

STATE OF MISSOURI  
**DEPARTMENT OF NATURAL RESOURCES**

MISSOURI CLEAN WATER COMMISSION



**MISSOURI STATE OPERATING PERMIT**

In compliance with the Missouri Clean Water Law, (Chapter 644 R.S. Mo. as amended, hereinafter, the Law), and the Federal Water Pollution Control Act (Public Law 92-500, 92<sup>nd</sup> Congress) as amended,

Permit No. MO-0117731

Owner: A & A, Inc.  
Address: P.O. Box 589, Linn Creek, MO 65052

Continuing Authority: Same as above  
Address: Same as above

Facility Name: A & A, Inc.  
Facility Address: 458 Wolverine Way, Linn Creek, MO 65052

Legal Description: See Page 2  
UTM Coordinates: See Page 2

Receiving Stream: See Page 2  
First Classified Stream and ID: See Page 2  
USGS Basin & Sub-watershed No.: See Page 2

is authorized to discharge from the facility described herein, in accordance with the effluent limitations and monitoring requirements as set forth herein:

**FACILITY DESCRIPTION**

Facility Type – Land Application of Biosolids – SIC #4953  
No Certified Operator Required.  
Land application of biosolids onto agricultural land for beneficial use as a soil amendment  
Design flow is 17,840 gallons per day (1-in-10 year design including net rainfall minus evaporation).  
Average design flow is 15,120 gallons per day (dry weather flows).  
Design sludge production is 460 dry tons per year.

This permit authorizes only wastewater discharges under the Missouri Clean Water Law and the National Pollutant Discharge Elimination System; it does not apply to other regulated areas. This permit may be appealed in accordance with Section 644.051.6 of the Law.

March 1, 2015                      January 5, 2016  
Effective Date                      Revised Date

  
Sara Parker Pauley, Director, Department of Natural Resources

June 30, 2017  
Expiration Date

  
John Madras, Director, Water Protection Program

**FACILITY DESCRIPTION** (continued)

Permitted Feature #001 – Storage Basin #001

Legal Description: NW ¼, NE ¼, Sec. 8, T38N, R16W, Camden County  
UTM Coordinates: X= 525586, Y= 4211638  
Receiving Stream: Tributary to Lake of the Ozarks  
First Classified Stream and ID: Lake of the Ozarks (L2) (7205)  
USGS Basin & Sub-watershed No.: (10290109-0401)

Permitted Feature #002 – Storage Basin #002

Legal Description: NW ¼, NE ¼, Sec. 8, T38N, R16W, Camden County  
UTM Coordinates: X= 525635, Y= 4211599  
Receiving Stream: Tributary to Lake of the Ozarks  
First Classified Stream and ID: Lake of the Ozarks (L2) (7205)  
USGS Basin & Sub-watershed No.: (10290109-0401)

**Design Basis:** **Average Annual**

Design dry weather flows: 15,120 gpd  
Design with 1-in-10 year flows: 17,840 gpd

**Storage Basins:**

Freeboard for basins: 2 feet

**Storage Capacity (in Days):**

Design for Dry weather flows: 80 days  
Design with 1-in 10 year flows: 70 days

Permitted Feature #003 – Land Application Field

Legal Description: W ½, NE ¼, Sec. 8, T38N, R16W, Camden County  
UTM Coordinates: X= 525756, Y= 4211491  
Receiving Stream: Tributary to Lake of the Ozarks  
First Classified Stream and ID: Lake of the Ozarks (L2) (7205)  
USGS Basin & Sub-watershed No.: (10290109-0401)

**Land Application:**

Field slopes: Less than 12 percent  
Equipment type: Sludge is stored in earthen basins and land applied by truck  
Vegetation: Grass land  
Application rate is based on: Plant available nitrogen loading rate

Permitted Feature #004 – Land Application Fields

Legal Description: NE ¼, SE ¼, Sec. 8, T38N, R16W, Camden County  
Sec. 9, T38N, R16W, Camden County  
UTM Coordinates: X= 527220, Y= 4210983  
Receiving Stream: Tributary to North Fork Linn Creek  
First Classified Stream and ID: Lake of the Ozarks (L2) (7205)  
USGS Basin & Sub-watershed No.: (10290109-0401)

**Land Application:**

Sludge volume per year: 1,367,436 gallons (including 1-in-10 year flows) 96.6 dry tons/year  
Application areas: 40.0 acres at design loading (228.5 acres total available on all sites)  
Application rates per acre: 2.4 dry tons/year  
Field slopes: Less than 12 percent  
Equipment type: Sludge is stored in earthen basins and land applied by truck  
Vegetation: Grass land  
Application rate is based on: Plant available nitrogen loading rate

**FACILITY DESCRIPTION** (continued)

Permitted Feature #005 – Eliminated

Permitted Feature #006 – Land Application Field

Legal Description: SW ¼, SW ¼, Sec. 15, T36N, R19W, Dallas County  
SE ¼, SE ¼, Sec. 16, T36N, R19W, Dallas County  
UTM Coordinates: X= 498299, Y= 4190116  
Receiving Stream: Coatney Creek (P) (1199)  
First Classified Stream and ID: Coatney Creek (P) (1199)  
USGS Basin & Sub-watershed No.: (10290110-0303)

Permitted Feature #007 – Land Application Field

Legal Description: NE ¼, NE ¼, Sec. 21, T36N, R19W, Dallas County  
UTM Coordinates: X= 497962, Y= 4189814  
Receiving Stream: Little Niangua River (P) (1189)  
First Classified Stream and ID: Little Niangua River (P) (1189) 303(d) List  
USGS Basin & Sub-watershed No.: (10290110-0303)

Land Application (Permitted Feature #006 & #007):

Sludge volume per year: 3,451,529 (including 1-in-10 year flows) 247 dry tons/year  
Application areas: 103 acres at design loading (228.5 acres total available on all sites)  
Application rates per acre: 2.4 dry tons/year  
Field slopes: Less than 12 percent except an area near pond #2(center of the site with 15%-20%)  
Equipment type: Sludge is stored in earthen basins and land applied by truck  
Vegetation: Grass land  
Application rate is based on: Plant available nitrogen loading rate

## A. STANDARD CONDITIONS

In addition to specified conditions stated herein, this permit is subject to the attached Parts I & III standard conditions dated August 1, 2014 and March 1, 2015, and hereby incorporated as though fully set forth herein.

## B. SPECIAL CONDITIONS

1. This permit may be reopened and modified, or alternatively revoked and reissued, to:
  - (a) Comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a) (2) of the Clean Water Act, if the effluent standard or limitation so issued or approved:
    - (1) contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
    - (2) controls any pollutant not limited in the permit.
  - (b) Incorporate new or modified effluent limitations or other conditions, if the result of a waste load allocation study, toxicity test or other information indicates changes are necessary to assure compliance with Missouri's Water Quality Standards.
  - (c) Incorporate new or modified effluent limitations or other conditions if, as the result of a watershed analysis, a Total Maximum Daily Load (TMDL) limitation is developed for the receiving waters which are currently included in Missouri's list of waters of the state not fully achieving the state's water quality standards, also called the 303(d) list.
  - (d) Incorporate the requirement to develop a pretreatment program pursuant to 40 CFR 403.8(a) when the Director of the Water Protection Program determines that a pretreatment program is necessary due to any new introduction of pollutants into the Publicly Owned Treatment Works or any substantial change in the volume or character of pollutants being introduced.

The permit as modified or reissued under this paragraph shall also contain any other requirements of the Clean Water Act then applicable.
2. The term "sludge" used herein means sludge, biosolids, by-products, and residuals; any solid, semi-solid, or liquid waste generated from domestic wastewater treatment facilities. Supernatant, as a physical part of sludge, is a liquid waste generated from domestic wastewater treatment facilities, and therefore must adhere to the sludge disposal requirements referenced in Paragraph 3 of this section.
3. Prior to land application, the permittee shall comply with the pollutant limitations, monitoring, reporting, and other requirements for metals, pathogens, and vectors in accordance with the attached permit Standard Conditions Part III and 40 CFR Part 503.
4. Water Quality Standards
  - (a) To the extent required by law, discharges to waters of the state shall not cause a violation of water quality standards rule under 10 CSR 20-7.031, including both specific and general criteria.
  - (b) General Criteria. The following general water quality criteria shall be applicable to all waters of the state at all times including mixing zones. No water contaminant, by itself or in combination with other substances, shall prevent the waters of the state from meeting the following conditions:
    - (1) Waters shall be free from substances in sufficient amounts to cause the formation of putrescent, unsightly or harmful bottom deposits or prevent full maintenance of beneficial uses;
    - (2) Waters shall be free from oil, scum and floating debris in sufficient amounts to be unsightly or prevent full maintenance of beneficial uses;
    - (3) Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses;
    - (4) Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal or aquatic life;
    - (5) There shall be no significant human health hazard from incidental contact with the water;
    - (6) There shall be no acute toxicity to livestock or wildlife watering;
    - (7) Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community;
    - (8) Waters shall be free from used tires, car bodies, appliances, demolition debris, used vehicles or equipment and solid waste as defined in Missouri's Solid Waste Law, section 260.200, RSMo, except as the use of such materials is specifically permitted pursuant to section 260.200-260.247.

B. SPECIAL CONDITIONS (continued)

5. Soil Monitoring.

- (a) No land application shall occur on fields listed in this permit if soil sample results are more the five (5) years old.
- (b) Soil sampling shall be in accordance with University of Missouri (MU) Guides G9215, Soil Sampling Pastures or G9217, Soil Sampling Hayfields and Row Crops or other methods approved by the department. The recommendation of one composite sample per 20 acres in G9215 and G9217 is not required by this permit, however, this is a useful method to identify soil fertility fluctuations in large fields due to past management practices, soil type, and variability of crop yields. There shall be at least one composite sample per 80 acres.
- (c) Testing shall conform to Recommended Chemical Soil Testing Procedures for North Central Region (North Central Regional Research Publication 221 Revised), or Soil Testing in Missouri (MU Extension Guide EC923), or other methods approved by the department.

