

STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES

MISSOURI CLEAN WATER COMMISSION



CONSTRUCTION PERMIT

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

United Services, Inc.
30208 Highway 136 East
Maryville, MO 64468

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.

April 7, 2015
Effective Date

Sara Parker Pauley
Sara Parker Pauley, Director, Department of Natural Resources

April 6, 2017
Expiration Date

John Madras
John Madras, Director, Water Protection Program

CONSTRUCTION PERMIT

I. CONSTRUCTION DESCRIPTION

Modification to an existing sewage treatment facility by the addition of a tablet chlorinator, a chlorine contact pipe with an effective volume of approximately 275 gallons (105 feet of 8-inch pvc pipe), a tablet dechlorinator, and all the necessary appurtenances to make the facilities complete and usable to treat the waste from a population equivalent of 67 with an average daily discharge of 6,660 gallons. This facility discharges to a Tributary to Mozingo Creek, Nodaway 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 May 13, 2014, and revisions received December 24, 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 10 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 10 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 10 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 10 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 May 13, 2014. The permit modification fee of \$75.00 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 potential for more stringent ammonia effluent limits was conveyed to the owner through a review letter dated December 15, 2014. The response to the letter dated December 19, 2014 acknowledges the new ammonia criterion. The consultant indicates that solutions to the existing and future ammonia limits are being explored.

2. CONSTRUCTION PURPOSE

Seasonal fecal coliform limits have been effective since April 1, 2014. This construction permit allows construction of the necessary disinfection equipment to meet bacteria limitations.

3. FACILITY DESCRIPTION

The existing treatment facility is a recirculating sand filter having a filter bed with a total area of approximately 1332 sq. ft., the design PE is 67 and the design flow is 6,660 GPD. The facility will be modified with the addition of a tablet chlorinator, a chlorine contact pipe, and a tablet dechlorinator. This facility discharges through a 4-inch outfall pipe.

4. COMPLIANCE PARAMETERS

The new facilities will allow e-Coli limits and total residual chlorine limits to be met. These activities do not intend to aid the facility in the treatment of ammonia.

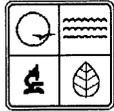
5. REVIEW of MAJOR TREATMENT DESIGN CRITERIA

Chlorination and dechlorination will be provided by Norweco XT 2000 tablet dispensers; this unit has a capacity to serve design flows of 20,000 GPD. The chlorine contact chamber will be 105 feet of 8-inch pvc pipe, there will be also a nominal amount of 4-inch piping between the chlorinator and dechlorinator. The pipe arrangement will have a volume of approximately 275 gallons. The design flow of the facility is 6,660 GPD; for design purposes a peak factor of 4 was assumed. At peak flow the contact chamber would provide the minimum required contact time of 15 minutes.

6. OPERATING PERMIT MODIFICATION

Operating permit MO-0130826 will require a modification to reflect the construction activities. Upon construction completion, submit a modification fee of \$75.00; Form B - Application for an Operating Permit for Domestic or Municipal Wastewater was submitted on May 13, 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.

Andrew Appelbaum, P.E.
Engineering Section
andy.appelbaum@dnr.mo.gov



MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM

APPLICATION FOR CONSTRUCTION PERMIT - 1 3 2014
WASTEWATER TREATMENT FACILITY

RECEIVED

CP0001652

AP 18329

C13207

FOR DEPARTMENT USE ONLY	
APP NO.	CP NO.
FEE RECEIVED \$750.00	CHECK NO. 20185
DATE RECEIVED 5/13/14	8B

WATER PROTECTION PROGRAM

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: _____ 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.) *W/ SUBMITTAL*
 - 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

COUNTRYSIDE VIEW SUBDIVISION - DISINFECTION IMPRV.

