

STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES

MISSOURI CLEAN WATER COMMISSION



CONSTRUCTION PERMIT

The Missouri Department of Natural Resources hereby issues a permit to:

Platte-Clay/ Holmes Creek Sewer Company
P.O. Box 100
Kearney, MO 64060

for the construction of (described facilities):

See attached.

Permit Conditions:

See attached.

Construction of such proposed facilities shall be in accordance with the provisions of the Missouri Clean Water Law, Chapter 644, RSMo, and regulation promulgated thereunder, or this permit may be revoked by the Department of Natural Resources (Department).

As the Department does not examine structural features of design or the efficiency of mechanical equipment, the issuance of this permit does not include approval of these features.

A representative of the Department may inspect the work covered by this permit during construction. Issuance of a permit to operate by the Department will be contingent on the work substantially adhering to the approved plans and specifications.

This permit applies only to the construction of water pollution control components; it does not apply to other environmentally regulated areas.

February 13, 2015
Effective Date


Sara Parker Pauley, Director, Department of Natural Resources

February 12, 2017
Expiration Date


John Madras, Director, Water Protection Program

CONSTRUCTION PERMIT

I. CONSTRUCTION DESCRIPTION

Modification to an existing sewage treatment facility by the consolidation of two outfalls into a single new outfall, addition of a tablet chlorinator, two 1500 gallon (nominal volume) tanks for a chlorine contact chamber with an effective volume of approximately 3000 gallons, a tablet dechlorinator, flow measurement weir, outfall pipe and structure, and all the necessary appurtenances to make the facilities complete and usable to treat the effluent from two existing recirculating sand filter treatment plants. The combined treatment plants will maintain the capacity to treat the waste from a design population equivalent of 589 with an average daily discharge of 44,087 gallons. This facility will discharge to a Tributary to Holmes Creek, Clay County.

II. FINDING OF AFFORDABILITY

The Finding of Affordability is not applicable. The permittee is not a combined or separate sanitary sewer system or a publicly owned treatment works.

III. CONSTRUCTION PERMIT CONDITIONS

The permittee is authorized to construct subject to the following conditions:

1. This construction permit does not authorize discharge.
2. All construction shall be in accordance with the plans and specifications submitted by White Cloud Engineering & Construction on October 20, 2014, and November 26, 2014.
3. The Department must be contacted in writing prior to making any changes to the approved plans and specifications that would directly or indirectly have an impact on the capacity, flow, system layout, or reliability of the proposed wastewater treatment facilities or any design parameter that is addressed by 10 CSR 20-8, in accordance with 10 CSR 20-8.110(8).
4. State and Federal Law does not permit bypassing of raw wastewater, therefore steps must be taken to ensure that raw wastewater does not discharge during construction. If a sanitary sewer overflow or bypass occurs, report the appropriate information to the Department's Kansas City Regional Office per 10 CSR 20-7.015(9)(E)2.
5. This Construction Permit is invalid for projects required to comply with the requirements contained in 10 CSR 20-4, "Grants and Loans"
6. Protection of drinking water supplies shall be in accordance with 10 CSR 20-8.120(10). "There shall be no physical connections between a public or private potable water supply system and a sewer, or appurtenance thereto which would permit the passage of any wastewater or polluted water into the potable supply. No water pipe shall pass through or come in contact with any part of a sewer manhole."