6. Land Application of Sludge

- (a) Operation. Permittee shall operate the land application system in accordance with the design parameters listed in the Facility Description section of this permit.
- (b) Land Application Site Locations. This permit authorizes land application of sludge to the sites that have been public noticed and listed in the permit facility description. Additional land application fields including non-owned property can be added through a permit modification. This supersedes Standard Conditions Part III Section G 2.
- (c) Subsurface Injection Requirement. Subsurface Injection or immediate incorporation after surface application should be considered where feasible and practicable to reduce exposure to wash off by storm water runoff and to retain nutrients in the soil for crop requirements.
- (d) Land Application Equipment. The land application system shall be operated so as to provide uniform distribution of applied wastes to the entire application site. Land application shall occur only during daylight hours. Equipment shall be properly operated and maintained and shall be visually checked daily during land application.
- (e) Saturated/Frozen Conditions. There shall be no land application during frozen, snow covered, or saturated soil conditions, or when precipitation is imminent or occurring. There shall be no land application on days when there is observation by operator of an imminent or impending rainfall event. An on-site visual investigation of the field's soil moisture condition will be made prior to land application to determine whether land application can occur. The visual and soil test procedures will be reviewed and approved by the department as part of the Operation and Maintenance (O&M) Manual.
- (f) Buffer Zones. There shall be no land application within 300 feet of any sinkhole, losing stream or other structure or physiographic feature that may provide direct connection between the ground water table and the surface, or water supply withdrawal; 300 feet of any lake or pond used for water supply; 100 feet of other ponds and lakes; 100 feet of gaining streams; 50 feet of intermittent or wet weather streams; 150 feet of dwelling or public use areas excluding roads or highways; or 50 feet inside the property line. For subsurface injection, buffer zones may be reduced to 25 feet from gaining streams (classified and unclassified) and property lines.
- (g) Public Access Restrictions. Public access shall to the land application site(s) shall be restricted for 180 days after application unless the sludge is either subsurface injected or incorporated. If the sludge is subsurface injected or incorporated, then public access to the land application site(s) shall be restricted for 60 days after application.
- (h) Daily Log Sheets. Daily log sheets shall be prepared and kept for each application site showing amounts of sludge applied per acre and dates of application.
- (i) Slope and Runoff Restrictions.
  - (1) Do not place sludge in a location where it is reasonably certain that pollutants will be transported into waters of the state during storm water runoff.
  - (2) Subsurface injection should be applied along the contour of the slope to minimize surfacing of liquids at the down gradient end of the injection trench.
- (j) Best Management Practices are located in the Water Quality Guide 426(WQ426) published by the University of Missouri.

7. Annual Report. An annual report is required in addition to the reporting requirements of this permit. The annual report shall be submitted by January 28<sup>th</sup> of each year for the previous growing season from January 1<sup>st</sup> to December 31<sup>st</sup> or an alternate 12 month period approved by the Department and listed in the Operation and Maintenance Manual. This report shall be submitted using report forms provided by the Department and shall include a summary of the monitoring and record keeping required by the Special Conditions and Standard Conditions of this permit. The report shall include requirements listed in Standard Conditions Part III Section J 5.

B. SPECIAL CONDITIONS (continued)

8. Records of sludge received shall be maintained for five years and made available to the Department upon request.
9. It is a violation of the Missouri Clean Water Law to fail to pay fees associated with this permit (644.055 RSMo).
10. The permittee shall develop, maintain and implement an Operation and Maintenance (O&M) Manual that includes all necessary items to ensure the operation and integrity of the waste handling and land application systems, including key operating procedures, an aerial or topographic site map with the permitted features, land application fields, and application buffer zones marked, and a brief summary of the operation of the facility. The O & M manual shall be made available to the operator. The O&M Manual shall be reviewed and updated at least every five years.
11. To add additional land application sites or convert any of the land to public use areas, a construction permit and permit modification may be required. The facility shall contact the Department for a written determination. Additionally, the O&M Manual shall be updated to include the additional land application site(s).
12. Provide adequate sludge storage or alternate disposal method as needed to match the land application windows for crop planting, harvesting, and inclement weather conditions. Operate storage basins so there is no discharge to waters of the state. If storage is not provided, the sludge shall be hauled to a permitted wastewater treatment facility during inclement weather conditions when land application is not allowed.
13. Reporting of Non-Detects:
  - (a) An analysis conducted by the permittee or their contracted laboratory shall be conducted in such a way that the precision and accuracy of the analyzed result can be enumerated.
  - (b) The permittee shall not report a sample result as "Non-Detect" without also reporting the detection limit of the test. Reporting as "Non Detect" without also including the detection limit will be considered failure to report, which is a violation of this permit.
  - (c) The permittee shall provide the "Non-Detect" sample result using the less than sign and the minimum detection limit (e.g. <10).
  - (d) Where the permit contains a Minimum Level (ML) and the permittee is granted authority in the permit to report zero in lieu of the < ML for a specified parameter (conventional, priority pollutants, metals, etc.), then zero (0) is to be reported for that parameter.
  - (e) See Standard Conditions Part I, Section A, #4 regarding proper detection limits used for sample analysis.
14. The facility must be sufficiently secured to restrict entry by children, livestock and unauthorized persons as well as to protect the facility from vandalism.
15. At least one gate must be provided to access the wastewater treatment facility and provide for maintenance and mowing. The gate shall remain locked except when opened by the permittee to perform operational monitoring, sampling, maintenance, mowing, or for inspections by the Department.
16. At least one (1) warning sign shall be placed on each side of the facility enclosure in such positions as to be clearly visible from all directions of approach. There shall also be one (1) sign placed for every five hundred feet (500') (150 m) of the perimeter fence. A sign shall also be placed on each gate. Minimum wording shall be SEWAGE TREATMENT FACILITY—KEEP OUT. Signs shall be made of durable materials with characters at least two inches (2") high and shall be securely fastened to the fence, equipment or other suitable locations.
17. An all-weather access road shall be provided to the treatment facility.
18. The berms of the storage basin(s) shall be mowed and kept free of any deep-rooted vegetation, animal dens, or other potential sources of damage to the berms.
19. The facility shall ensure that adequate provisions are provided to prevent surface water intrusion into the storage basin(s) and to divert stormwater runoff around the storage basin(s) and protect embankments from erosion.
20. This permit does not authorize the land application of industrial sludges. The facility must receive approval from the department 30 days prior to accepting industrial wastes to this system.

**MISSOURI DEPARTMENT OF NATURAL RESOURCES**  
**FACT SHEET**  
**FOR THE PURPOSE OF RENEWAL**  
**OF**  
**MO-0117731**  
**A & A, INC.**

The Federal Water Pollution Control Act ("Clean Water Act" Section 402 Public Law 92-500 as amended) established the National Pollution Discharge Elimination System (NPDES) permit program. This program regulates the discharge of pollutants from point sources into the waters of the United States, and the release of stormwater from certain point sources. All such discharges are unlawful without a permit (Section 301 of the "Clean Water Act"). After a permit is obtained, a discharge not in compliance with all permit terms and conditions is unlawful. Missouri State Operating Permits (MSOPs) are issued by the Director of the Missouri Department of Natural Resources (Department) under an approved program, operating in accordance with federal and state laws (Federal "Clean Water Act" and "Missouri Clean Water Law" Section 644 as amended). MSOPs are issued for a period of five (5) years unless otherwise specified.

As per [40 CFR Part 124.8(a)] and [10 CSR 20-6.020(1)2.] a Factsheet shall be prepared to give pertinent information regarding the applicable regulations, rationale for the development of effluent limitations and conditions, and the public participation process for the Missouri State Operating Permit (operating permit) listed below.

A Factsheet is not an enforceable part of an operating permit.

**Part I – Facility Information**

Facility Type: NON-POTW – Private Sludge Hauler – SIC #4953

Facility Description:

Land application of biosolids onto agricultural land for beneficial use as a soil amendment

Application Date: 04/28/2014

Expiration Date: 03/06/2013

**PERMITTED FEATURE(S) TABLE:**

PERMITTED FEATURE	DESIGN FLOW (CFS)	TREATMENT LEVEL	EFFLUENT TYPE
#001	0.028	Land Application	Domestic
#002	NA	Land Application	Domestic
#003	Land Application Site		
#004	Land Application Site		
#005	<i>Eliminated</i>		
#006	Land Application Site		
#007	Land Application Site		

Facility Performance History:

In an inspection on August 3, 2011, the facility was found to be in non-compliance for the following: discharging to an unnamed tributary to Lake of the Ozarks without an operating permit, failure to submit DMRs, failure to submit sludge reports, causing pollution to waters of the state, failure to report a wastewater bypass within 24 hours of the event, and failure to operate and maintain facilities to comply with the Missouri Clean Water Law and applicable permit conditions. The Southwest Regional Office sent an enforcement request on August 24, 2011 for these violations. A consent judgement was filed on February 23, 2015.

**Comments:**

The permitted features for this facility have been renumbered from the past permit. Please see the appendix. TSS, pH, ammonia, and Oil & Grease monitoring of the land applied septage has been removed. Soil monitoring for ammonia, nitrate, and organic matter has been removed.

