

STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION



CONSTRUCTION PERMIT

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

Brad & Julie Leonard 3532 Matney Hollow Road Seymore, MO 65746
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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.

April 1, 2015
Effective Date

March 31, 2017
Expiration Date

Sara Parker Pauley, Director, Department of Natural Resources

John Madras, Director, Water Protection Program

CONSTRUCTION PERMIT

I. CONSTRUCTION DESCRIPTION

This project consists of the construction of a no-discharge earth basin lagoon for lime sludge storage which is produced at the Whiteman AFB drinking water treatment facility. A+ Septic Solutions is contracted to haul and land apply the approximately 12,000 gallons of lime sludge produced each week. The sludge is currently applied on 240 acres at the Whiteman AFB under permit MOG640090. The lagoon, which will be constructed on 7.7 acres of private property recently purchased by A+ Septic Solutions, will be used exclusively for the temporary storage of lime sludge. The lagoon will be utilized when weather conditions prevent land application. During ideal weather the sludge will be removed and land applied onto Whiteman AFB.

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 Schulte Engineering & Consulting on March 3rd, 2015.
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. Manholes shall be located with the top access at or above grade level.
 - D. 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 1 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. A+ Septic Solutions will become the continuing authority for operation, maintenance, and modernization of these facilities;
 - B. Submit the enclosed form Statement of Work Completed to the department in accordance with 10 CSR 20-6.010(5)(D);
 - C. Submit an electronic copy of the as built if the project was not constructed in accordance with previously submitted plans and specifications.

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 facility is no-discharge.

2. CONSTRUCTION PURPOSE

The purpose of this project is to construct a no-discharge earth basin lagoon that can be utilized for temporary lime sludge storage when weather conditions prevent land application.

3. FACILITY DESCRIPTION

The drinking water treatment plant located on Whiteman AFB produces approximately 12,000 gallons of lime sludge each week. The AFB's operating permit, MO640090 allows for land application of the lime sludge. A+ Septic Solutions is currently contracted by Whiteman AFB to haul and land apply the sludge on 240 acres located on the AFB. A+ Septic Solutions recently purchased 7.7 acres of private land on which they plan to build a new no-discharge earth basin lagoon.

This lagoon will be utilized for temporary storage of the lime sludge when weather conditions prevent land application. During times of ideal weather the lime sludge that is stored in the lagoon will be pumped and hauled back to Whiteman AFB to be land applied.

4. COMPLIANCE PARAMETERS

The parameters stated in the operating permit must be met at all times. The no-discharge earth basin lagoon will be used exclusively to temporarily store the lime sludge produced by Whiteman AFB when weather conditions prevent land application. As stated in the operating permit, land application is not allowed during frozen, snow covered, or saturated soil conditions, or when precipitation is imminent or occurring.

5. REVIEW of MAJOR TREATMENT DESIGN CRITERIA

The no-discharge earth basin will be 30 feet long, 50 feet wide, a 6 foot depth, and a freeboard of 2 feet. The lagoon will have a minimum operating level of 2 feet and a maximum operating level of 6 feet. The available volume between the low water operating level and the high water operating level is approximately 120,000 gallons. This volume will provide adequate storage capacity for 10 weeks.

The design of the lagoon deviates from regulations in that it will contain only two large, clean, light colored barrels to measure the rainfall and evaporation on the pond cell as opposed to three as stated in 10 CSR 20-8.020(16)(C)1.

6. OPERATING PERMIT REQUIREMENTS

An operating permit is required to operate the no-discharge earth basin lagoon for temporary storage as well as land application of lime sludge. Master General Permit MOG640238 is the option that has been proposed for this project and is the general permit being used. All parameters of the operating permit must be complied with. Discharge monitoring report (DMR) data must be submitted to the Kansas City Regional Office on its due date even if project construction is not completed at that time.

Rachel Schneider
Engineering Section
rachel.schneider@dnr.mo.gov

APPENDIX – OPERATING PERMIT



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

RECEIVED

2P0001738
 1/20/15

FOR DEPARTMENT USE ONLY	
APP NO.	CP NO.
EEE RECEIVED #10008/2000	CHECK NO. 779
DATE RECEIVED 2-3-15	JS

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: _____
- 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.)
- 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: Form E enclosed
- 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

A+ Septic Solutions Lime Sludge Storage Lagoon

2.2 PROJECT DESCRIPTION

The project consists of the construction of a non-discharging earth basin lagoon for lime sludge storage. A+ Septic Solutions is the contact sludge hauler for the Whitman AFB water treatment facility. The lagoon is being constructed to provide short term storage of lime sludge. The lagoon will be utilized when weather conditions prevent land application of lime sludge after its removal from the treatment facility.

2.3 SLUDGE HANDLING, USE AND DISPOSAL DESCRIPTION

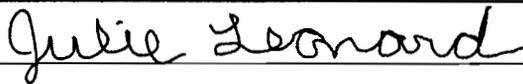
Sludge will be removed from the lagoon during ideal weather conditions and land applied on application land permitted under Whitman AFB permit #MOG640090.