7. Sewers in relation to water works structures shall meet the requirements of 10 CSR 23-3.010 with respect to minimum distances from public water supply wells or other water supply sources and structures.
 - A. Sewer mains shall be laid at least ten feet horizontally from any existing or proposed water main. The distances shall be measured edge-to-edge. In cases where it is not practical to maintain a ten foot separation, the Department may allow a deviation on a case-by-case basis, if supported by data from the design engineer. Such a deviation may allow installation of the sewer closer to a water main, provided that the water main is in a separate trench or on an undisturbed earth shelf located on either side of the sewer and at an elevation so the bottom of the water main is at least 18 inches above the top of the sewer. If it is impossible to obtain proper horizontal and vertical separation as described above for sewers, the sewer must be constructed of slip-on or mechanical joint pipe or continuously encased and be pressure tested to 150 pounds per square inch to assure water tightness.
 - B. Manholes should be located at least ten feet horizontally from any existing or proposed water main.
 - C. Sewers crossing water mains shall be laid to provide a minimum vertical distance of 18 inches between the outside of the water main and the outside of the sewer. This shall be the case where the water main is either above or below the sewer. The crossing shall be arranged so that the sewer joints will be equidistant and as far as possible from the water main joints. Where a water main crosses under a sewer, adequate structural support shall be provided for the sewer to maintain line and grade. When it is impossible to obtain proper vertical separation as stipulated above, one of the following methods must be specified:
 - a. The sewer shall be designed and constructed equal to the water pipe and shall be pressure tested to assure water tightness prior to backfilling; or
 - b. Either the water main or sewer line may be continuously encased or enclosed in a watertight carrier pipe which extends ten feet on both sides of the crossing, measured perpendicular to the water main. The carrier pipe shall be of materials approved by the Department for use in water main construction.
8. In addition to the requirements for a construction permit, 10 CSR 20-6.200 requires land disturbance activities of one acre or more to obtain a Missouri State Operating Permit to discharge stormwater. The permit requires Best Management Practices sufficient to control runoff and sedimentation to protect waters of the state. Land disturbance permits will only be obtained by means of the Department's ePermitting system available online at www.dnr.mo.gov/env/wpp/epermit/help.htm. See www.dnr.mo.gov/env/wpp/stormwater/sw-land-disturb-permits.htm for more information.

9. A United States (U.S.) Army Corps of Engineers (COE) permit (404) and a Water Quality Certification (401) issued by the Department or permit waiver may be required for the activities described in this permit. This permit is not valid until these requirements are satisfied. If construction activity will disturb any land below the ordinary high water mark of Jurisdictional Waters of the U.S. then a 404/401 will be required. Since the COE makes determinations on what is jurisdictional, you must contact the COE to determine permitting requirements. You may call the Department's Water Protection Program at 573-751-1300 for more information. See www.dnr.mo.gov/env/wpp/401/ for more information.
10. Upon completion of construction;
 - A. Submit the enclosed form Statement of Work Completed to the Department in accordance with 10 CSR 20-6.010(5)(D);
 - B. Submit an electronic copy of the as-builts if the project was not constructed in accordance with previously submitted plans and specifications; and
 - C. Form B - Application for an Operating Permit for Domestic or Municipal Wastewater has already been submitted for modification of the treatment facility; received April 10, 2014. The permit modification fee of \$750.00 must be submitted in order to complete the application. Please submit this fee at the time the Statement of Work Completed is submitted.

IV. REVIEW SUMMARY

1. AMMONIA

The Water Protection Program is providing this notice to inform permittees that EPA's published ammonia criteria for aquatic life protection is lower than the current Missouri criteria. The department has initiated stakeholder discussions on this topic and at this time, there is no firm target date for starting the rulemaking to adopt new standards. More information can be found at <http://dnr.mo.gov/pubs/pub2481.pdf>.

The scope of the current project is to provide seasonal disinfection to the effluent in order to meet e-coli limitations. Ammonia limits will become effective January 1, 2018, the current Operating Permit has a schedule of compliance. Future enactment of the stricter ammonia limits has been communicated in the Public Notice fact sheet for renewal of the Operating Permit placed on public notice 12-15-2013, and issued 1-1-2015. Discussion with the Consulting Engineer acknowledges the upcoming ammonia limits as well as potential future stricter limitations. Options are being considered by the owner and consultant.

2. CONSTRUCTION PURPOSE

Seasonal fecal coliform limits have been effective since August 2011. This construction permit allows construction of the necessary disinfection equipment to meet bacteria limitations.

3. FACILITY DESCRIPTION

The existing treatment facility consists of two separate plants each with a separate outfall to the adjacent creek. Outfall # 001 is a recirculating sand filter with two separate filter beds with a total area of approximately 5200 sq. ft., the design PE is 348 and the design flow is 26,100 GPD. Outfall # 002 is a recirculating sand filter with one filter bed with a total area of approximately 3600 sq. ft., the design PE is 241 and the design flow is 18,038 GPD. The future facility will have the two outfalls combined prior to tablet chlorination and tablet dechlorination. The new outfall (#003) will be located in between the two existing outfalls. Outfall #003 location in UTM is X=380854, Y=4352958, Clay County.

4. COMPLIANCE PARAMETERS

The new facilities will allow e-Coli limits and total residual chlorine limits to be met.