This permit was previously written under the premise that this facility is storing and land applying only septage, which is defined as either a liquid or a solid material removed from septic tank, cesspool, portable toilet, Type III marine sanitation device or similar treatment works that receives only domestic sewage. After further review of the facility's processes, the Department has determined this facility is also accepting and processing municipal sludges. Because septage requirements in the permit did not address the land application of municipal sludge, the permit has been modified to correctly identify this facility's processes and the associated requirements.

**Part II – Operator Certification Requirements**

- This facility is not required to have a certified operator.

**Part III– Operational Monitoring**

- As per [10 CSR 20-9.010(4)], the facility is not required to conduct operational monitoring.

**Part IV – Receiving Stream Information**

While this facility is no discharge, a receiving stream is listed for the purposes of showing what stream would be affected in the event of an emergency release or runoff due to an acute or chronic rain event. 10 CSR 20-7.031 Missouri Water Quality Standards, the Department defines the Clean Water Commission water quality objectives in terms of "water uses to be maintained and the criteria to protect those uses." The receiving stream and/or 1<sup>st</sup> classified receiving stream's beneficial water uses to be maintained, are located in the Receiving Stream Table located below in accordance with [10 CSR 20-7.031(4)].

**RECEIVING STREAM(S) TABLE:**

PERMITTED FEATURE	WATER-BODY NAME	CLASS	WBID	DESIGNATED USES*	12-DIGIT HUC
#001, #002, and #003	Tributary to Lake of the Ozarks	NA	NA	General Criteria	(10290109-0401)
#004	Tributary to North Fork Linn Creek	NA	NA	General Criteria	
#001, #002, #003, and #004	Lake of the Ozarks	L2	7205	LWW, AQL, SCR, WBC(A)	
#006	Coatney Creek	P	1199	LWW, AQL, WBC(B)	(10290110-0303)
#007	Little Niangua River	P	1189	LWW, AQL, CLF, SCR, WBC(A)	

\* - Irrigation (IRR), Livestock & Wildlife Watering (LWW), Protection of Warm Water Aquatic Life and Human Health-Fish Consumption (AQL), Cool Water Fishery(CLF), Cold Water Fishery (CDF), Whole Body Contact Recreation (WBC), Secondary Contact Recreation (SCR), Drinking Water Supply (DWS), Industrial (IND), Groundwater (GRW).

**RECEIVING STREAM MONITORING REQUIREMENTS:**

No receiving water monitoring requirements recommended at this time.

**Part V – Rationale and Derivation of Effluent Limitations & Permit Conditions**

**ALTERNATIVE EVALUATIONS FOR NEW FACILITIES:**

As per [10 CSR 20-7.015(4)(A)], discharges to losing streams shall be permitted only after other alternatives including land application, discharges to a gaining stream and connection to a regional wastewater treatment facility have been evaluated and determined to be unacceptable for environmental and/or economic reasons.

- The facility does not discharge to a Losing Stream as defined by [10 CSR 20-2.010(36)] & [10 CSR 20-7.031(1)(N)], or is an existing facility.

**ANTI-BACKSLIDING:**

A provision in the Federal Regulations [CWA §303(d)(4); CWA §402(c); 40 CFR Part 122.44(I)] that requires a reissued permit to be as stringent as the previous permit with some exceptions.

- All limits in this operating permit are at least as protective as those previously established; therefore, backsliding does not apply.

**ANTIDegradation:**

In accordance with Missouri's Water Quality Standard [10 CSR 20-7.031(3)], the Department is to document by means of Antidegradation Review that the use of a water body's available assimilative capacity is justified. Degradation is justified by documenting the socio-economic importance of a discharging activity after determining the necessity of the discharge.

- No degradation proposed and no further review necessary. Facility did not apply for authorization to increase pollutant loading or to add additional pollutants to their discharge.

**AREA-WIDE WASTE TREATMENT MANAGEMENT & CONTINUING AUTHORITY:**

As per [10 CSR 20-6.010(3)(B)], ...An applicant may utilize a lower preference continuing authority by submitting, as part of the application, a statement waiving preferential status from each existing higher preference authority, providing the waiver does not conflict with any area-wide management plan approved under section 208 of the Federal Clean Water Act or any other regional sewage service and treatment plan approved for higher preference authority by the Department.

**BIOSOLIDS & SEWAGE SLUDGE:**

Biosolids are solid materials resulting from domestic wastewater treatment that meet federal and state criteria for beneficial uses (i.e. fertilizer). Sewage sludge is solids, semi-solids, or liquid residue generated during the treatment of domestic sewage in a treatment works; including but not limited to, domestic septage; scum or solids removed in primary, secondary, or advanced wastewater treatment process; and a material derived from sewage sludge. Sewage sludge does not include ash generated during the firing of sewage sludge in a sewage sludge incinerator or grit and screening generated during preliminary treatment of domestic sewage in a treatment works. Additional information regarding biosolids and sludge is located at the following web address:

<http://dnr.mo.gov/env/wpp/pub/index.html>, items WQ422 through WQ449.

- Permittee land applies biosolids in accordance with Standard Conditions III and a Department approved biosolids management plan.

**COMPLIANCE AND ENFORCEMENT:**

Enforcement is the action taken by the Water Protection Program (WPP) to bring an entity into compliance with the Missouri Clean Water Law, its implementing regulations, and/or any terms and conditions of an operating permit. The primary purpose of the enforcement activity in the WPP is to resolve violations and return the entity to compliance.

- The permittee/facility is currently under enforcement action. In an inspection on August 3, 2011, the facility was found to be in non-compliance for the following: discharging to an unnamed tributary to Lake of the Ozarks without an operating permit, failure to submit DMRs, failure to submit sludge reports, causing pollution to waters of the state, failure to report a wastewater bypass within 24 hours of the event, and failure to operate and maintain facilities to comply with the Missouri Clean Water Law and applicable permit conditions. The Southwest Regional Office sent an enforcement request on August 24, 2011 for these violations. A consent judgement was filed on February 23, 2015.

**PRETREATMENT PROGRAM:**

The reduction of the amount of pollutants, the elimination of pollutants, or the alteration of the nature of pollutant properties in wastewater prior to or in lieu of discharging or otherwise introducing such pollutants into a Publicly Owned Treatment Works [40 CFR Part 403.3(q)].

- The permittee, at this time, is not required to have a Pretreatment Program or does not have an approved pretreatment program.

**REMOVAL EFFICIENCY:**

Removal efficiency is a method by which the Federal Regulations define Secondary Treatment and Equivalent to Secondary Treatment, which applies to Biochemical Oxygen Demand 5-day (BOD<sub>5</sub>) and Total Suspended Solids (TSS) for Publicly Owned Treatment Works (POTWs)/municipals. This is a no-discharge facility, therefore removal efficiency is 100% and influent monitoring is not required.

**SANITARY SEWER OVERFLOWS (SSO) AND INFLOW AND INFILTRATION (I&I):**

Sanitary Sewer Overflows (SSOs) are defined as untreated sewage releases and are considered bypassing under state regulation [10 CSR 20-2.010(11)] and should not be confused with the federal definition of bypass. SSOs result from a variety of causes including blockages, line breaks, and sewer defects that can either allow wastewater to backup within the collection system during dry weather conditions or allow excess stormwater and groundwater to enter and overload the collection system during wet weather conditions. SSOs can also result from lapses in sewer system operation and maintenance, inadequate sewer design and construction, power failures, and vandalism. SSOs include overflows out of manholes, cleanouts, broken pipes, and other into waters of the state and onto city streets, sidewalks, and other terrestrial locations.

Inflow and Infiltration (I&I) is defined as unwanted intrusion of stormwater or groundwater into a collection system. This can occur from points of direct connection such as sump pumps, roof drain downspouts, foundation drains, and storm drain cross-connections or through cracks, holes, joint failures, faulty line connections, damaged manholes, and other openings in the collection system itself. I&I results from a variety of causes including line breaks, improperly sealed connections, cracks caused by soil erosion/settling, penetration of vegetative roots, and other sewer defects. In addition, excess stormwater and groundwater entering the collection system from line breaks and sewer defects have the potential to negatively impact the treatment facility.

Missouri RSMo §644.026.1.(13) mandates that the Department issue permits for discharges of water contaminants into the waters of this state, and also for the operation of sewer systems. Such permit conditions shall ensure compliance with all requirements as established by sections 644.006 to 644.141. Standard Conditions Part I, referenced in the permit, contains provisions requiring proper operation and maintenance of all facilities and systems of treatment and control. Missouri RSMo §644.026.1.(15) instructs the Department to require proper maintenance and operation of treatment facilities and sewer systems and proper disposal of residual waste from all such facilities. To ensure that public health and the environment are protected, any noncompliance which may endanger public health or the environment must be reported to the Department within 24 hours of the time the permittee becomes aware of the noncompliance. Standard Conditions Part I, referenced in the permit, contains the reporting requirements for the permittee when bypasses and upsets occur. The permit also contains requirements for permittees to develop and implement a program for maintenance and repair of the collection system. The permit requires that the permittee submit an annual report to the Department for the previous calendar year that contains a list of all SSOs and building backups (locations, features of collection system where the SSO/building backup occurred, volumes, durations, receiving stream, causes, mitigation efforts, and actions to prevent reoccurrences), a summary of efforts taken by the permittee to locate and eliminate sources of excess I & I, a summary of general maintenance and repairs to the collection system, and a summary of any planned maintenance and repairs to the collection system for the upcoming calendar year.

- This facility is not required to develop or implement a program for maintenance and repair of the collection system; however, it is a violation of Missouri State Environmental Laws and Regulations to allow untreated wastewater to discharge to waters of the state.