2.4 DESIGN INFORMATION

A. Current population: n/a; Design population: n/a Lime sludge is collected once per week and removed from treatment facility. Average weekly production of lime sludge is 12,000gal. Sludge hauler utilizes a 3,000gal truck.
 B. Actual Flow: 1,715 gpd; Design Average Flow: 1,715 gpd;
 Actual Peak Daily Flow: n/a gpd; Design Maximum Daily Flow: n/a gpd; Design Wet Weather Event: n/a

2.5 ADDITIONAL INFORMATION

- A. Is a topographic map attached? YES NO
- B. Is a process flow diagram attached? YES NO n/a for storage lagoon

3.0 WASTEWATER TREATMENT FACILITY				
NAME A+ Septic Solutions Lime Sludge Storage Lagoon		TELEPHONE NUMBER WITH AREA CODE 417-935-4459		E-MAIL ADDRESS aplussepticssolutions@gmail.com
ADDRESS (PHYSICAL) 9 SE J Hwy	CITY Knob Noster	STATE MO	ZIP CODE 65336	COUNTY Johnson
Wastewater Treatment Facility: Mo- (Outfall Of)				
3.1 Legal Description: _____ ¼, SW _____ ¼, SW _____ ¼, Sec. 22, T 46N, R 24W (Use additional pages if construction of more than one outfall is proposed.)				
3.2 UTM Coordinates Easting (X): 451863 Northing (Y): 4289845 For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)				
3.3 Name of receiving streams: Unnamed tributary to Clear Fork. This is a non-discharging system.				
4.0 PROJECT OWNER				
NAME A+ Septic Solutions, Brad & Julie Leonard		TELEPHONE NUMBER WITH AREA CODE (417) 935-4459		E-MAIL ADDRESS aplussepticssolutions@gmail.com
ADDRESS 3532 Matney Hollow Rd	CITY Seymore	STATE MO	ZIP CODE 65746	
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 A+ Septic Solutions		TELEPHONE NUMBER WITH AREA CODE (417) 935-4459		E-MAIL ADDRESS aplussepticssolutions@gmail.com
ADDRESS 3532 Matney Hollow Rd	CITY Seymore	STATE MO	ZIP CODE 65746	
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				
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 Douglas J. Schulte, Schulte Engineering & Consulting		TELEPHONE NUMBER WITH AREA CODE (816) 260-3328		E-MAIL ADDRESS doug@schultheengineering.com
ADDRESS 21 Gates Drive	CITY Platte City	STATE MO	ZIP CODE 64079	
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 Brad or Julie Leonard			DATE 2-26-2015	
TITLE OR CORPORATE POSITION Owner		TELEPHONE NUMBER WITH AREA CODE (417) 935-4459		E-MAIL ADDRESS aplussepticssolutions@gmail.com
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.				

PART B – LAND APPLICATION ONLY

(Submit only if the proposed construction project includes land application of wastewater.)

8.0 FACILITY INFORMATION

8.1 Type of wastewater to be irrigated: Domestic State/National Park Seasonal business
 Municipal Municipal with a pretreatment program or significant industrial users
 Other (explain) Water treatment lime sludge

8.2 Months when the business or enterprise will operate or generate wastewater:
 12 months per year Part of the year (list months): _____

8.3 This system is designed for:
 No-discharge.
 Partial irrigation when feasible and discharge rest of time.
 Irrigation during recreational season, April – October, and discharge during November – March.
 Other (explain) _____.

9.0 STORAGE BASINS

9.1 Number of storage basins: 1 (Use additional pages if greater than three basins.)

9.2 Type of basins: Steel Concrete Fiberglass Earthen Earthen with membrane liner

9.3 Storage basin dimensions at inside top of berm (feet). Report freeboard as feet from top of berm to emergency spillway or overflow pipe.
Basin #1: Length 30 Width 50 Depth 8 Freeboard 2 Depth 5 Safety _____ % Slope 3:1
Basin #2: Length _____ Width _____ Depth _____ Freeboard _____ Depth _____ Safety _____ % Slope _____
Basin #3: Length _____ Width _____ Depth _____ Freeboard _____ Depth _____ Safety _____ % Slope _____

9.4 Storage Basin operating levels (report as feet below emergency overflow level).
Basin #1: Maximum operating water level 6 ft Minimum operating water level 2 ft
Basin #2: Maximum operating water level _____ ft Minimum operating water level _____ ft
Basin #3: Maximum operating water level _____ ft Minimum operating water level _____ ft

9.5 Design depth of sludge in storage basins.
Basin #1: 2-3 ft Basin #2: _____ ft Basin #3: _____ ft Basin intended to provide temporary storage only

9.6 Existing sludge depth, if the basins are currently in operation.
Basin #1: _____ ft Basin #2: _____ ft Basin #3: _____ ft

9.7 Total design sludge storage: _____ dry tons and 6,000 cubic feet

10.0 LAND APPLICATION SYSTEM Land application per Whitman AFB Permit #MOG 640090

10.1 Number of irrigation sites _____ Total Acres _____ Maximum % field slopes _____
Location: _____ ¼, _____ ¼, _____ ¼, _____ Sec. _____ T _____ R _____ County _____ Acres
Location: _____ ¼, _____ ¼, _____ ¼, _____ Sec. _____ T _____ R _____ County _____ Acres
Location: _____ ¼, _____ ¼, _____ ¼, _____ Sec. _____ T _____ R _____ County _____ Acres
(Use additional pages if greater than three irrigation sites.)

10.2 Type of vegetation: Grass hay Pasture Timber Row crops
 Other (describe) _____

10.3 Wastewater flow (dry weather) gallons per day: Average annual _____ Seasonal _____ Off-season _____

10.4 Land application rate (design flow including 1-in-10 year storm water flows):
Design: _____ inches/year _____ inches/hour _____ inches/day _____ inches/week
Actual: _____ inches/year _____ inches/hour _____ inches/day _____ inches/week

10.5 Total irrigation per year (gallons): Design: _____ gal Actual: _____ gal

10.6 Actual months used for irrigation (check all that apply):
 Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

10.7 Land application rate is based on:
 Hydraulic Loading Other (describe) _____
 Nutrient Management Plan (N&P) If N&P is selected, is the plan included? YES NO