5. REVIEW of MAJOR TREATMENT DESIGN CRITERIA

The design flow of the plant is 46,138 GPD; the maximum flow expected is a peak of 4 times, which is a flow of 128 gpm. Both tablet dispensers (Norweco XT-4000) have a peak flow capacity of 138 gpm. The chlorine contact chamber has an approximate volume of 3000 gallons. This exceeds the required minimum contact time of 15 minutes at peak flow. The design of the chlorine contact chamber is non-standard and does not meet the baffling requirements found in 10 CSR 20- chapter 8. Instead of a 40 to 1 baffling arrangement the total volume is divided equally in four compartments arranged in series. Flow first goes through 30 feet of 6-inch piping to promote mixing; the pipe is submerged in, and discharges into, the first compartment. The additional amount of contact volume reduces concerns of short circuiting.

6. OPERATING PERMIT MODIFICATION

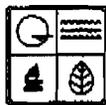
Operating permit MO-0119148 will require a modification to reflect the construction activities. Upon construction completion, submit a modification fee of \$750.00; Form B - Application for an Operating Permit for Domestic or Municipal Wastewater was submitted on April 10, 2014. A draft of the Operating Permit modification is scheduled to be placed on public notice at approximately the same time as Construction Permit issuance.

ORIGINAL

CP0001040

AP18112

C13157



MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM
APPLICATION FOR CONSTRUCTION PERMIT -
WASTEWATER TREATMENT FACILITY

FOR DEPARTMENT USE ONLY	
APP NO.	CP NO.
FEE RECEIVED \$150.00	CHECK NO. 108709
DATE RECEIVED 4-10-14	

APPLICATION OVERVIEW

The Application for Construction Permit - Wastewater Treatment Facility form has been developed in a modular format and consists of Part A and B. All applicants must complete Part A. Part B should be completed for applicants who currently land-apply wastewater or propose land application for wastewater treatment. Please read the accompanying instructions before completing this form. Submittal of an incomplete application may result in the application being returned.

PART A - BASIC INFORMATION

1.0 APPLICATION INFORMATION (Note - If any of the questions in this section are answered NO, this application may be considered incomplete and returned.)

- 1.1 Is this a Federal/State funded project? YES N/A Funding Agency: Cont. Ann. Project #: _____
- 1.2 Has the Missouri Department of Natural Resources approved the proposed project's antidegradation review?
 YES Date of Approval: _____
 Attached is the No Degradation Evaluation Conclusion of Antidegradation Review form
- 1.3 Has the department approved the proposed project's facility plan*?
 YES Date of Approval: _____ NO N/A (If Not Applicable, complete No. 1.4.) Enclosed.
- 1.4 [Complete only if answered Not Applicable on No. 1.3.] Is a copy of the engineering report* for wastewater treatment facilities with a design flow less than 22,500 gpd included with this application?
 YES NO
- 1.5 Is a copy of the appropriate plans* and specifications* included with this application?
 YES Denote which form is submitted: Hard copy Electronic copy (See instructions.) NO
- 1.6 Is a summary of design* included with this application? YES NO
- 1.7 Has the appropriate operating permit application (A, B, or B2) been submitted to the department?
 YES Date of submittal: _____
 Enclosed is the appropriate operating permit application submittal. Denote which form: A B B2
 N/A Please explain: _____
- 1.8 Is the facility currently under enforcement with the department or the Environmental Protection Agency? YES NO
- 1.9 Is the appropriate fee included with this application? YES NO (See instructions for appropriate fee.)

* Must be affixed with a Missouri registered professional engineer's seal, signature and date. ✓

2.0 PROJECT INFORMATION

2.1 NAME OF PROJECT
Holmes Creek WWTF IMPROVEMENTS

2.2 PROJECT DESCRIPTION
DISINFECTION W/ UV, COMBINING OUTFALLS 1+2 TO SINGLE OUT FALL

2.3 SLUDGE HANDLING, USE AND DISPOSAL DESCRIPTION
N/A - DISINFECTION OF EXISTING WWTF ONLY

2.4 DESIGN INFORMATION

A. Current population: 420; Design population: 589
 B. Actual Flow: 32000 gpd; Design Average Flow: 4438 gpd;
 Actual Peak Daily Flow: 42900 gpd; Design Maximum Daily Flow: 4438 gpd

RECEIVED

APR 10 2014

2.5 ADDITIONAL INFORMATION

- A. Is a topographic map attached? YES NO
- B. Is a process flow diagram attached? YES NO