**SCHEDULE OF COMPLIANCE (SOC):**

Per 644.051.4 RSMo, a permit may be issued with a Schedule of Compliance (SOC) to provide time for a facility to come into compliance with new state or federal effluent regulations, water quality standards, or other requirements. Such a schedule is not allowed if the facility is already in compliance with the new requirement, or if prohibited by other statute or regulation. A SOC includes an enforceable sequence of interim requirements (actions, operations, or milestone events) leading to compliance with the Missouri Clean Water Law, its implementing regulations, and/or the terms and conditions of an operating permit. *See also* Section 502(17) of the Clean Water Act, and 40 CFR §122.2. For new effluent limitations, the permit includes interim monitoring for the specific parameter to demonstrate the facility is not already in compliance with the new requirement. Per 40 CFR § 122.47(a)(1) and 10 CSR 20-7.031(11), compliance must occur as soon as possible. If the permit provides a schedule for meeting new water quality based effluent limits, a SOC must include an enforceable, final effluent limitation in the permit even if the SOC extends beyond the life of the permit.

A SOC is not allowed:

- For effluent limitations based on technology-based standards established in accordance with federal requirements, if the deadline for compliance established in federal regulations has passed. 40 CFR § 125.3.
- For a newly constructed facility in most cases. Newly constructed facilities must meet applicable effluent limitations when discharge begins, because the facility has installed the appropriate control technology as specified in a permit or antidegradation review. A SOC is allowed for a new water quality based effluent limit that was not included in a previously public noticed permit or antidegradation review, which may occur if a regulation changes during construction.
- To develop a TMDL, UAA, or other study associated with development of a site specific criterion. A facility is not prohibited from conducting these activities, but a SOC may not be granted for conducting these activities.

In order to provide guidance to Permit Writers in developing SOC's, and attain a greater level of consistency, on October 25, 2012 the Department issued a policy on development of SOC's. This policy provides guidance to Permit Writers on the standard time frames for schedules for common activities, and guidance on factors that may modify the length of the schedule such as an affordability analysis.

- This permit does not contain a SOC.

**VARIANCE:**

As per the Missouri Clean Water Law § 644.061.4, variances shall be granted for such period of time and under such terms and conditions as shall be specified by the commission in its order. The variance may be extended by affirmative action of the commission. In no event shall the variance be granted for a period of time greater than is reasonably necessary for complying with the Missouri Clean Water Law §§644.006 to 644.141 or any standard, rule or regulation promulgated pursuant to Missouri Clean Water Law §§644.006 to 644.141.

- This operating permit is not drafted under premises of a petition for variance.

**WATER QUALITY STANDARDS:**

Per [10 CSR 20-7.031(4)], General Criteria shall be applicable to all waters of the state at all times including mixing zones. Additionally, [40 CFR 122.44(d)(1)] directs the Department to establish in each NPDES permit to include conditions to achieve water quality established under Section 303 of the Clean Water Act, including State narrative criteria for water quality.

**40 CFR 122.41(M) - BYPASSES:**

The federal Clean Water Act (CWA), Section 402 prohibits wastewater dischargers from “bypassing” untreated or partially treated sewage (wastewater) beyond the headworks. A bypass is defined as an intentional diversion of waste streams from any portion of a treatment facility, [40 CFR 122.41(m)(1)(i)]. Additionally, Missouri regulation 10 CSR 20-7.015(9)(G) states a bypass means the intentional diversion of waste streams from any portion of a treatment facility, except in the case of blending, to waters of the state. Only under exceptional and specified limitations do the federal regulations allow for a facility to bypass some or all of the flow from its treatment process. Bypasses are prohibited by the CWA unless a permittee can meet all of the criteria listed in 40 CFR 122.41(m)(4)(i)(A), (B), & (C). Any bypasses from this facility are subject to the reporting required in 40 CFR 122.41(l)(6) and per Missouri’s Standard Conditions I, Section B, part 2.b. Additionally, Anticipated Bypasses include bypasses from peak flow basins or similar devices designed for peak wet weather flows.

- This facility does not anticipate bypassing.

**Part VI – Permit Limits Determination**

There are no effluent limits for this permit as this permit does not authorize discharges.

**Part VII – Cost Analysis for Compliance**

Pursuant to Section 644.145, RSMo., the Department is required to determine whether a permit or decision is affordable and makes a “finding of affordability” for certain permitting and enforcement decisions. This is done through a cost analysis for compliance. This requirement applies to discharges from combined or separate sanitary sewer systems or publically-owned treatment works.

- The Department is not required to complete a cost analysis for compliance.

## **Part VIII – Administrative Requirements**

On the basis of preliminary staff review and the application of applicable standards and regulations, the Department, as administrative agent for the Missouri Clean Water Commission, proposes to issue a permit(s) subject to certain effluent limitations, schedules, and special conditions contained herein and within the operating permit. The proposed determinations are tentative pending public comment.

### **PERMIT SYNCHRONIZATION:**

The Department of Natural Resources is currently undergoing a synchronization process for operating permits. Permits are normally issued on a five-year term, but to achieve synchronization many permits will need to be issued for less than the full five years allowed by regulation. The intent is that all permits within a watershed will move through the Watershed Based Management (WBM) cycle together will all expire in the same fiscal year. This will allow further streamlining by placing multiple permits within a smaller geographic area on public notice simultaneously, thereby reducing repeated administrative efforts. This will also allow the Department to explore a watershed based permitting effort at some point in the future. Renewal applications must continue to be submitted within 180 days of expiration, however, in instances where effluent data from the previous renewal is less than 4 years old, that data may be re-submitted to meet the requirements of the renewal application. If the permit provides a schedule of compliance for meeting new water quality based effluent limits beyond the expiration date of the permit, the time remaining in the schedule of compliance will be allotted in the renewed permit. This permit will expire in the 2<sup>nd</sup> Quarter of calendar year 2017.

### **PUBLIC NOTICE:**

The Department shall give public notice that a draft permit has been prepared and its issuance is pending. Additionally, public notice will be issued if a public hearing is to be held because of a significant degree of interest in and water quality concerns related to a draft permit. No public notice is required when a request for a permit modification or termination is denied; however, the requester and permittee must be notified of the denial in writing.

The Department must issue public notice of a pending operating permit or of a new or reissued statewide general permit. The public comment period is the length of time not less than 30 days following the date of the public notice which interested persons may submit written comments about the proposed permit.

For persons wanting to submit comments regarding this proposed operating permit, then please refer to the Public Notice page located at the front of this draft operating permit. The Public Notice page gives direction on how and where to submit appropriate comments.

- The original Public Notice period for this operating permit was from November 29, 2014 – December 29, 2014. No comments were received. Because of major modifications made to the permit, it was placed on Public Notice from September 4, 2015 – October 5, 2015. No comments were received.

**DATE OF FACT SHEET:** OCTOBER 16, 2014

### **COMPLETED BY:**

**ANGELA FALLS, ENVIRONMENTAL SPECIALIST  
MISSOURI DEPARTMENT OF NATURAL RESOURCES  
WATER PROTECTION PROGRAM  
OPERATING PERMITS SECTION - DOMESTIC WASTEWATER UNIT  
(573) 751-1419  
[angela.falls@dnr.mo.gov](mailto:angela.falls@dnr.mo.gov)**

