

STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION



CONSTRUCTION PERMIT

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

Vickie South
Owner
Lehenbauer Home Site, LLC; Howe & Assoc.
1044 E. Broadway
Columbia, MO 65203

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.

August 14, 2020
Effective Date

August 13, 2022
Expiration Date

Edward B. Galbraith, Director, Division of Environmental Quality

Chris Wieberg, Director, Water Protection Program

CONSTRUCTION PERMIT

I. CONSTRUCTION DESCRIPTION

Modification to an existing wastewater treatment facility by the addition of ultraviolet (UV) disinfection. Installation of a Sanitron Model S50C, enclosed ultraviolet disinfection unit, having a peak capacity of 20 gpm (28,800 GPD), and all the necessary appurtenances to make the facilities complete and usable to treat the effluent from an existing three cell lagoon wastewater treatment plant, with a design average daily discharge of 23,040 gallons. The existing outfall will remain in use. This facility discharges to a Tributary to Auxvasse Creek, Callaway County, Missouri.

This project will also include general site work appropriate to the scope and purpose of the project and all necessary appurtenances to make a complete and usable wastewater treatment facility.

II. COST ANALYSIS FOR COMPLIANCE

Pursuant to Section 644.145, RSMo, when issuing permits under this chapter that incorporate a new requirement for discharges from publicly owned combined or separate sanitary or storm sewer systems or publicly owned treatment works, or when enforcing provisions of this chapter or the Federal Water Pollution Control Act, 33 U.S.C. 1251 et seq., pertaining to any portion of a publicly owned combined or separate sanitary or storm sewer system or [publicly owned] treatment works, the Department of Natural Resources shall make a “finding of affordability” on the costs to be incurred and the impact of any rate changes on ratepayers upon which to base such permits and decisions, to the extent allowable under this chapter and the Federal Water Pollution Control Act. This process is completed through a cost analysis for compliance. Permits that do not include new requirements may be deemed affordable.

The Department is not required to complete a cost analysis for compliance because the facility is not a combined or separate sanitary sewer system for a publically-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 consistent with plans and specifications signed and sealed by Michael Hall, P.E., McClure Engineering Co. and as described in this permit.
3. The Department must be contacted in writing prior to making any changes to the 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(11).

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 Northeast Regional Office per 10 CSR 20-7.015(9)(G).
5. The wastewater facility structures, electrical equipment, and mechanical equipment shall be protected from physical damage by not less than the one hundred- (100-) year flood elevation per 10 CSR 20-8.140(2)(B). The minimum distance between wastewater treatment facilities and all potable water sources shall be at least three hundred feet (300') per 10 CSR 20-8.140(2)(C)1.
6. 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 dnr.mo.gov/env/wpp/epermit/help.htm. See dnr.mo.gov/env/wpp/stormwater/sw-land-disturb-permits.htm for more information.
7. 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 dnr.mo.gov/env/wpp/401/ for more information.
8. All construction must adhere to applicable 10 CSR 20-8 (Chapter 8) requirements listed below.
 - Emergency Power. Disinfection and dechlorination processes, when used, shall be provided during all power outages. 10 CSR 20-8.190 (2) (A)
 - The UV dosage shall be based on the design peak hourly flow, maximum rate of pumpage, or peak batch flow. 10 CSR 20-8.190 (5) (A) 1.
 - If no flow equalization is provided for a batch discharger, the UV dosage shall be based on the peak batch flow. 10 CSR 20-8.190 (5) (A) 2.
 - The UV system shall deliver the target dosage based on equipment derating factors and, if needed, have the UV equipment manufacturer verify that the scale up or scale down factor utilized in the design is appropriate for the specific application under consideration. 10 CSR 20-8.190 (5) (A) 3.

- Closed Vessel systems. The combination of the total number of closed vessels shall be capable of treating the design peak hourly flow, maximum rate of pumpage, or peak batch flow. 10 CSR 20-8.190 (5) (B) 1.
- The UV system must continuously monitor and display at the UV system control panel the following minimum conditions:
 - The relative intensity of each bank or closed vessel system; 10 CSR 20-8.190 (5) (C) 1. A.
 - The operational status and condition of each bank or closed vessel system; 10 CSR 20-8.190 (5) (C) 1. B.
 - The ON/OFF status of each lamp in the system; 10 CSR 20-8.190 (5) (C) 1. C. and
 - The total number of operating hours of each bank or each closed vessel system. 10 CSR 20-8.190 (5) (C) 1. D.
- The UV system shall include an alarm system. Alarm systems shall comply with 10 CSR 20-8.140(7)(C). 10 CSR 20-8.190 (5) (C) 2.
- Adequate provisions shall be made to effectively protect facility personnel and visitors from hazards. The following shall be provided to fulfill the particular needs of each wastewater treatment facility:
 - Fencing. Enclose the facility site with a fence designed to discourage the entrance of unauthorized persons and animals; 10 CSR 20-8.140 (8) (A)
 - Gratings over appropriate areas of treatment units where access for maintenance is necessary; 10 CSR 20-8.140 (8) (B)
 - Appropriate personal protective equipment (PPE); 10 CSR 20-8.140 (8) (E)
 - Appropriately-placed warning signs for slippery areas, non-potable water fixtures (see subparagraph (7)(D)3.B. of this rule), low head clearance areas, open service manholes, hazardous chemical storage areas, flammable fuel storage areas, high noise areas, etc.; 10 CSR 20-8.140 (8) (I)

