

STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION



CONSTRUCTION PERMIT

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

Valley Oaks Steak Company, LLC
1120 NE Eagle Ridge Blvd.
Grain Valley, MO 64029

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.

October 30, 2018
Effective Date


Edward B. Galbraith, Director, Division of Environmental Quality

October 29, 2020
Expiration Date


Chris Wieberg, Director, Water Protection Program

CONSTRUCTION PERMIT

I. CONSTRUCTION DESCRIPTION

This construction involves the installation of two 1000 gallon septic tanks for domestic wastewater and two 1500 gallon septic tanks for industrial process wastewater. An existing earthen storage basin currently being used for both domestic and process wastewater will be enlarged to accommodate additional domestic waste flow and an additional earthen storage basin will be constructed for additional process wastewater. An interconnecting pipe will be installed between these 2 basins along with two valved drawdown pipes. A BioMicrobics HighStrength FAST unit (aerated bioreactor) will be installed at the outlet of the drawdown pipes. A pump tank will be installed above the drip system which include 27,150 linear feet of drip line.

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 in accordance with the plans and specifications submitted by Quist Engineering Inc. and Phillips Engineering LLC on January 26, 2018 and revised plans received on May 17, 2018.

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. 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.
6. 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.
7. Upon completion of construction:
 - A. The Valley Oaks Steak Company LLC will become the continuing authority for operation, maintenance, and modernization of these facilities;
 - 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. Submit the enclosed form Statement of Work Completed to the Department in accordance with 10 CSR 20-6.010(5)(D) and request the operating permit be issued.

IV. REVIEW SUMMARY

1. CONSTRUCTION PURPOSE

The purpose of this construction is to increase the waste handling system for an expansion to this meat processing facility.

2. FACILITY DESCRIPTION

This is a meat processing facility that slaughters beef from an adjacent cattle feedlot. Animal wastes from the feedlot are not stored or treated at this facility and are covered under MO-G010872. Domestic wastewater and industrial process wastewater are generated on site. Domestic wastewater and industrial process wastewater are treated by a no-discharge wastewater treatment facility on site. Domestic wastewater flows from a septic tank into an earthen storage basin and industrial process wastewater flows from a septic tank into a separate earthen storage basin. These basins are interconnected and outlet to a subsurface land application system. Discharges as a result of chronic/catastrophic storms will go through an emergency spillway.

This facility is currently covered under a general permit. A site specific permit is needed to allow for operating with both domestic and industrial waste streams.

The Valley Oaks Steak Company LLC is located at 1921 W. 50 Hwy, Lone Jack, in Johnson County, Missouri.

3. COMPLIANCE PARAMETERS

The facility will be required to monitor storage basin freeboard and precipitation, to conduct effluent sampling, and to do record keeping and reporting as prescribed in operating permit #MO-0139009.

4. REVIEW of MAJOR TREATMENT DESIGN CRITERIA

This is a modification to an existing permitted facility. Existing waste storage basin will be enlarged and an additional waste storage basin will be constructed for storing industrial wastes from the meat processing floor. Primary treatment of domestic wastes will be in two 1000 gallon tanks with a detention time of 32 hours. Wastewater will gravity flow to the domestic waste storage basin. Blood, internal organs, and hides from processed cattle will be separated and rendered offsite therefore only process wastewater from cleanup on processing floor and tables will enter the primary tanks for industrial wastewater. These tanks will have a detention time of 16 hours and will gravity flow to Cell 1, the industrial wastewater storage basin. Settled solids in the septic tanks shall be removed by a contract hauler. The two storage basins will be interconnected and wastewater will be drawn down with two 6" pipes. The domestic waste structure has a storage volume of 193,837 gallons; the industrial basin has a storage volume of 559,915

gallons with the system providing 90 days of storage. Both basins will be operated at a 7.0' operating depth and will be sealed with a compacted clay liner.

Valved drawdown pipes will outlet into the treatment unit. A BioMicrobics HighStrength FAST 9.0 system will be used. This system has two 14.3 ft by 8 ft aeration chambers with 5 feet sidewater depth with a total volume of 8440 gallons. A transfer pipe and elbow allows wastewater from the second aeration chamber to move by gravity to the clarifier.

