

STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION



CONSTRUCTION PERMIT

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

Thomas P. Meyer
Adventure Out RV Park
19402 Hwy J
Monroe City, MO 63456

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.

May 31, 2023

Effective Date

May 30, 2025

Expiration Date

John Hoke, Director, Water Protection Program

CONSTRUCTION PERMIT

I. CONSTRUCTION DESCRIPTION

Construction of a new earthen lagoon storage basin with a total storage volume of ~ 454,000 gallons above the 1' level, with ~ 3,965 ft of SDR 35 PVC and 13 manholes to treat 5,630 gpd dry-weather flow. Irrigation will occur with existing equipment on ~ 6.2 acres of ground, which will be shared with and is sufficient for the irrigation from the existing lagoon.

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

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 Kyle Pociask, P.E., with Four Points Land Surveying & Engineering, Inc., 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 treatment facility shall be located at least 200 ft from any dwelling or establishment and at least 50 ft to property line, per 10 CSR 20-8.140(C)(2).
6. 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.

7. 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 <https://dnr.mo.gov/data-e-services/missouri-gateway-environmental-management-mogem>. See <https://dnr.mo.gov/data-e-services/water/electronic-permitting-epermitting> for more information.
8. A United States Army Corps of Engineers (USACE) Clean Water Act Section 404 Department of the Army permit and a Section 401 Water Quality Certification issued by the Department may be required for the activities described in this permit. This permit is not valid until these requirements are satisfied or notification is provided that no Section 404 permit is required by the USACE. You must contact your local USACE district since they determine what waters are jurisdictional and which permitting requirements may apply. You may call the Department's Water Protection Program, Operating Permits Section at 573-522-4502 for more information. See <https://dnr.mo.gov/water/business-industry-other-entities/permits-certification-engineering-fees/section-401-water-quality> for more information.
9. 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.
 - 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.
 - A means of flow measurement shall be provided at all wastewater treatment facilities. 10 CSR 20-8.140(7)(E)
 - 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)
 - First aid equipment; 10 CSR 20-8.140(8)(C)
 - Appropriate personal protective equipment (PPE); 10 CSR 20-8.140(8)(E)

- Lagoon berms shall be constructed of relatively impervious material and compacted to at least ninety-five percent maximum dry density test method to form a stable structure. 10 CSR 20-8.200(4)(A)1.
- The minimum berm width shall be eight feet 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 that—
 - Prevents the overtopping and cutting of berms; 10 CSR 20-8.200(4)(A)4.A.
 - Is compacted and vegetated or otherwise constructed to prevent erosion; 10 CSR 20-8.200(4)(A)4.B. and
 - Has the ability for a representative sample to be collected, if discharging. 10 CSR 20-8.200(4)(A)4.C.
- The soil of the lagoon bottom shall be compacted with the moisture content between two percent below and four percent above the optimum water content and compacted to at least ninety-five percent maximum dry density test method. 10 CSR 20-8.200(4)(B)
- The lagoon shall be sealed to ensure that seepage loss is as low as possible and has a design permeability not exceeding 1.0×10^{-7} cm/sec. 10 CSR 20-8.200(4)(C)1.
- The minimum thickness of the compacted clay liner must be twelve inches. For permeability coefficients greater than 1.0×10^{-7} cm/sec or for heads over five feet such as an aerated lagoon system, the following formula shall be used to determine minimum seal thickness, Equation 200-1 per 10 CSR 20-8.200(4)(C)2.:

Equation 200-1 $t = (H \times K) / (5.4 \times 10^{-7} \text{ cm/sec})$ 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.
- Synthetic seals thickness may vary due to liner material but the liner thickness shall be no less than two-hundredths inch (.02") or twenty (20) mil and be the appropriate material to perform under existing conditions. 10 CSR 20-8.200(4)(C)3.
- Seep collars shall be provided on drainpipes where they pass through the lagoon seal. 10 CSR 20-8.200(4)(C)4.
- Unlined corrugated metal pipe shall not be used for influent lines due to corrosion problems. 10 CSR 20-8.200(4)(D) 1.
- A manhole shall be installed with its invert at least six inches above the maximum operating level of the lagoon, prior to the entrance into the primary cell, and provide sufficient hydraulic head without surcharging the manhole. 10 CSR 20-8.200(4)(D) 2.
- 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.
- The wetted application area of a surface irrigation system must be located
 - Outside of flood-prone areas having a flood frequency greater than once every ten (10) years; 10 CSR 20-8.200(6)(B) 1.
 - At least one hundred fifty feet (150') from existing dwellings or public use areas, excluding roads or highways; 10 CSR 20-8.200(6)(B) 2. A.
 - At least fifty feet inside the property line; 10 CSR 20-8.200(6)(B) 2. B.