9. Upon completion of construction:

- A. Submit an electronic copy of the as builts if the project was not constructed in accordance with previously submitted plans and specifications; and
- B. Submit the enclosed form Statement of Work Completed to the Department in accordance with 10 CSR 20-6.010(5)(N). 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. CONSTRUCTION PURPOSE

Fecal Coliform limits have been effective since January 3, 2012. The addition of UV disinfection will enable the facility to comply with Fecal Coliform limits and *E. Coli* limits in future permits.

2. FACILITY DESCRIPTION

The existing wastewater treatment facility consists of a three cell lagoon. This project will add UV disinfection.

The Lehenbauer Pre-manufactured Home Park wastewater treatment facility is located at 2051 State Rd. M, K Kingdom City, MO 65262. The facility has a design average flow of 48,000 gpd, with an actual flow of 6,000 gpd. The design flow will be adjusted to 23,040 gpd and will be considered permitted to serve an organic population equivalent of approximately 288 people. The development served is also known as Hatton Hills Mobile Home Park.

3. COMPLIANCE PARAMETERS

The facility is currently involved in enforcement action from the Department and has a Consent Judgement in place. The most recent Operating Permit expired January 4, 2012. The Mobile Home Park and treatment facility is currently under a new owner.

Fecal Coliform limits have been effective since January 3, 2012. The addition of UV disinfection will enable the facility to comply with Fecal Coliform limits, and *E. Coli* limits in future permits. The monthly average Fecal Coliform limit in the most recent permit is 400 colonies/100 ml. Future Operating permits will have *E. Coli* limits and the anticipated monthly average limit is 206 colonies/100 ml.

4. REVIEW of MAJOR TREATMENT DESIGN CRITERIA

The existing treatment facility is a three cell lagoon with a design flow of 48,000 gpd. The mobile home park does not have the number of connections that was originally anticipated; only Phase One with 96 pads was constructed (phase 2 would have added another 100 pads). The facility will reduce their design flow; the number of trailers is set at and limited to 96. The new design flow is based on 3 persons per trailer and 80 gallons per person per day. The revised design flow is 23,080 gpd; PE of 288. The current actual flow is approximately 6000 gpd; with 25 occupied trailers.

The facility is planning to modify their operations to operate as a “controlled discharge lagoon”. The maximum rate of flow that the facility will discharge is 28,000 gpd; flow limiting piping/valving and sufficient reserve capacity will enable

this limitation. The proposed UV equipment will have the capacity to treat a flow of 20 gpm (28,800 gpd).

Construction will cover the following items:

- Disinfection – Disinfection is the process of removal, deactivation, or killing or pathogenic microorganisms.
- Closed Vessel Ultraviolet (UV) – A closed vessel, gravity flow, low pressure high output UV disinfection system capable of treating a peak flow of 28,800 gpd while delivering a minimum UV intensity of 30 mJ/cm². The closed vessel UV system consists of one lamp per reactor. One closed vessel UV reactor will be provided. The effluent flows by gravity through ultraviolet disinfection, disinfected flow goes by gravity to Outfall No. 001. Sanitron Model S50C.
- A solenoid control valve for emergency shut-off of flow will activate if power is interrupted. This will prevent flow from discharging in the event of power failure. The valve will be located upstream of the UV system.
- Several optional accessories to the Sanitron UV Package have been selected to be installed:
 - Guardian Ultraviolet Monitor
 - Promate Audio Alarm
 - Promate Solenoid Valve
 - Promate Elapsed Time Indicator

5. OPERATING PERMIT

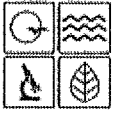
These construction activities do not require a modification to the operating permit. Operating permit MO-0119377 expired on January 4, 2012. An Application for Operating Permit for renewal and modification was filed on July 30, 2020. If you have questions on the renewal application, please contact the NPDES permitting section at 573-751-1300.

