

STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION



CONSTRUCTION PERMIT

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

Dallen Davies
Missouri Prime Beef Packers WWTF
5305 Highway H
Pleasant Hope, MO 65725

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 1, 2021
Effective Date

January 31, 2023
Expiration Date

Edward B. Galbraith, Director, Division of Environmental Quality

Chris Wieberg, Director, Water Protection Program

CONSTRUCTION PERMIT

I. CONSTRUCTION DESCRIPTION

The proposed project will consist of construction of Storage Basin 3 which is phase 1 of anticipated construction associated with the permitted facility. Phase 2 construction activities will require a second construction permit application.

A closure plan will need to be submitted to the South West Regional Office for review and approval prior to any closure activities.

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 Cochran 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 South West Regional Office per 10 CSR 20-7.015(9)(G).
5. Lagoons shall be located at least two hundred feet (200') from any dwelling or establishment and 50 feet (50') from property lines per 10 CSR 20-8.140(2)(C)(2).
6. The wastewater treatment facility shall be located above the twenty-five (25)-year flood level.
7. 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.
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 dnr.mo.gov/env/wpp/epermit/help.htm. See 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 dnr.mo.gov/env/wpp/401/ for more information.
10. All construction must adhere to applicable 10 CSR 20-8 (Chapter 8) requirements listed below.
 - Flood protection shall apply to new construction and to existing facilities undergoing major modification. 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. 10 CSR 20-8.140 (2) (B)
 - Unless another distance is determined by the Missouri Geological Survey or by the department's Public Drinking Water Branch, the minimum distance between wastewater treatment facilities and all potable water sources shall be at least three hundred feet (300'). 10 CSR 20-8.140 (2) (C) 1.

- Where a potable water supply is to be used for any purpose in a wastewater treatment facility other than direct connections, a break tank, pressure pump, and pressure tank or a reduced pressure backflow preventer consistent with the department's Public Drinking Water Branch shall be provided. 10 CSR 20-8.140 (7) (D) 3. A.
- For indirect connections, a sign shall be permanently posted at every hose bib, faucet, hydrant, or sill cock located on the water system beyond the break tank or backflow preventer to indicate that the water is not safe for drinking. 10 CSR 20-8.140 (7) (D) 3. B.
- Where a separate non-potable water supply is to be provided, a break tank will not be necessary, but all system outlets shall be posted with a permanent sign indicating the water is not safe for drinking. 10 CSR 20-8.140 (7) (D) 4.
- Facilities shall be readily accessible by authorized personnel from a public right-of-way at all times. 10 CSR 20-8.140 (2) (D)
- No piping or other connections shall exist in any part of the wastewater treatment facility that might cause the contamination of a potable water supply. 10 CSR 20-8.140 (7) (D) 1.
- 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)
- The minimum berm width shall be eight feet (8') to permit access of maintenance vehicles. 10 CSR 20-8.200 (4) (A) 2.
- Minimum freeboard shall be two feet (2'). 10 CSR 20-8.200 (4) (A) 3.
- An emergency spillway shall be provided. 10 CSR 20-8.200 (4) (A) 4.
- An emergency spillway must have the ability for a representative sample to be collected if a discharge occurs. 10 CSR 20-8.200 (4) (A) 4. C.
- The minimum thickness of the compacted clay liner must be twelve inches (12"). For permeability coefficients greater than 1.0×10^{-7} cm/sec or for heads over five feet (5') such as an aerated lagoon system, the following formula shall be used to determine minimum seal thickness, Equation 200-1 per 10 CSR 20-200(4)(C)2.:

Equation 200-1

$$t = \frac{H \times K}{5.4 \times 10^{-7} \text{ cm/sec}}$$

where:

K = the permeability coefficient of the soil in question;

H = the head of water in the lagoon; and

t = the thickness of the soil seal.