This subsurface drip irrigation system was designed for 8145 gpd. The facility has selected a Geoflow subsurface drip dispersal system. System will have 6 drip dispersal zones with 10 laterals. System will be dosed 12 times per 24 hours, each zone receiving 5.7 minutes per dose. Flow rate of emitters is 0.53 gph; emitters are spaced every 2 ft. The 1.3 acre drip field has the capacity for 8145 gpd. The dosing rate will be 0.153 gallons/day/ft². The surface soils at the site are rated for 0.5 gallons/day/ft² as determined from an on-site investigation completed by Tim Knoernschild on April 16, 2018. A hydraulic loading rate of 0.15 gallons/day/ft² was used in design.

5. OPERATING PERMIT

The site specific operating permit for Valley Oaks Steak Company was successfully public noticed from August 23, 2018 to September 24, 2018 with no comments received. After construction, submit the Statement of Work Completed to the Department in accordance with 10 CSR 20-6.010(5)(D) and request the operating permit be issued.

Diane Reinhardt
Engineering Section
Diane.reinhardt@dnr.mo.gov

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JAN 26 2018

AP29264



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

Water Protection Program

APP NO.	CP NO.
FEE RECEIVED	CHECK NO.
DATE RECEIVED	

1-20-18

The Application for Construction Permit – Wastewater Facility form is for construction pertaining to domestic wastewater treatment facilities, agrichemical facilities, and components thereof. This 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.**

- 1.1 Is this a Federal/State funded project? ☐ YES ☒ N/A Funding Agency: _____ Project #: _____
- 1.2 Is this an application for an agrichemical? ☐ YES (See instructions.) ☐ N/A
- 1.3 Has the Missouri Department of Natural Resources approved the proposed project's antidegradation review?
☐ YES Date of Approval: _____
- 1.4 Has the department approved the proposed project's facility plan*?
☐ YES Date of Approval: _____ ☒ NO ☐ N/A (If Not Applicable, complete No. 1.5.)
- 1.5 [Complete only if answered Not Applicable on No. 1.4] 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
- 1.6 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
- 1.7 Is a summary of design* included with this application? ☒ YES ☐ NO
- 1.8 Is a general operating permit applicable?
☒ YES Submit the appropriate operating permit application to the Regional Office at least 60 days prior to operation.
☐ NO Enclose the appropriate operating permit application and fee submittal. Denote which form: ☐ B ☐ B2
- 1.9 Is the facility currently under enforcement with the department or the Environmental Protection Agency? ☐ YES ☒ NO
- 1.10 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.

2.1 NAME OF PROJECT

VALLEY OAKS STEAK COMPANY

2.2 PROJECT DESCRIPTION

THE EXPANTION OF AN EXISTING PERMITTED MEAT PROCESSING FACILITY FROM A 2,000 GPD TO A 9,900 GDP.
WE HAVE PROPOSED TO ADD AN ADDITIONAL HOLDING TANK, HOLDING POND, AND ADDITIONAL LAND APPLICATION AREA.

2.3 SLUDGE HANDLING, USE AND DISPOSAL DESCRIPTION

WILL BE PUMED AS NEEDED BY A LICENCED COMPANY.

2.4 DESIGN INFORMATION

A. Current population: N/A; Design population: N/A


B. Actual Flow: 1,800 gpd; Design Average Flow: 6,000 gpd;
Actual Peak Daily Flow: _____ gpd; Design Maximum Daily Flow: 9,900 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

