cooperation in this matter.

If you have already provided this information, the department appreciates your efforts to return your facility to compliance.

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 initial "I".

Irene Crawford
Regional Director

IC/drm



Jeremiah W. (Jay) Nixon, Governor

Sara Parker Pauley, Director

DEPARTMENT OF NATURAL RESOURCES

dnr.mo.gov

CERTIFIED MAIL

7014 1200 0001 0386 8153

5.200 BCSD, Lee Heights WWTF
Boone County
#MO-0102113
NOV #NER 2015030513534998

January 22, 2016

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

NOTICE OF VIOLATION

Dear Mr. Cooksey:

Missouri State Operating Permit (MSOP) #MO-0102113 was issued for the Boone County Regional Sewer District (BCSD), Lee Heights WWTF 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 1st and 2nd Quarters 2015 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	1 st Quarter 2015	Biochemical Oxygen Demand (BOD)	45 mg/L Monthly Average	53 mg/L
001	2 nd Quarter 2015	E. coli	206 #/100 mL Monthly Average	945 #/100 mL

BCSD, Lee Heights WWTF
January 22, 2016
Page 2

Therefore, Notice of Violation #NER 2015030513534998 is hereby issued to BCSD, Lee Heights WWTF for failure to comply with the aforementioned effluent limitations. Per state regulation 10 CSR 20-7.015(9)(D)(4), please provide a written report by **February 15, 2016**, which explains the cause for the non-compliance, exact dates of non-compliance, date upon which you returned to compliance, and what steps your operation performed to prevent a reoccurrence of the violation. BCSD, Lee Heights WWTF 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 Ruby 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



Irene Crawford
Regional Director

IC/drm



Missouri Department of dnr.mo.gov

NATURAL RESOURCES

Eric R. Greitens, Governor

Carol S. Comer, Director

5.200 BCRSD Oberlin Valley WWTP
Boone County
MO0117323

March 30, 2018

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

LETTER OF WARNING

Dear Permittee:

The Missouri Department of Natural Resources' Northeast Regional Office is issuing you Letter of Warning (LOW) for significant violations of Missouri State Operating Permit (MSOP) MO0117323 and the Missouri Clean Water Law (MCWL) at BCRSD Oberlin Valley WWTP. The Department requests that you take immediate action to correct the violations found on the attached list.

MSOP MO0117323 sets forth specific effluent limitations, monitoring requirements, and permit conditions regarding your facility. Failure to comply with effluent limitations established in part "A" of the MSOP is a violation of Sections 644.051.1(3) and 644.076.1, RSMo. **Failure to address the violation(s) may result in heightened enforcement action.**

By **April 30, 2018**, please submit a written response, to the Northeast Regional Office, 1709 Prospect Drive, Macon, MO 63552-2602, addressing the violations and explaining what steps you have taken or will take to prevent future violations. Your facility will be considered not in compliance until the violation(s) is/are addressed. If you have any questions or would like to schedule a meeting in person, please contact the Water Pollution Technical Services Unit at 660-385-8000, NERO@dnr.mo.gov or the address above. Thank you for your cooperation in this matter.

If you have already provided this information, the Department appreciates your efforts to return your facility to compliance.

Sincerely,

NORTHEAST REGIONAL OFFICE

Irene Crawford
Regional Director

IC/rmm



Enclosure

5.200 BCRSD Oberlin Valley WWTP
Boone County
MO0117323

Issue	Permitted Feature	Monitoring Period End Date or Event Due Date	Parameter or Event Type
Effluent Violation	001	9/30/2017	E. coli, colony forming units (CFU)
Effluent Violation	001	12/31/2017	Escherichia coli (E. coli)