- Unlined corrugated metal pipe shall not be used for influent lines due to corrosion problems. 10 CSR 20-8.200 (4) (D) 1.
- The influent line(s) shall be located along the bottom of the lagoon so that the top of the pipe is just below the average elevation of the lagoon seal; however, there shall be an adequate seal below the pipe. 10 CSR 20-8.200 (4) (D) 3.

11. Upon completion of construction:

- A. The Missouri Prime Beef Packers, LLC, charter #FL1433370, will become the continuing authority for operation and maintenance of these facilities;
- 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. 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 or modification, they will be expected to include an updated facility description on their application.

IV. REVIEW SUMMARY

1. CONSTRUCTION PURPOSE

An existing meat processing facility is being converted from pork slaughter and processing to cattle slaughter and processing. The existing treatment facility, MO-0113204, is permitted to land apply 106,077 gpd. The owner intends to expand flows from 106,077 gpd to 350,000 gpd following completion of phases 1 and 2. The proposed construction activity covered under this permit is for phase 1 only.

The construction of phase 1 storage basin #3 will provide approximately 16,805,893 gallons of storage during the winter months. The additional storage volume will allow the facility to incrementally increase the number of cattle processed up to an intended target of 500 cattle/day and apply for a construction permit for phase 2 in preparation of final buildout.

2. FACILITY DESCRIPTION

The existing wastewater treatment facility includes two non-aerated lagoons followed by land application of wastewater by spray irrigation methods.

The Missouri Prime Beef Packers WWTF is located at 5305 Highway H, City of Pleasant Hope, in Polk County, Missouri. The facility has a design average flow of 106,077 gpd.

3. COMPLIANCE PARAMETERS

The existing facility can meet effluent limitations and monitoring requirements outlined in tables A 1-7 of MO-0113204. The proposed project is required to meet all applicable requirements in the operating permit.

4. REVIEW of MAJOR TREATMENT DESIGN CRITERIA

Existing major components which will remain in use include the following:

- Lagoon Cell No. 1 – Lagoon Cell No. 1 is non-aerated and has a surface area of 2.44 acres and a wastewater volume of 3,908,335 gallons. This cell has 1 ft. of freeboard, 9.2 ft. of operating depth, and average 0.79 ft. of sludge depth, and a clay liner.
- Lagoon Cell No. 2 – Lagoon Cell No. 2 is non-aerated and has a surface area of 2.21 acres and a wastewater volume of 3,160,346 gallons. This cell has 1 ft. of freeboard, 9.2 ft. of operating depth, and average 0.59 ft. of sludge depth, and a clay liner.

Existing cells 1 and 2 have approximately 7,068,681 gallons of storage as designed and provide approximately 67 days of retention at the permitted design flow.

New components for Phase 1 construction:

- Storage Basin #3 (SB3) – The Earthen Basin will be constructed and sealed with a clay liner. A Geohydrologic Evaluation was conducted on November 5, 2020 for the proposed basin location and received moderate collapse potential and overall geologic limitations ratings. The basin will have 3:1 side slopes, a depth from the top of the berm to the lagoon floor of 18 ft., with 1 ft. for sludge depth, and 2 ft. of freeboard plus 1 feet above emergency spillway. The usable storage depth is 15 ft. The basin has a surface area of approximately 4.26 acres, and a volume of 15,727,741 gallons. This provides approximately 148 days of retention at the proposed design flow and 128 days at the 1-in-10 year rainfall minus evaporation for the proposed storage period. The berm width will be 8 ft. This basin site will be enclosed with 6 ft. chain link fencing. The basin soil seal thickness will be constructed in accordance with 10 CSR 20-200(4)(C)2.