2.6 ESTIMATED PROJECT CONSTRUCTION COST

\$ 35,000.00

NAME VALLEY OAKS STEAK COMPANY		TELEPHONE NUMBER WITH AREA CODE (816) 229-8115		EMAIL ADDRESS tony@safetyminstorage.com	
ADDRESS (PHYSICAL) 1921 W 50 HWY		CITY LONE JACK	STATE MO	ZIP CODE 64070	COUNTY JOHNSON
Wastewater Treatment Facility: Mo- G822T02 (Outfall 1 Of 1)					
3.1 Legal Description: SW ¼, NW ¼, NE ¼, Sec. 22 , T 47 , R 29W (Use additional pages if construction of more than one outfall is proposed.)					
3.2 UTM Coordinates Easting (X): Northing (Y): For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)					
3.3 Name of receiving streams: 8-20-13 MUDD V1.0(3960)					
NAME VALLEY OAKS STEAK COMPANY		TELEPHONE NUMBER WITH AREA CODE (816) 229-8116		EMAIL ADDRESS tony@safetyminstorage.com	
ADDRESS 1120 NE EAGLE RIDGE BLVD		CITY GRAIN VALLEY	STATE MO	ZIP CODE 64029	
NAME SAME AS OWNER		TELEPHONE NUMBER WITH AREA CODE		EMAIL 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 checked="" 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 checked="" 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 checked="" 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 checked="" 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 checked="" type="checkbox"/> NO					
ENGINEER NAME / COMPANY NAME ROBERT WALQUIST / QUIST ENGINEERING INC		TELEPHONE NUMBER WITH AREA CODE		EMAIL ADDRESS	
ADDRESS 821 N COLUMBUS ST		CITY LEES SUMMIT	STATE MO	ZIP CODE 64063	
PROJECT OWNER SIGNATURE 					
PRINTED NAME DAVID WARD				DATE 1/23/18	
TITLE OR CORPORATE POSITION OWNER		TELEPHONE NUMBER WITH AREA CODE (816) 229-8115		EMAIL ADDRESS tony@safetyminstorage.com	
Mail completed copy to:		MISSOURI DEPARTMENT OF NATURAL RESOURCES WATER PROTECTION PROGRAM P.O. BOX 176 JEFFERSON CITY, MO 65102-0176			

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) MEAT PROCESSING FOR 90 HEAD A DAY AND 30 EMPLOYEES

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 ☐ Subsurface
☒ Partial irrigation when feasible and discharge rest of time
☐ Irrigation during recreational season, April – October, and discharge during November – March
☐ Other (explain)

9.1 Number of storage basins: 2 (Use additional pages if greater than two 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 85' Width 85' Depth 7' Freeboard 5' Depth 12' Safety 1' % Slope 33
Basin #2: Length 70' Width 70' Depth 5' Freeboard 5' Depth 10' Safety 1' % Slope 33

9.4 Storage Basin operating levels (report as feet below emergency overflow level).

Basin #1: Maximum operating water level 1 ft Minimum operating water level 5 ft
Basin #2: Maximum operating water level 1 ft Minimum operating water level 5 ft

9.5 Design depth of sludge in storage basins.

Basin #1: 1 ft Basin #2: 1 ft

9.6 Existing sludge depth, if the basins are currently in operation.

Basin #1: 0 ft Basin #2: 0 ft

9.7 Total design sludge storage: 0.5 dry tons and 28 cubic feet

10.1 Type of land application: ☐ Fixed Head Sprinklers ☐ Center Pivot ☐ Traveling Gun ☒ Drip Dispersal
☐ Subsurface Low Pressure Pipe ☐ Other (describe) _____

10.2 Number of irrigation sites 1 Total Acres 2 Maximum % field slopes 6%
Location: SW 1/4, NW 1/4, NE 1/4, 22 Sec. 47N T 29W R JOHNSON County 2 Acres
Location: _____ 1/4, _____ 1/4, _____ 1/4, _____ Sec. _____ T _____ R _____ County _____ Acres
Location: _____ 1/4, _____ 1/4, _____ 1/4, _____ Sec. _____ T _____ R _____ County _____ Acres
(Use additional pages if greater than three irrigation sites.)

10.3 Type of vegetation: ☒ Grass hay ☐ Pasture ☐ Timber ☐ Row crops
☐ Other (describe)

10.4 Wastewater flow (dry weather) gallons per day: Average annual 9,900
Seasonal 9,900 Off-season 9,900

10.5 Land application rate (design flow including 1-in-10 year storm water flows):

Design: 61,676 inches/year 7.06 inches/hour 170 inches/day 1,186 inches/week
Actual: _____ inches/year _____ inches/hour _____ inches/day _____ inches/week

10.6 Total irrigation per year (gallons): Design: 546,000 gal Actual: UN-KNOWN gal

10.7 Actual months used for irrigation (check all that apply):

☐ Jan ☐ Feb ☐ Mar ☐ Apr ☐ May ☒ Jun ☐ Jul ☐ Aug ☐ Sep ☐ Oct ☐ Nov ☐ Dec

10.8 Land application rate is based on:

☒ Hydraulic Loading ☐ Other (describe) _____
☐ Nutrient Management Plan (N and P) If N and P is selected, is the plan included? ☐ YES ☐ NO