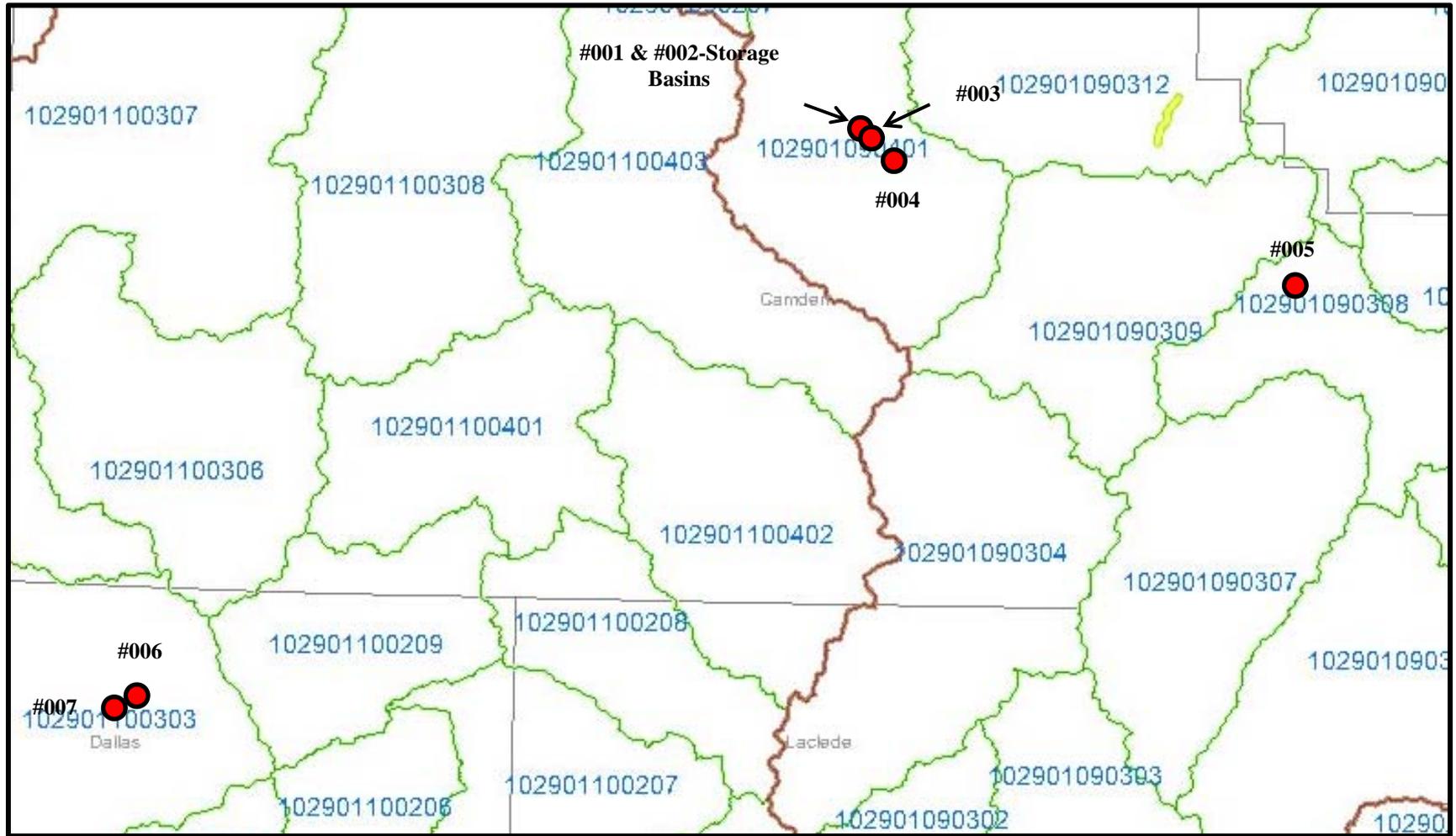
**DATE OF FACT SHEET MODIFICATION:** AUGUST 5, 2015

### **COMPLETED BY:**

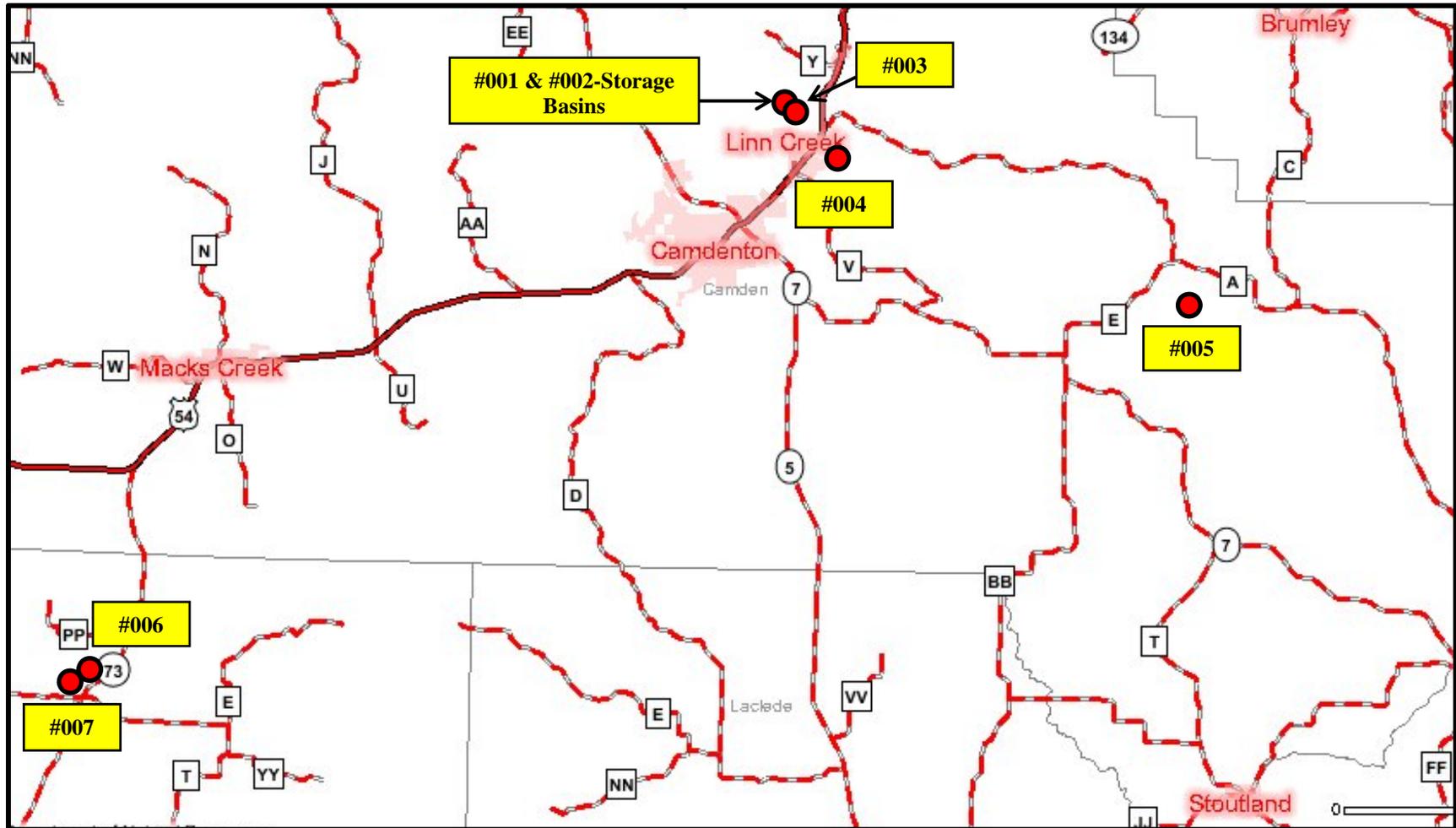
**ANGELA FALLS, ENVIRONMENTAL SPECIALIST  
MISSOURI DEPARTMENT OF NATURAL RESOURCES  
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**Appendices**

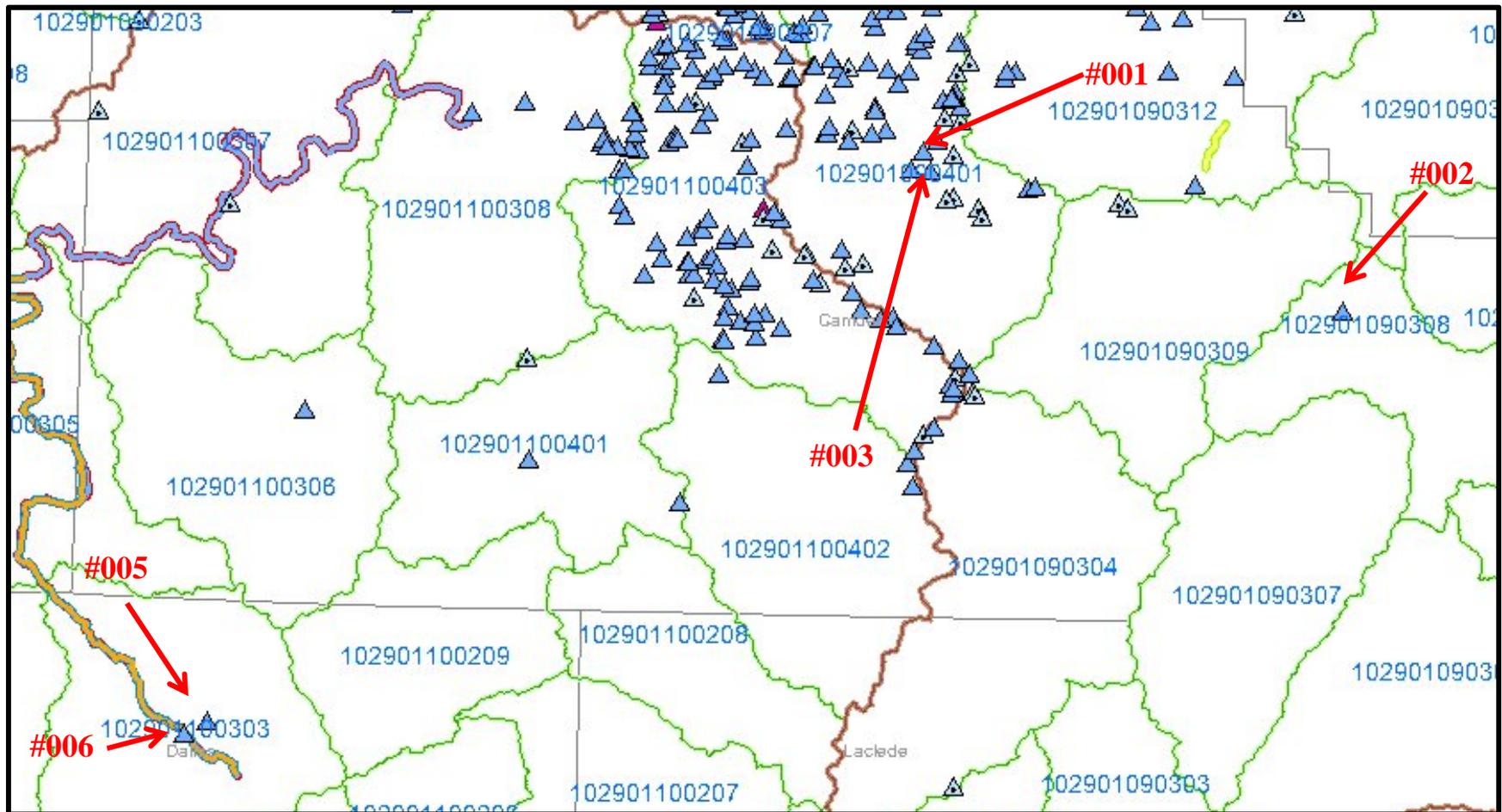
**APPENDIX – LAND APPLICATION SITES ON WATERSHED MAP**



APPENDIX – LAND APPLICATION SITES ON HIGHWAY MAP



APPENDIX – PAST LAND APPLICATION SITES ON WATERSHED MAP



**APPENDIX – PERMITTED FEATURES #001, #002, AND #003**



**Permitted Feature #001– Storage Basin**

Legal Description: NW ¼, NE ¼, Sec. 8, T38N, R16W, Camden County  
UTM Coordinates: X= 525586, Y= 4211638  
USGS Basin & Sub-watershed No.: (10290109-0401)