- At least 300 feet from any sinkhole, losing stream, or other structure or physiographic feature that may provide direct connection between the ground water table and the surface; 10 CSR 20-8.200(6)(B) 2. C.
- At least 300 feet from any existing potable water supply well not located on the property. Adequate protection shall be provided for wells located on the application site; 10 CSR 20-8.200(6)(B) 2. D.
- 100 feet to wetlands, ponds, gaining streams (classified or unclassified; perennial or intermittent); 10 CSR 20-8.200(6)(B) 2. E. and
- If an established vegetated buffer or the wastewater is disinfected, the setbacks established in subsections (A)–(E) above may be decreased if the applicant demonstrates the risk is mitigated. 10 CSR 20-8.200(6)(B) 2. F.
- The wetted application area of a surface irrigation system must be Fenced, or if not fenced, provide in the construction permit application or the facility plan, the—
 - Method of disinfection being utilized; 10 CSR 20-8.200(6)(B) 3. A.
 - Suitable barriers in place, 10 CSR 20-8.200(6)(B) 3. B. or
 - Details on how public access is limited and not expected to be present. 10 CSR 20-8.200(6)(B) 3. C.
- For facilities that operate and generate flows only from April through October season, a minimum storage capacity of 45 days shall be provided. For facilities that operate or generate flows only from November through March, the minimum storage listed in 10 CSR 20-8.200(6)(C)1., subsections A to D is required. 10 CSR 20-8.200(6)(C) 1. E.

10. Upon completion of construction:

- A. Tom Meyer will become the continuing authority for operation and maintenance of these facilities;
- B. Submit an electronic copy of the as-built plans if the project was not constructed in accordance with previously submitted plans and specifications; and
- C. Submit the Statement of Work Completed form to the Department in accordance with 10 CSR 20-6.010(5)(N) (<https://dnr.mo.gov/document-search/wastewater-construction-statement-work-completed-mo-780-2155>)

IV. REVIEW SUMMARY

1. CONSTRUCTION PURPOSE

The facility is expanding and needs more capacity.

2. FACILITY DESCRIPTION

The existing system includes an earthen basin and area available for irrigation. The area being used for irrigation is different from the original permitted area and was evaluated with this current project. The original system was constructed about 2014.

The new earthen basin will be used for additional RV sites, cabins, and homes. An existing portable pump will be used to irrigate from either lagoon to the same 6.2-acre plot of land. Once the new basin is constructed, both systems will be covered under MOG8232351.

The Adventure Out RV Park WWTF is located at 19402 Highway J, Monroe City, in Ralls County, Missouri, 63456. The additional basin and reevaluation of the irrigation area will add capacity for an additional 5,630 gpd of dry-weather design average flow (from 85 RV sites, eight cabins, six homes, and a two-washer laundry) and serves a hydraulic population equivalent of ~ 56.3 people. The RV park is closed for the winter season.

3. COMPLIANCE PARAMETERS

This will be a no-discharge facility and will follow the existing operating permit MOG823063, with an expiration date of August 24, 2027. The facility will be required to monitor storage basin freeboard, daily precipitation, irrigation period and daily volume irrigated, application area, and application rate.

4. REVIEW of MAJOR TREATMENT DESIGN CRITERIA

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

- Single-Cell Storage Lagoon (#1) – Influent flows via 8-inch PVC gravity to the existing earthen basin. Original plans show a 15.7-ft-deep rectangular basin, being ~ 246.8 ft by 104.7 ft at the top of berm (~ 152.6 ft by 10.5 ft at the bottom), with a 3:1 inner-berm side slope and 10-ft berm width. The existing lagoon seal is 12-inches of compacted clay. A portable pump and flexible hose is used to pump lagoon wastewater to a ~ 6.2-acre irrigation field with portable sprinkler. The originally-permitted irrigation area was moved at some point between approval and application for the new system.

Construction will cover the following items:

- Components are designed for a Population Equivalent of ~ 56.3 persons, based on hydraulic loading to the system.
- Flow Measurement – Installation of accurate flow measurement devices will give the treatment facility a means of improved data analysis.
 - An existing portable pump will be used to measure volume irrigated.
- Single-Cell Storage Lagoon #2 – The earthen basin will be constructed and sealed with the clay-rich soils at the basin site. The basin will have 3:1 inner side slopes, the depth from the top of the berms to the lagoon floor will be 13 ft, 1 ft will serve as sludge and clay liner depth, and 2½ ft of freeboard plus ½ ft above the emergency spillway provides an operating depth of 9 ft. The basin is non-aerated and has a design maximum water surface area of ~ 0.276 acres and a wastewater storage volume of ~ 454,000 gallons (~ 142 ft by 112 ft at the top of berm and ~64 ft by 34 ft at the bottom)). This provides ~ 80.6 days of retention at the proposed dry-weather design flow and 51.3 days at the wet-weather flow (including the 1-in-10 year rainfall minus evaporation), which will meet the proposed 45-day storage period (as the park will be closed for the winter). The berm width will be 8 ft. The lagoon site shall be fenced.
- Irrigation Site –The combined irrigation site for the existing storage basin #1 and the new storage basin #2 is immediately south of the proposed lagoon site, in the

vicinity of 19402 Hwy J, Monroe City, in Ralls County. The owned land application site is ~ 6.2 acres (on a total parcel of 34.9 acres) with grass. This site is unfenced. Maximum application rates are 0.5 inch per hour, 1.0 inch per day, 3.0 inches per week, and 24 inches per calendar year, as per MOG823063.