V. NOTICE OF RIGHT TO APPEAL

If you were adversely affected by this decision, you may be entitled to an appeal before the Administrative Hearing Commission (AHC) pursuant to 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. Any appeal should be directed to:

Administrative Hearing Commission
U.S. Post Office Building, Third Floor
131 West High Street, P.O. Box 1557
Jefferson City, MO 65102-1557
Phone: 573-751-2422
Fax: 573-751-5018
Website: <https://ahc.mo.gov>

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



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	CHECK NO.
DATE RECEIVED	

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: _____ N/A
- 1.3 Has the department approved the proposed project's facility plan*?
 YES Date of Approval: 12/2018 NO (If No, complete No. 1.4.)
- 1.4 [Complete only if answered No on No. 1.3.] Is a copy of the facility plan* for wastewater treatment facilities included with this application?
 YES NO Exempt because _____
- 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 and fee submittal. Denote which form: A B B2
 N/A: However, In the event the department believes that my operating permit requires revision to permit limitation such as changing equivalent to secondary limits to secondary limits or adding total residual chlorine limits, please share a draft copy prior to public notice? YES NO
- 1.8 Is the facility currently under enforcement with the department or the Environmental Protection Agency? YES NO
- 1.9 Is the appropriate fee or JetPay confirmation included with this application? YES NO
 See Section 7.0

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

2.0 PROJECT INFORMATION

2.1 NAME OF PROJECT Land Application System Hatton Hills Mobile Home Park	2.2 ESTIMATED PROJECT CONSTRUCTION COST \$ 65,000
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2.3 PROJECT DESCRIPTION
 Conversion of the existing lagoon into a controlled discharge lagoon. Number of connections will be limited to 96 (current number of possible connections). Installation of a UV disinfection system to allow for discharges during summer months.

2.4 SLUDGE HANDLING, USE AND DISPOSAL DESCRIPTION
 Sludge will be retained in the lagoons

2.5 DESIGN INFORMATION

A. Current population: 75; Design population: 288

B. Actual Flow: 6,000 gpd; Design Average Flow: 23K gpd;
 Actual Peak Daily Flow: 27k gpd; Design Maximum Daily Flow: 28.8K gpd; Design Wet Weather Event: 100

2.6 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 Lehenbauer Pre-Manufactured Home Park		TELEPHONE NUMBER WITH AREA CODE 573-442-1040	E-MAIL ADDRESS vickie@howe-associates.com	
ADDRESS (PHYSICAL) Kimberly Road & Route M	CITY Kingdom City	STATE MO	ZIP CODE 65262	COUNTY Callaway
Wastewater Treatment Facility: Mo- 0119377 (Outfall 001 Of 001)				
3.1 Legal Description: <u>NE 1/4, NE 1/4, SW 1/4, Sec. 26, T 49N, R 10W</u> (Use additional pages if construction of more than one outfall is proposed.)				
3.2 UTM Coordinates Easting (X): <u>385944</u> . Northing (Y): <u>-920030</u> For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)				
3.3 Name of receiving streams: <u>Auxvasse Creek</u>				

4.0 PROJECT OWNER

NAME Lehenbauer Home Site, LLC; %Howe & Assoc.		TELEPHONE NUMBER WITH AREA CODE 573-874-1040	E-MAIL ADDRESS vickie@howe-associates.com	
ADDRESS 104 E. Broadway	CITY Columbia	STATE MO	ZIP CODE 65203	

5.0 CONTINUING AUTHORITY: A continuing authority is a company, business, entity or person(s) that will be operating the facility and/or ensuring compliance with the permit requirements.

NAME Lehenbauer Home Site, LLC; %Howe & Assoc.		TELEPHONE NUMBER WITH AREA CODE 573-874-1040	E-MAIL ADDRESS vickie@howe-associates.com	
ADDRESS 104 E. Broadway	CITY Columbia	STATE MO	ZIP CODE 65203	

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

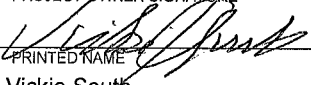
6.0 ENGINEER

ENGINEER NAME / COMPANY NAME Michael Hall/McClure Engineering		TELEPHONE NUMBER WITH AREA CODE 573-814-1568	E-MAIL ADDRESS mhall@mecresults.com	
ADDRESS 1901 Pennsylvania Dr.	CITY Columbia	STATE MO	ZIP CODE 65202	

7.0 APPLICATION FEE

CHECK NUMBER JETPAY CONFIRMATION NUMBER

8.0 PROJECT OWNER: I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

PROJECT OWNER SIGNATURE


PRINTED NAME Vickie South	DATE 7-30-20	
TITLE OR CORPORATE POSITION Owner	TELEPHONE NUMBER WITH AREA CODE 573-874-1040	E-MAIL ADDRESS vickie@howe-associates.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.