WATER PROTECTION PROGRAM

✓

3.0 WASTEWATER TREATMENT FACILITY

NAME <i>Holmes Creek Sewer Co.</i>		TELEPHONE NUMBER WITH AREA CODE <i>816-903-7310</i>	E-MAIL ADDRESS <i>daved@pccc.coop</i>	
ADDRESS (PHYSICAL) <i>12502 French Ridge</i>	CITY <i>Kennett</i>	STATE <i>MO</i>	ZIP CODE <i>64060</i>	COUNTY <i>CLAY</i>

Wastewater Treatment Facility: *Mo-019148 (Outfall 1+2 of 2) PROJECT WILL COMBINE*

- 3.1 Legal Description: *SE 1/4, NE 1/4, Sec. 16, T 52 N, R 31 W*
(Use additional pages if construction of more than one outfall is proposed.)
- 3.2 UTM Coordinates Easting (X): *380874* Northing (Y): *4352912*
For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)
- 3.3 Name of receiving streams: *UN. TR. 15 to Holmes Cr., U*

4.0 PROJECT OWNER

NAME <i>PLATE CLAY/HOLMES CR SEWER CO.</i>		TELEPHONE NUMBER WITH AREA CODE <i>816 903 7310</i>	E-MAIL ADDRESS <i>daved@pccc.coop</i>	
ADDRESS <i>PO Box 100</i>	CITY <i>Kennett</i>	STATE <i>MO</i>	ZIP CODE <i>64060</i>	

5.0 CONTINUING AUTHORITY: Permanent organization that will serve as the continuing authority for the operation, maintenance and modernization of the wastewater collection system.

NAME <i>Same</i>		TELEPHONE NUMBER WITH AREA CODE	E-MAIL ADDRESS	
ADDRESS	CITY	STATE	ZIP CODE	

5.1 A letter from the continuing authority, if different than the owner, is included with this application. YES NO N/A

5.2 COMPLETE THE FOLLOWING IF THE CONTINUING AUTHORITY IS A MISSOURI PUBLIC SERVICE COMMISSION REGULATED ENTITY.

A. Is a copy of the certificate of convenience and necessity included with this application? YES NO

5.3 COMPLETE THE FOLLOWING IF THE CONTINUING AUTHORITY IS A PROPERTY OWNERS ASSOCIATION.

- A. Is a copy of the as-filed restrictions and covenants included with this application? YES NO
- B. Is a copy of the as-filed warranty deed, quitclaim deed or other legal instrument which transfers ownership of the land for the wastewater treatment facility to the association included with this application? YES NO
- C. Is a copy of the as-filed legal instrument (typically the plat) that provides the association with valid easements for all sewers included with this application? YES NO
- D. Is a copy of the Missouri Secretary of State's nonprofit corporation certificate included with this application? YES NO

6.0 ENGINEER

ENGINEER NAME / COMPANY NAME <i>BRICK ROOST, WHITE CLOUD ENG & CONST</i>		TELEPHONE NUMBER WITH AREA CODE <i>660 582 4111</i>	E-MAIL ADDRESS <i>whitecloudunitedsky.net</i>	
ADDRESS <i>PO Box 468</i>	CITY <i>MARIONVILLE</i>	STATE <i>MO</i>	ZIP CODE <i>64468</i>	

7.0 PROJECT OWNER: I hereby certify that I am familiar with the information contained in this application and to the best of my knowledge and belief such information is true, complete, and accurate, and if granted this permit, I agree to abide by the Missouri Clean Water Law and all rules, regulations, orders, and decisions, subject to any legitimate appeal available to applicant under Missouri Clean Water Law. I also understand the issuance of the construction permit does not guarantee the proposed wastewater treatment will meet the required effluent limitations of the issued Missouri State Operating Permit for this facility.

PROJECT OWNER SIGNATURE

PRINTED NAME <i>Davis DeWitt</i>	DATE <i>4/03/14</i>
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TITLE OR CORPORATE POSITION <i>Manager of Const. + Maint.</i>	TELEPHONE NUMBER WITH AREA CODE <i>816 903-7352</i>	E-MAIL ADDRESS <i>daved@pccc.coop</i>
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Mail completed copy to: MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM
P.O. BOX 176
JEFFERSON CITY, MO 65102-0176

END OF PART A.
REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHETHER PART B NEEDS TO BE COMPLETE.