2.2 PROJECT DESCRIPTION

CHLORINATION - DI-CHLOR of RSF EFFLUENT PRIOR TO DISCHARGE

2.3 SLUDGE HANDLING, USE AND DISPOSAL DESCRIPTION

N/A

2.4 DESIGN INFORMATION

- A. Current population: *41*; Design population: *67*
- B. Actual Flow: *2260* gpd; Design Average Flow: *6600* gpd;
Actual Peak Daily Flow: *4000* gpd; Design Maximum Daily Flow: *6600* gpd

2.5 ADDITIONAL INFORMATION

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

3.0 WASTEWATER TREATMENT FACILITY				
NAME <i>COUNTRYSIDE VIEW SUS.</i>		TELEPHONE NUMBER WITH AREA CODE <i>800-748-1488</i>		E-MAIL ADDRESS <i>dfarnan@vecci.coop</i>
ADDRESS (PHYSICAL) <i>Hwy 136 East</i>	CITY <i>MARYVILLE</i>	STATE <i>MO</i>	ZIP CODE <i>64468</i>	COUNTY <i>WUDANWAY</i>
Wastewater Treatment Facility: Mo- <i>0130826</i> (Outfall <i>1</i> Of <i>1</i>)				
3.1 Legal Description: <u> </u> 1/4, <u><i>NW</i></u> 1/4, <u><i>NE</i></u> 1/4, Sec. <u><i>24</i></u> , T <u><i>64</i></u> , R <u><i>35</i></u> (Use additional pages if construction of more than one outfall is proposed.)				
3.2 UTM Coordinates Easting (X): <u><i>347867</i></u> Northing (Y): <u><i>4467468</i></u> For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)				
3.3 Name of receiving streams: <u><i>UN. TRIS TO MOZINGO CREEK</i></u>				
4.0 PROJECT OWNER				
NAME <i>UNITED SERVICES, INC</i>		TELEPHONE NUMBER WITH AREA CODE <i>800 748 1488</i>		E-MAIL ADDRESS <i>dfarnan@vecci.coop</i>
ADDRESS <i>30208 Hwy 136 E</i>	CITY <i>MARYVILLE</i>	STATE <i>MO</i>	ZIP CODE <i>64468</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. <input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> 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? <input type="checkbox"/> YES <input type="checkbox"/> NO <i>N/A</i>				
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? <input type="checkbox"/> YES <input type="checkbox"/> 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? <input type="checkbox"/> YES <input type="checkbox"/> 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? <input type="checkbox"/> YES <input type="checkbox"/> NO				
D. Is a copy of the Missouri Secretary of State's nonprofit corporation certificate included with this application? <input type="checkbox"/> YES <input type="checkbox"/> NO				
6.0 ENGINEER				
ENGINEER NAME / COMPANY NAME <i>BRACK POST - WHITE CLOUD ENG.</i>		TELEPHONE NUMBER WITH AREA CODE <i>660 582 4111</i>		E-MAIL ADDRESS <i>whitecloud@unitedsky.net</i>
ADDRESS <i>PO Box 468</i>	CITY <i>MARYVILLE</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 <i>Gene Dorrel</i>				
PRINTED NAME <i>Gene Dorrel</i>			DATE <i>4/30/14</i>	
TITLE OR CORPORATE POSITION <i>Genl. MGR - UNITED SERVICES</i>		TELEPHONE NUMBER WITH AREA CODE <i>800 748 1488</i>		E-MAIL ADDRESS
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.				

WHITE CLOUD ENGINEERING & CONSTRUCTION, INC.

26101 Hallmark Rd., P.O. Box 468; Maryville, MO 64468
PHONE: 660-582-4111; FAX: 660-582-4115
E-Mail: whitecl@unitedsky.net

Brock Pfof, P.E.
Missouri Registration MO-E-22495
Iowa Registration No. 11782

American Society of Civil Engineers
National Society of Professional Engineers
Missouri Society of Professional Engineers
American Water Works Association

April 30, 2014

Missouri Department of Natural Resources
Water Protection Program
PO Box 176
Jefferson City, MO 65102

Re; disinfection of existing WWTF, Countryside View, MO-0130826

To Whom it May Concern;

Enclosed for review and issuance of a construction permit are the following items;

Completed, signed and dated Application for Construction.
Completed, signed and dated No Degradation Evaluation (as per Keith Fork)
Appropriate permit fee of \$750.
Two sets of plans, specifications, engineering report, and calculations, sealed by a PE.
Completed Form B-Operating permit

Due to the minor nature of the project, I have taken the liberty of using as-bilt plans for the existing facility, and modifying to show the proposed disinfection regime. The plans have been included with the spec packet on 8 ½ x 11 sheets. If you require full sized plans, please do not hesitate to call or e-mail. I am also sending a copy electronically.