**Permitted Feature #002– Storage Basin**

Legal Description: NW ¼, NE ¼, Sec. 8, T38N, R16W, Camden County  
UTM Coordinates: X= 525635, Y= 4211599  
USGS Basin & Sub-watershed No.: (10290109-0401)

**Permitted Feature #003– Land Application Field**

Legal Description: W ½, NE ¼, Sec. 8, T38N, R16W, Camden County  
UTM Coordinates: X= 525756, Y= 4211491  
USGS Basin & Sub-watershed No.: (10290109-0401)

**Permitted Features #001, #002, #003**

Receiving Stream: Unnamed tributary to Lake of the Ozarks (U)  
First Classified Stream and ID: Lake of the Ozarks (L2) (7205)

**APPENDIX – PERMITTED FEATURE #004**



Permitted Feature #004– Land Application Fields

Legal Description:	NE ¼, SE ¼, Sec. 8, T38N, R16W, Camden County Sec. 9, T38N, R16W, Camden County
UTM Coordinates:	X= 527220, Y= 4210983
Receiving Stream:	Unnamed tributary to North Fork Linn Creek (U)
First Classified Stream and ID:	Lake of the Ozarks (L2) (7205)
USGS Basin & Sub-watershed No.:	(10290109-0401)

APPENDIX – PERMITTED FEATURE #005 – *ELIMINATED*



Permitted Feature #005– Land Application Fields

Legal Description:

S ½, SW ¼, Sec. 25, T38N, R15W, Camden County  
SE ¼, SE ¼, Sec. 26, T38N, R15W, Camden County  
N ½, NW ¼, Sec. 36, T38N, R15W, Camden County

UTM Coordinates:

X= 541037, Y= 4205309

Receiving Stream:

Unnamed tributary to West Glaze Creek (U) (losing)

First Classified Stream and ID:

West Glaze Creek (P) (1147)

USGS Basin & Sub-watershed No.:

(10290109-0308)

APPENDIX – PERMITTED FEATURES #006 AND #007



Permitted Feature #006– Land Application Field

Legal Description: SW ¼, SW ¼, Sec. 15, T36N, R19W, Dallas County  
SE ¼, SE ¼, Sec. 16, T36N, R19W, Dallas County  
UTM Coordinates: X= 498299, Y= 4190116  
Receiving Stream: Coatney Creek (P) (1199)  
First Classified Stream and ID: Coatney Creek (P) (1199)  
USGS Basin & Sub-watershed No.: (10290110-0303)

Permitted Feature #007– Land Application Field

Legal Description: NE ¼, NE ¼, Sec. 21, T36N, R19W, Dallas County  
UTM Coordinates: X= 497962, Y= 4189814  
Receiving Stream: Little Niangua River (P) (1189)  
First Classified Stream and ID: Little Niangua River (P) (1189) 303(d) List  
USGS Basin & Sub-watershed No.: (10290110-0303)



STANDARD CONDITIONS FOR NPDES PERMITS  
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MISSOURI CLEAN WATER COMMISSION  
REVISED  
AUGUST 1, 2014

These Standard Conditions incorporate permit conditions as required by 40 CFR 122.41 or other applicable state statutes or regulations. These minimum conditions apply unless superseded by requirements specified in the permit.

## Part I – General Conditions

### Section A – Sampling, Monitoring, and Recording

1. **Sampling Requirements.**
  - a. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
  - b. All samples shall be taken at the outfall(s) or Missouri Department of Natural Resources (Department) approved sampling location(s), and unless specified, before the effluent joins or is diluted by any other body of water or substance.
2. **Monitoring Requirements.**
  - a. Records of monitoring information shall include:
    - i. The date, exact place, and time of sampling or measurements;
    - ii. The individual(s) who performed the sampling or measurements;
    - iii. The date(s) analyses were performed;
    - iv. The individual(s) who performed the analyses;
    - v. The analytical techniques or methods used; and
    - vi. The results of such analyses.
  - b. If the permittee monitors any pollutant more frequently than required by the permit at the location specified in the permit using test procedures approved under 40 CFR Part 136, or another method required for an industry-specific waste stream under 40 CFR subchapters N or O, the results of such monitoring shall be included in the calculation and reported to the Department with the discharge monitoring report data (DMR) submitted to the Department pursuant to Section B, paragraph 7.
3. **Sample and Monitoring Calculations.** Calculations for all sample and monitoring results which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in the permit.
4. **Test Procedures.** The analytical and sampling methods used shall conform to the reference methods listed in 10 CSR 20-7.015 unless alternates are approved by the Department. The facility shall use sufficiently sensitive analytical methods for detecting, identifying, and measuring the concentrations of pollutants. The facility shall ensure that the selected methods are able to quantify the presence of pollutants in a given discharge at concentrations that are low enough to determine compliance with Water Quality Standards in 10 CSR 20-7.031 or effluent limitations unless provisions in the permit allow for other alternatives. A method is “sufficiently sensitive” when; 1) the method minimum level is at or below the level of the applicable water quality criterion for the pollutant or, 2) the method minimum level is above the applicable water quality criterion, but the amount of pollutant in a facility’s discharge is high enough that the method detects and quantifies the level of pollutant in the discharge, or 3) the method has the lowest minimum level of the analytical methods approved under 10 CSR 20-7.015. These methods are also required for parameters that are listed as monitoring only, as the data collected may be used to determine if limitations need to be established. A permittee is responsible for working with their contractors to ensure that the analysis performed is sufficiently sensitive.
5. **Record Retention.** Except for records of monitoring information required by the permit related to the permittee’s sewage sludge use and disposal activities, which shall be retained for a period of at least five (5) years (or longer as required by 40 CFR part 503), the permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by the permit, and records of all data used to complete the application for the permit, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Department at any time.

6. **Illegal Activities.**
  - a. The Federal Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under the permit shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than two (2) years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than four (4) years, or both.
  - b. The Missouri Clean Water Law provides that any person or who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained pursuant to sections 644.006 to 644.141 shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than six (6) months, or by both. Second and successive convictions for violation under this paragraph by any person shall be punished by a fine of not more than \$50,000 per day of violation, or by imprisonment for not more than two (2) years, or both.

### Section B – Reporting Requirements

1. **Planned Changes.**
  - a. The permittee shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility when:
    - i. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b); or
    - ii. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under 40 CFR 122.42(a)(1);
    - iii. The alteration or addition results in a significant change in the permittee’s sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan;
    - iv. Any facility expansions, production increases, or process modifications which will result in a new or substantially different discharge or sludge characteristics must be reported to the Department 60 days before the facility or process modification begins. Notification may be accomplished by application for a new permit. If the discharge does not violate effluent limitations specified in the permit, the facility is to submit a notice to the Department of the changed discharge at least 30 days before such changes. The Department may require a construction permit and/or permit modification as a result of the proposed changes at the facility.
2. **Non-compliance Reporting.**
  - a. The permittee shall report any noncompliance which may endanger health or the environment. Relevant information shall be provided orally or via the current electronic method approved by the Department, within 24 hours from the time the permittee becomes aware of the circumstances, and shall be reported to the appropriate Regional Office during normal business hours or the Environmental Emergency Response hotline at 573-634-2436 outside of normal business hours. A written submission shall also be provided within five (5) business days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.



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- b. The following shall be included as information which must be reported within 24 hours under this paragraph.
    - i. Any unanticipated bypass which exceeds any effluent limitation in the permit.
    - ii. Any upset which exceeds any effluent limitation in the permit.
    - iii. Violation of a maximum daily discharge limitation for any of the pollutants listed by the Department in the permit required to be reported within 24 hours.
  - c. The Department may waive the written report on a case-by-case basis for reports under paragraph 2. b. of this section if the oral report has been received within 24 hours.
3. **Anticipated Noncompliance.** The permittee shall give advance notice to the Department of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements. The notice shall be submitted to the Department 60 days prior to such changes or activity.
  4. **Compliance Schedules.** Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of the permit shall be submitted no later than 14 days following each schedule date. The report shall provide an explanation for the instance of noncompliance and a proposed schedule or anticipated date, for achieving compliance with the compliance schedule requirement.
  5. **Other Noncompliance.** The permittee shall report all instances of noncompliance not reported under paragraphs 2, 3, and 6 of this section, at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph 2. a. of this section.
  6. **Other Information.** Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Department, it shall promptly submit such facts or information.
  7. **Discharge Monitoring Reports.**
    - a. Monitoring results shall be reported at the intervals specified in the permit.
    - b. Monitoring results must be reported to the Department via the current method approved by the Department, unless the permittee has been granted a waiver from using the method. If the permittee has been granted a waiver, the permittee must use forms provided by the Department.
    - c. Monitoring results shall be reported to the Department no later than the 28<sup>th</sup> day of the month following the end of the reporting period.
- b. Notice.
    - i. Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least 10 days before the date of the bypass.
    - ii. Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in Section B – Reporting Requirements, paragraph 5 (24-hour notice).
  - c. Prohibition of bypass.
    - i. Bypass is prohibited, and the Department may take enforcement action against a permittee for bypass, unless:
      1. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
      2. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
      3. The permittee submitted notices as required under paragraph 2. b. of this section.
    - ii. The Department may approve an anticipated bypass, after considering its adverse effects, if the Department determines that it will meet the three (3) conditions listed above in paragraph 2. c. i. of this section.
3. **Upset Requirements.**
    - a. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph 3. b. of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.
    - b. Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
      - i. An upset occurred and that the permittee can identify the cause(s) of the upset;
      - ii. The permitted facility was at the time being properly operated; and
      - iii. The permittee submitted notice of the upset as required in Section B – Reporting Requirements, paragraph 2. b. ii. (24-hour notice).
      - iv. The permittee complied with any remedial measures required under Section D – Administrative Requirements, paragraph 4.
    - c. Burden of proof. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

## Section C – Bypass/Upset Requirements

1. **Definitions.**
  - a. *Bypass*: the intentional diversion of waste streams from any portion of a treatment facility, except in the case of blending.
  - b. *Severe Property Damage*: substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
  - c. *Upset*: an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
2. **Bypass Requirements.**
  - a. Bypass not exceeding limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs 2. b. and 2. c. of this section.

