



Jeremiah W. (Jay) Nixon, Governor • Sara Parker Pauley, Director

DEPARTMENT OF NATURAL RESOURCES

www.dnr.mo.gov

SEP 21 2016

Mr. Lonnie Thurmond, City Administrator
City of East Prairie
219 North Washington
East Prairie, MO 63845

RE: AP#19966 Wastewater UV Disinfection Improvements – East Prairie Wastewater Treatment Facility, MO-0001698, Construction Permit No. CP0001698, Construction Permit Time Extension

Dear Lonnie Thurmond:

The Department of Natural Resources, Water Protection Program received a construction permit extension request on August 26, 2016 for the city of East Prairie. The request for additional time for Construction Permit Number CP0001698 has been granted for a period of 24 months and will expire December 22, 2018. This permit extension authorizes construction of the facilities described on the permit dated December 23, 2014. This construction permit extension does not supersede any requirements of the operating permit or enforcement actions.

In accordance with 10 CSR 20-6.010(4)(G), the department can only grant time extensions once. Thus, if the project is not complete by December 22, 2018, the applicant must submit a new construction permit application and fee.

If you were adversely affected by this decision, you may be entitled to an appeal before the Administrative Hearing Commission (AHC) pursuant to 10 CSR 20-1.020 and Section 621.250, RSMo. To appeal, you must file a petition with the AHC within 30 days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed; if it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the AHC. Contact information for the AHC is: Administrative Hearing Commission, United States Post Office Building, Third Floor, 131 West High Street, P.O. Box 1557, Jefferson City, Missouri 65102, Phone: (573) 751-2422, Fax: (573) 751-5018, and Website: www.oa.mo.gov/ahc.

Mr. Lonnie Thurmond, City Administrator
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If you have any questions concerning this matter, please contact Ms. Lei Hou, P.E., of the Water Protection Program, at (314) 416-2458 or Department of Natural Resources, P.O. Box 176, Jefferson City, Missouri 65102.

Thank you for your efforts to help ensure clean water in Missouri.

Sincerely,

WATER PROTECTION PROGRAM



John Madras
Director

JM: lhk

Enclosure

c: Mr. Richard E. Cochran, Jr., P.E., Waters Engineering Inc.
Southeast Regional Office
Ms. Kristi Savage-Clarke, Water Protection Program

RECEIVED

AUG 31 2016

Waters Engineering, Inc.

Civil Engineering & Land Surveying

Water Protection Program

Post Office Box 567
908 S. Kingshighway
Sikeston, Missouri 63801

E-mail: main@waterseng.com
573/471-5680
Fax: 573/471-5689

August 25, 2016

Ms. Lei Hou
Missouri Department of Natural Resources
Water Protection Program, Permitting
P.O. Box 176
Jefferson City, Missouri 65101

RE: Wastewater System Improvements
East Prairie Permit No. CP001698
Mississippi County, Missouri

Dear Ms Hou:

The City of East Prairie would like to request a two year extension of the construction permit referenced above. As you may know, the City was awarded an Engineering Services Grant after the construction permit was issued. The grant was received and preparation and submittal of the Facility Plan through this grant is ongoing. The plan must be submitted to MDNR no later than August 2017.

One option the Facility Plan is examining is the option of land application as a means to meet future ammonia limits. Should the City proceed with the construction of a land application system, disinfection will not be required. Until we know the best option for the City regarding treatment, we are delaying the construction of the disinfection. Therefore, the City would appreciate receiving a two year extension on this permit until we can finalize the Facility Plan and determine our best course of action.

If you have any questions or comments on the plan, please contact me.

Sincerely,

WATERS ENGINEERING, INC.



Richard E. Cochran, Jr., P.E.
Senior Engineer

copy: Lonnie Thurmond, City Administrator

STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION



CONSTRUCTION PERMIT

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

City of East Prairie 219 North Washington East Prairie, MO 63845
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for the construction of (described facilities):

See attached.

Permit Conditions:

See attached.

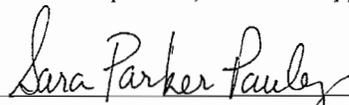
Construction of such proposed facilities shall be in accordance with the provisions of the Missouri Clean Water Law, Chapter 644, RSMo, and regulation promulgated thereunder, or this permit may be revoked by the Department of Natural Resources (Department).

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.

December 23, 2014
Effective Date


Sara Parker Pauley, Director, Department of Natural Resources

December 22, 2016
Expiration Date


John Madros, Director, Water Protection Program

CONSTRUCTION PERMIT

I. CONSTRUCTION DESCRIPTION

Modification to an existing wastewater treatment facility, by the addition of a Trojan UV3000Plus ultraviolet (UV) disinfection system consisting two (2) banks placed in series within a single channel, each bank with five (5) modules, each module to have eight (8) UV lamps (design is based on a peak flow of 2.0 MGD), and all the necessary appurtenances to make the facilities complete and usable to treat the waste from a population equivalent of 6,000 with an average daily discharge of 0.6 MGD. This facility discharges to the unnamed tributary to Lee Rowe Ditch in Mississippi County, Missouri.

II. FINDING OF AFFORDABILITY

The Finding of Affordability is not applicable. The construction permit application was submitted due to the Schedule of Compliance in its current operating permit issued on November 20, 2009. No new requirements and changes to the operating permit will result from the issuance of this construction permit.

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 Richard E. Cochran, JR, PE, of Waters Engineering, Inc. and received on November 4, 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 Southeast 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 built if the project was not constructed in accordance with previously submitted plans and specifications; and
 - C. When the facility applies for their next operating permit renewal, they will be expected to include an updated facility description on their application.

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>.

2. CONSTRUCTION PURPOSE

The existing operating permit, MO0001698 issued November 20, 2009, includes final effluent limits for Fecal Coliform effective November 20, 2012. The City of East Prairie is proposing to install an ultraviolet disinfection system to meet the disinfection requirement.

3. FACILITY DESCRIPTION

The existing facility is a three-cell lagoon treatment system and sludge retains in the lagoon.

4. COMPLIANCE PARAMETERS

The existing operating permit, MO0001698 issued on November 20, 2009, contains final effluent Fecal Coliform limits of 1000 colonies per 100 mL daily maximum and 400 colonies per 100 mL monthly average. The operating permit expired November 19, 2014 and the city has applied for a renewal. The new permit will contain disinfection effluent limits for E. coli. The proposed construction is anticipated to meet the E. coli limits.

5. REVIEW of MAJOR TREATMENT DESIGN CRITERIA

The ultraviolet disinfection system will be capable of treating effluent flows from this facility of 0.6 MGD design flow and 2.0 MGD peak hourly flow. UV transmittance test of the effluent were completed and the system was designed for an UV transmittance of 40%. Spare parts for the UV unit will be stored on the site for a quick replacement.

6. OPERATING PERMIT MODIFICATION

It is expected that the facility owner will include a new facility description in their next operating permit renewal application to reflect the installation of an UV disinfection system.

Lei Hou, PE
Engineering Section
lei.hou@dnr.mo.gov