If you have questions regarding the project, please do not hesitate to call or e-mail this office.

Sincerely,

Brock Pfof, PE

cc. United Services

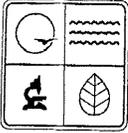
RECEIVED

MAY 13 2014

WATER PROTECTION PROGRAM

RECEIVED

MAY 13 2014



MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM, WATER POLLUTION CONTROL BRANCH
NO DEGRADATION EVALUATION
CONCLUSION OF ANTIDegradation REVIEW
(Submit this form with the appropriate Permit Application)

WATER PROTECTION PROGRAM

1. FACILITY

NAME <i>Countryside View Subdivision</i>		COUNTY <i>MOON TOWNSHIP</i>	
ADDRESS (PHYSICAL) <i>Highway 136 East</i>		CITY <i>MARYVILLE</i>	STATE <i>MO</i>
FACILITY CONTACT: <i>DARREN FARNHAM</i>		ZIP CODE <i>64468</i>	TELEPHONE NUMBER WITH AREA CODE <i>800 748 1488</i>

2. NO DEGRADATION OPTIONS

- Renewal without changes
 - Sewer extensions
 - CSO elimination projects
 - No-discharge with land application
 - No-discharge with subsurface irrigation
 - Recycle or reuse of effluent
 - Discharge to a regional wastewater collection and treatment system.
 - Addition or replacement of disinfection system for an existing wastewater facility: Ultraviolet or Ozone
 - The facility will be required to meet regulatory effluent limits for bacteria.
 - Addition or replacement for chlorination or dechlorination disinfection system of existing facility.
- The chlorination or dechlorination disinfection treatment system design must be for total removal of Total Residual Chlorine. Therefore, the facility will be required to meet the water quality-bases effluent limits determined by the permit writer or the following water quality-bases effluent limits:

Beneficial Use of Classified Water	MDL (µg/l)	AML (µg/l)
Warm-water fishery	17	8.2
Cold-water fishery	3.3	1.6

Note: These compliance limits for Total Residual Chlorine are much less than minimum quantification level, or ML, of 0.13. The facility will be required to meet regulatory effluent limits for bacteria.

Other, please describe: _____

Consulted with Water Protection Staff:

NAME <i>Scott Honig</i>	DATE <i>2011</i>
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3. NO DEGRADATION PROPOSED PROJECT SUMMARY

DISINFECTION of RSE EFFLUENT

CONSULTANT: I have prepared or reviewed this form and all attached reports and documentation. The conclusion proposed is consistent with the Antidegradation Implementation Procedure and current state and federal regulations.

SIGNATURE <i>BP/H</i>	DATE <i>4/27/14</i>
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PRINT NAME <i>Brock Post</i>

TELEPHONE NUMBER WITH AREA CODE <i>660 582 4111</i>	E-MAIL ADDRESS <i>whitecld@unitedsky.net</i>
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Owner: I have read and reviewed the prepared documents and agree with this submittal.

SIGNATURE <i>Aene Dorel</i>	DATE <i>4/30/14</i>
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TELEPHONE NUMBER WITH AREA CODE <i>800-748-1488</i>	E-MAIL ADDRESS
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Continuing Authority: Continuing Authority is the permanent organization that will be responsible for the operation, maintenance and modernization of the facility. The regulatory requirement regarding continuing authority is available at www.sos.mo.gov/adrules/csr/current/10csr/10c20-6a.pdf.

I have read and reviewed the prepared documents and agree with this submittal.

SIGNATURE <i>SAME</i>	DATE
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TELEPHONE NUMBER WITH AREA CODE	E-MAIL ADDRESS
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Return completed form with the appropriate Permit Application to:

Missouri Department of Natural Resources
Water Protection Program
Water Pollution Control Branch
P.O. Box 176
Jefferson City, MO 65102