## Section D – Administrative Requirements

1. **Duty to Comply.** The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Missouri Clean Water Law and Federal Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.
  - a. The permittee shall comply with effluent standards or prohibitions established under section 307(a) of the Federal Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement.
  - b. The Federal Clean Water Act provides that any person who violates section 301, 302, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any such sections in a permit issued under section 402, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or 402(b)(8) of the Act, is subject to a civil penalty not to exceed \$25,000 per day for each violation. The Federal Clean Water Act provides that any person who negligently violates sections 301, 302, 306, 307, 308, 318, or 405 of the Act, or any condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, or any requirement



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- imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of \$2,500 to \$25,000 per day of violation, or imprisonment of not more than one (1) year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than \$50,000 per day of violation, or by imprisonment of not more than two (2) years, or both. Any person who knowingly violates such sections, or such conditions or limitations is subject to criminal penalties of \$5,000 to \$50,000 per day of violation, or imprisonment for not more than three (3) years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than \$100,000 per day of violation, or imprisonment of not more than six (6) years, or both. Any person who knowingly violates section 301, 302, 303, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than \$250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than \$500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the CWA, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than \$1,000,000 and can be fined up to \$2,000,000 for second or subsequent convictions.
- c. Any person may be assessed an administrative penalty by the EPA Director for violating section 301, 302, 306, 307, 308, 318 or 405 of this Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this Act. Administrative penalties for Class I violations are not to exceed \$10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed \$25,000. Penalties for Class II violations are not to exceed \$10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed \$125,000.
- d. It is unlawful for any person to cause or permit any discharge of water contaminants from any water contaminant or point source located in Missouri in violation of sections 644.006 to 644.141 of the Missouri Clean Water Law, or any standard, rule or regulation promulgated by the commission. In the event the commission or the director determines that any provision of sections 644.006 to 644.141 of the Missouri Clean Water Law or standard, rules, limitations or regulations promulgated pursuant thereto, or permits issued by, or any final abatement order, other order, or determination made by the commission or the director, or any filing requirement pursuant to sections 644.006 to 644.141 of the Missouri Clean Water Law or any other provision which this state is required to enforce pursuant to any federal water pollution control act, is being, was, or is in imminent danger of being violated, the commission or director may cause to have instituted a civil action in any court of competent jurisdiction for the injunctive relief to prevent any such violation or further violation or for the assessment of a penalty not to exceed \$10,000 per day for each day, or part thereof, the violation occurred and continues to occur, or both, as the court deems proper. Any person who willfully or negligently commits any violation in this paragraph shall, upon conviction, be punished by a fine of not less than \$2,500 nor more than \$25,000 per day of violation, or by imprisonment for not more than one year, or both. Second and successive convictions for violation of the same provision of this paragraph by any person shall be punished by a fine of not more than \$50,000 per day of violation, or by imprisonment for not more than two (2) years, or both.
2. **Duty to Reapply.**
- a. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit.
- b. A permittee with a currently effective site-specific permit shall submit an application for renewal at least 180 days before the expiration date of the existing permit, unless permission for a later date has been granted by the Department. (The Department shall not grant permission for applications to be submitted later than the expiration date of the existing permit.)
- c. A permittee with currently effective general permit shall submit an application for renewal at least 30 days before the existing permit expires, unless the permittee has been notified by the Department that an earlier application must be made. The Department may grant permission for a later submission date. (The Department shall not grant permission for applications to be submitted later than the expiration date of the existing permit.)
3. **Need to Halt or Reduce Activity Not a Defense.** It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
4. **Duty to Mitigate.** The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.
5. **Proper Operation and Maintenance.** The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.
6. **Permit Actions.**
- a. Subject to compliance with statutory requirements of the Law and Regulations and applicable Court Order, this permit may be modified, suspended, or revoked in whole or in part during its term for cause including, but not limited to, the following:
- i. Violations of any terms or conditions of this permit or the law;
- ii. Having obtained this permit by misrepresentation or failure to disclose fully any relevant facts;
- iii. A change in any circumstances or conditions that requires either a temporary or permanent reduction or elimination of the authorized discharge; or
- iv. Any reason set forth in the Law or Regulations.
- b. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.
7. **Permit Transfer.**
- a. Subject to 10 CSR 20-6.010, an operating permit may be transferred upon submission to the Department of an application to transfer signed by the existing owner and the new owner, unless prohibited by the terms of the permit. Until such time the permit is officially transferred, the original permittee remains responsible for complying with the terms and conditions of the existing permit.
- b. The Department may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the Missouri Clean Water Law or the Federal Clean Water Act.
- c. The Department, within 30 days of receipt of the application, shall notify the new permittee of its intent to revoke or reissue or transfer the permit.
8. **Toxic Pollutants.** The permittee shall comply with effluent standards or prohibitions established under section 307(a) of the Federal Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the Federal Clean Water Act within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement.
9. **Property Rights.** This permit does not convey any property rights of any sort, or any exclusive privilege.



STANDARD CONDITIONS FOR NPDES PERMITS  
ISSUED BY  
THE MISSOURI DEPARTMENT OF NATURAL RESOURCES  
MISSOURI CLEAN WATER COMMISSION  
REVISED  
AUGUST 1, 2014

10. **Duty to Provide Information.** The permittee shall furnish to the Department, within a reasonable time, any information which the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also furnish to the Department upon request, copies of records required to be kept by this permit.
11. **Inspection and Entry.** The permittee shall allow the Department, or an authorized representative (including an authorized contractor acting as a representative of the Department), upon presentation of credentials and other documents as may be required by law, to:
  - a. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of the permit;
  - b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
  - c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
  - d. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Federal Clean Water Act or Missouri Clean Water Law, any substances or parameters at any location.
12. **Closure of Treatment Facilities.**
  - a. Persons who cease operation or plan to cease operation of waste, wastewater, and sludge handling and treatment facilities shall close the facilities in accordance with a closure plan approved by the Department.
  - b. Operating Permits under 10 CSR 20-6.010 or under 10 CSR 20-6.015 are required until all waste, wastewater, and sludges have been disposed of in accordance with the closure plan approved by the Department and any disturbed areas have been properly stabilized. Disturbed areas will be considered stabilized when perennial vegetation, pavement, or structures using permanent materials cover all areas that have been disturbed. Vegetative cover, if used, shall be at least 70% plant density over 100% of the disturbed area.
13. **Signatory Requirement.**
  - a. All permit applications, reports required by the permit, or information requested by the Department shall be signed and certified. (See 40 CFR 122.22 and 10 CSR 20-6.010)
  - b. The Federal Clean Water Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than six (6) months per violation, or by both.
  - c. The Missouri Clean Water Law provides that any person who knowingly makes any false statement, representation or certification in any application, record, report, plan, or other document filed or required to be maintained pursuant to sections 644.006 to 644.141 shall, upon conviction, be punished by a fine of not more than ten thousand dollars, or by imprisonment for not more than six months, or by both.
14. **Severability.** The provisions of the permit are severable, and if any provision of the permit, or the application of any provision of the permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of the permit, shall not be affected thereby.

**STANDARD CONDITIONS FOR NPDES PERMITS**  
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**MISSOURI CLEAN WATER COMMISSION**  
**March 1, 2015**

**PART III – SLUDGE AND BIOSOLIDS FROM DOMESTIC AND INDUSTRIAL WASTEWATER  
TREATMENT FACILITIES**

**SECTION A – GENERAL REQUIREMENTS**

1. This permit pertains to sludge requirements under the Missouri Clean Water Law and regulation for domestic wastewater and industrial process wastewater. This permit also incorporates applicable federal sludge disposal requirements under 40 CFR 503 for domestic wastewater. The Environmental Protection Agency (EPA) has principal authority for permitting and enforcement of the federal sludge regulations under 40 CFR 503 for domestic wastewater. EPA has reviewed and accepted these standard sludge conditions. EPA may choose to issue a separate sludge addendum to this permit or a separate federal sludge permit at their discretion to further address the federal requirements.
2. These PART III Standard Conditions apply only to sludge and biosolids generated at domestic wastewater treatment facilities, including public owned treatment works (POTW), privately owned facilities and sludge or biosolids generated at industrial facilities.
3. Sludge and Biosolids Use and Disposal Practices:
  - a. The permittee is authorized to operate the sludge and biosolids treatment, storage, use, and disposal facilities listed in the facility description of this permit.
  - b. The permittee shall not exceed the design sludge volume listed in the facility description and shall not use sludge disposal methods that are not listed in the facility description, without prior approval of the permitting authority.
  - c. The permittee is authorized to operate the storage, treatment or generating sites listed in the Facility Description section of this permit.
4. Sludge Received from other Facilities:
  - a. Permittees may accept domestic wastewater sludge from other facilities including septic tank pumpings from residential sources as long as the design sludge volume is not exceeded and the treatment facility performance is not impaired.
  - b. The permittee shall obtain a signed statement from the sludge generator or hauler that certifies the type and source of the sludge
5. These permit requirements do not supersede nor remove liability for compliance with county and other local ordinances.
6. These permit requirements do not supersede nor remove liability for compliance with other environmental regulations such as odor emissions under the Missouri Air Pollution Control Law and regulations.
7. This permit may (after due process) be modified, or alternatively revoked and reissued, to comply with any applicable sludge disposal standard or limitation issued or approved under Section 405(d) of the Clean Water Act under Chapter 644 RSMo.
8. In addition to STANDARD CONDITIONS, the Department may include sludge limitations in the special conditions portion or other sections of a site specific permit.
9. Alternate Limits in the Site Specific Permit.