- Wastewater Irrigation –
 - Irrigation is via an existing 2-inch water pump powered by a small gas engine. Wastewater is pumped through a flexible hose to the portable sprinkler head that can be moved around the irrigation field. The owner will be responsible for ensuring the proper buffer distances are maintained.

5. OPERATING PERMIT

Operating permit MOG823063 will require a modification to reflect the construction activities. The modified operating permit for Adventure Out RV Park WWTF, MOG823063, does not require public notice. Submit the Statement of Work Completed to the Department in accordance with 10 CSR 20-6.010(5)(N) and request the operating permit modification be issued.

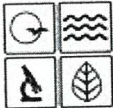
These construction activities do not change the effluent limits or conditions of the current operating permit. The Department will conduct an internal modification to reflect the current facility description upon receipt of the Statement of Work Completed form.

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>

Scott Adams, P.E.
Engineering Section
scott.adams@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

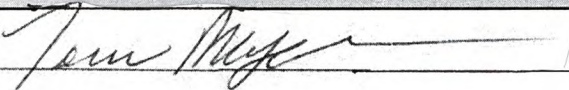
1.0 APPLICATION INFORMATION (Note – If any of the questions in this section are answered NO, this application may be considered incomplete and returned.)

- 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: _____
 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 Adventure Out RV Park - Wastewater Phase 2	2.2 ESTIMATED PROJECT CONSTRUCTION COST \$
2.3 PROJECT DESCRIPTION Project will finish out the build of the Adventure Out RV Park including new gravity sewer lines and a 7,000 gallon per day capacity lagoon with surface irrigation of wastewater.	
2.4 SLUDGE HANDLING, USE AND DISPOSAL DESCRIPTION Sludge will be stored in the lagoon.	
2.5 DESIGN INFORMATION A. Current population: _____; Design population: _____ SEE SUMMARY OF DESIGN B. Actual Flow: _____ gpd; Design Average Flow: _____ gpd; Actual Peak Daily Flow: _____ gpd; Design Maximum Daily Flow: _____ gpd; Design Wet Weather Event: _____	
2.6 ADDITIONAL INFORMATION A. Is a topographic map attached? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO B. Is a process flow diagram attached? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	

3.0 WASTEWATER TREATMENT FACILITY				
NAME Adventure Out RV Park		TELEPHONE NUMBER WITH AREA CODE 5737354125		E-MAIL ADDRESS adventureoutrv@gmail.com
ADDRESS (PHYSICAL) 19402 Hwy J		CITY Monroe City	STATE MO	ZIP CODE 63456
COUNTY Ralls				
Wastewater Treatment Facility: Mo- (Outfall Of)				
3.1 Legal Description: _____ ¼, _____ ¼, _____ ¼, Sec. 14, T 55N, R 07W (Use additional pages if construction of more than one outfall is proposed.)				
3.2 UTM Coordinates Easting (X): 616498 Northing (Y): 4378624 For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)				
3.3 Name of receiving streams: _____				
4.0 PROJECT OWNER				
NAME Adventure Out RV Park		TELEPHONE NUMBER WITH AREA CODE 5737354125		E-MAIL ADDRESS adventureoutrv@gmail.com
ADDRESS 19402 Hwy J		CITY Monroe City	STATE MO	ZIP CODE 63456
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 Same as above		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 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				
6.0 ENGINEER				
ENGINEER NAME / COMPANY NAME Kyle Pociask / Four Points Land Surveying & Engineeri		TELEPHONE NUMBER WITH AREA CODE 573-406-5533		E-MAIL ADDRESS kyle@fourpointssurvey.com
ADDRESS 17 Northpoint Plaza		CITY Hannibal	STATE MO	ZIP CODE 63401
7.0 APPLICATION FEE				
<input checked="" type="checkbox"/> CHECK NUMBER 2472 <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 Tom Meyer				DATE
TITLE OR CORPORATE POSITION Owner		TELEPHONE NUMBER WITH AREA CODE 5737354125		E-MAIL ADDRESS adventureoutrv@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) _____

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 127' X 94' Depth: 10' Freeboard: 2' Safety: 1' %Slope: 33%
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 11 ft Minimum operating water level 1 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: _____ ft Basin #2: _____ ft Basin #3: _____ ft

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 _____ cubic feet

10.0 LAND APPLICATION SYSTEM

10.1 Number of irrigation sites 1 Total Acres 5.75 Maximum % field slopes 7
Location: _____ ¼, _____ ¼, SE ¼, 14 Sec. 55N T 07W R Ralls County 5.75 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 10,000 Seasonal _____ Off-season _____

10.4 Land application rate (design flow including 1-in-10 year storm water flows):
Design: 24 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: 3444140 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