- Flows from existing lagoon cells 1 and 2 flow by gravity to SB3 through approximately 551 lf of 8-inch PVC SDR-35 and 111 lf of 8 inch ductile iron pipe. One manhole, two cleanouts, and one valve vault will be included in the transfer piping layout between existing lagoon 1 and SB3. The ductile iron pipe will pass through the berm of SB3 from a valve vault just outside the berm to the pipe outlet along the floor elevation of SB3. Piping will be buried minimum of 36 inches below ground surface.
- The current permit lists 4 monitoring wells on site. Any monitoring wells needing to be decommissioned will be done so in accordance with the Missouri Geologic Survey policies.

5. OPERATING PERMIT

These construction activities of phase 1 do not require a modification to the operating permit. Operating permit MO-0113204 will be expiring on November 30, 2021. A renewal application must be filed before June 3, 2021 regardless of the status of these construction activities. It is expected that the facility owner will include a new facility description and process flow diagram in their next operating permit renewal application or future modification application to reflect the construction of storage basin #3.

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>

Aaron Sawyer
Engineering Section
aaron.sawyer@dnr.mo.gov

Cailie Carlile, P.E., Unit Chief
Engineering Section
cailie.carlile@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: _____ 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: MO-113204
 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 Missouri Prime Beef Packers	2.2 ESTIMATED PROJECT CONSTRUCTION COST \$
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2.3 PROJECT DESCRIPTION
 A new storage basin is needed to allow operation to begin and continue. A treatment lagoon & discharge basin will be constructed at a later date (after this storage basin is built). For more information, please see "Description of Need" in the Facility Plan.

2.4 SLUDGE HANDLING, USE AND DISPOSAL DESCRIPTION
 Sludge will be stored in the new storage basin. The sludge will be disposed of by contract hauler once 12"-18" has accumulated.

2.5 DESIGN INFORMATION
 A. Current population: None; Design population: None
 B. Actual Flow: None gpd; Design Average Flow: 106k gpd;
 Actual Peak Daily Flow: None gpd; Design Maximum Daily Flow: 106k gpd; Design Wet Weather Event: 10yr

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 Missouri Prime Beef Packers		TELEPHONE NUMBER WITH AREA CODE 541-390-7034		E-MAIL ADDRESS dallen@mpbeef.com
ADDRESS (PHYSICAL) 5305 Highway H		CITY Pleasant Hope	STATE MO	ZIP CODE 65725
COUNTY Polk				
Wastewater Treatment Facility: Mo- 0113204 (Outfall 1 Of 1)				
3.1 Legal Description: <u>SW ¼, SW ¼, SW ¼, Sec. 20, T 32N, R 21W</u> (Use additional pages if construction of more than one outfall is proposed.)				
3.2 UTM Coordinates Easting (X): <u>476096</u> Northing (Y): <u>4147935</u> For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)				
3.3 Name of receiving streams: <u>Tributary to Pomme de Terre River</u>				
4.0 PROJECT OWNER				
NAME Missouri Prime Beef Packers		TELEPHONE NUMBER WITH AREA CODE 541-390-7034		E-MAIL ADDRESS dallen@mpbeef.com
ADDRESS 5305 Highway H		CITY Pleasant Hope	STATE MO	ZIP CODE 65725
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 Missouri Prime Beef Packers		TELEPHONE NUMBER WITH AREA CODE 541-390-7034		E-MAIL ADDRESS dallen@mpbeef.com
ADDRESS 5305 Highway H		CITY Pleasant Hope	STATE MO	ZIP CODE 65725
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 Cochran Engineering		TELEPHONE NUMBER WITH AREA CODE 636-584-0540		E-MAIL ADDRESS dvanleer@cochraneng.com
ADDRESS 530A East Independence Drive		CITY Union	STATE MO	ZIP CODE 63084
7.0 APPLICATION FEE				
<input checked="" type="checkbox"/> CHECK NUMBER 44688 <input type="checkbox"/> 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 Dallen Davies				DATE 12/10/2020
TITLE OR CORPORATE POSITION Owner		TELEPHONE NUMBER WITH AREA CODE 541-390-7034		E-MAIL ADDRESS dallen@mpbeef.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.				