Where deemed appropriate, the Department may require an individual site specific permit in order to authorize alternate limitations:

  - a. A site specific permit must be obtained for each operating location, including application sites.
  - b. To request a site specific permit, an individual permit application, permit fee, and supporting documents shall be submitted for each operating location. This shall include a detailed sludge/biosolids management plan or engineering report.
10. Exceptions to these Standard Conditions may be authorized on a case-by-case basis by the Department, as follows:
  - a. The Department will prepare a permit modification and follow permit notice provisions as applicable under 10 CSR 20-6.020, 40 CFR 124.10, and 40 CFR 501.15(a)(2)(ix)(E). This includes notification of the owner of the property located adjacent to each land application site, where appropriate.
  - b. Exceptions cannot be granted where prohibited by the federal sludge regulations under 40 CFR 503.

## **SECTION B – DEFINITIONS**

1. Best Management Practices include agronomic loading rates, soil conservation practices and other site restrictions.
2. Biosolids means organic fertilizer or soil amendment produced by the treatment of domestic wastewater sludge.
3. Biosolids land application facility is a facility where biosolids are spread onto the land at agronomic rates for production of food or fiber. The facility includes any structures necessary to store the biosolids until soil, weather, and crop conditions are favorable for land application.
4. Class A biosolids means a material that has met the Class A pathogen reduction requirements or equivalent treatment by a Process to Further Reduce Pathogens (PFRP) in accordance with 40 CFR 503.
5. Class B biosolids means a material that has met the Class B pathogen reduction requirements or equivalent treatment by a Process to Significantly Reduce Pathogens (PFRP) in accordance with 40 CFR 503.
6. Domestic wastewater means wastewater originating from the sanitary conveniences of residences, commercial buildings, factories and institutions; or co-mingled sanitary and industrial wastewater processed by a (POTW) or a privately owned facility.
7. Industrial wastewater means any wastewater, also known as process water, not defined as domestic wastewater. Per 40 CFR Part 122, process water means any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product.
8. Mechanical treatment plants are wastewater treatment facilities that use mechanical devices to treat wastewater, including septic tanks, sand filters, extended aeration, activated sludge, contact stabilization, trickling filters, rotating biological discs, and other similar facilities. It does not include wastewater treatment lagoons and constructed wetlands for wastewater treatment.
9. Operating location as defined in 10 CSR 20-2.010 is all contiguous lands owned, operated or controlled by one (1) person or by two (2) or more persons jointly or as tenants in common.
10. Plant Available Nitrogen (PAN) is the nitrogen that will be available to plants during the growing seasons after biosolids application.
11. Public contact site is land with a high potential for contact by the public. This includes, but is not limited to, public parks, ball fields, cemeteries, plant nurseries, turf farms, and golf courses.
12. Sludge is the solid, semisolid, or liquid residue removed during the treatment of wastewater. Sludge includes septage removed from septic tanks or equivalent facilities. Sludge does not include carbon coal byproducts (CCBs)
13. Sludge lagoon is part of a mechanical wastewater treatment facility. A sludge lagoon is an earthen basin that receives sludge that has been removed from a wastewater treatment facility. It does not include a wastewater treatment lagoon or sludge treatment units that are not a part of a mechanical wastewater treatment facility.
14. Septage is the material pumped from residential septic tanks and similar treatment works (with a design population of less than 150 people). The standard for biosolids from septage is different from other sludges.

## **SECTION C – MECHANICAL WASTEWATER TREATMENT FACILITIES**

1. Sludge shall be routinely removed from wastewater treatment facilities and handled according to the permit facility description and sludge conditions of this permit.
2. The permittee shall operate the facility so that there is no sludge discharged to waters of the state.
3. Mechanical treatment plants shall have separate sludge storage compartments in accordance with 10 CSR 20, Chapter 8. Failure to remove sludge from these storage compartments on the required design schedule is a violation of this permit.

## **SECTION D – SLUDGE DISPOSED AT OTHER TREATMENT FACILITY OR CONTRACT HAULER**

1. This section applies to permittees that haul sludge to another treatment facility for disposal or use contract haulers to remove and dispose of sludge.
2. Permittees that use contract haulers are responsible for compliance with all the terms of this permit including final disposal, unless the hauler has a separate permit for sludge or biosolids disposal issued by the Department; or the hauler transports the sludge to another permitted treatment facility.
3. Haulers who land apply septage must obtain a state permit.
4. Testing of sludge, other than total solids content, is not required if sludge is hauled to a municipal wastewater treatment facility or other permitted wastewater treatment facility, unless it is required by the accepting facility.

## **SECTION E – INCINERATION OF SLUDGE**

1. Sludge incineration facilities shall comply with the requirements of 40 CFR 503 Subpart E; air pollution control regulations under 10 CSR 10; and solid waste management regulations under 10 CSR 80.
2. Permittee may be authorized under the facility description of this permit to store incineration ash in lagoons or ash ponds. This permit does not authorize the disposal of incineration ash. Incineration ash shall be disposed in accordance with 10 CSR 80; or if the ash is determined to be hazardous with 10 CSR 25.
3. In addition to normal sludge monitoring, incineration facilities shall report the following as part of the annual report, quantity of sludge incinerated, quantity of ash generated, quantity of ash stored, and ash used or disposal method, quantity, and location. Permittee shall also provide the name of the disposal facility and the applicable permit number.

## **SECTION F – SURFACE DISPOSAL SITES AND SLUDGE LAGOONS**

1. Surface disposal sites of domestic facilities shall comply with the requirements in 40 CFR 503 Subpart C; air pollution control regulations under 10 CSR 10; and solid waste management regulations under 10 CSR 80.
2. Sludge storage lagoons are temporary facilities and are not required to obtain a permit as a solid waste management facility under 10 CSR 80. In order to maintain sludge storage lagoons as storage facilities, accumulated sludge must be removed routinely, but not less than once every two years unless an alternate schedule is approved in the permit. The amount of sludge removed will be dependent on sludge generation and accumulation in the facility. Enough sludge must be removed to maintain adequate storage capacity in the facility.
  - a. In order to avoid damage to the lagoon seal during cleaning, the permittee may leave a layer of sludge on the bottom of the lagoon, upon prior approval of the Department; or
  - b. Permittee shall close the lagoon in accordance with Section H.

## **SECTION G – LAND APPLICATION**

1. The permittee shall not land apply sludge or biosolids unless land application is authorized in the facility description or the special conditions of the issued NPDES permit.
2. Land application sites within a 20 miles radius of the wastewater treatment facility are authorized under this permit when biosolids are applied for beneficial use in accordance with these standard conditions unless otherwise specified in a site specific permit. If the permittee's land application site is greater than a 20 mile radius of the wastewater treatment facility, approval must be granted from the Department.
3. Land application shall not adversely affect a threatened or endangered species or its designated critical habitat.
4. Biosolids shall not be applied unless authorized in this permit or exempted under 10 CSR 20, Chapter 6.
  - a. This permit does not authorize the land application of domestic sludge except for when sludge meets the definition of biosolids.
  - b. This permit authorizes "Class A or B" biosolids derived from domestic wastewater and/or process water sludge to be land applied onto grass land, crop land, timber or other similar agricultural or silviculture lands at rates suitable for beneficial use as organic fertilizer and soil conditioner.
5. Public Contact Sites:

Permittees who wish to apply Class A biosolids to public contact sites must obtain approval from the Department after two years of proper operation with acceptable testing documentation that shows the biosolids meet Class A criteria. A shorter length of testing will be allowed with prior approval from the Department. Authorization for land applications must be provided in the special conditions section of this permit or in a separate site specific permit.

  - a. After Class B biosolids have been land applied, public access must be restricted for 12 months.
  - b. Class B biosolids are only land applied to root crops, home gardens or vegetable crops whose edible parts will not be for human consumption.
6. Agricultural and Silvicultural Sites:

Septage – Based on Water Quality guide 422 (WQ422) published by the University of Missouri

  - a. Haulers that land apply septage must obtain a state permit
  - b. Do not apply more than 30,000 gallons of septage per acre per year.
  - c. Septage tanks are designed to retain sludge for one to three years which will allow for a larger reduction in pathogens and vectors, as compared to other mechanical type treatment facilities.
  - d. To meet Class B sludge requirements, maintain septage at 12 pH for at least thirty (30) minutes before land application. 50 pounds of hydrated lime shall be added to each 1,000 gallons of septage in order to meet pathogen and vector stabilization for septage biosolids applied to crops, pastures or timberland.
  - e. Lime is to be added to the pump truck and not directly to the septic tanks, as lime would harm the beneficial bacteria of the septic tank.

Biosolids - Based on Water Quality guide 423, 424, and 425 (WQ423, WQ424, WQ425) published by the University of Missouri;

- a. Biosolids shall be monitored to determine the quality for regulated pollutants
- b. The number of samples taken is directly related to the amount of sludge produced by the facility (See Section I of these Standard Conditions). Report as dry weight unless otherwise specified in the site specific permit. Samples should be taken only during land application periods. When necessary, it is permissible to mix biosolids with lower concentrations of biosolids as well as other suitable Department approved material to reach the maximum concentration of pollutants allowed.
- c. Table 1 gives the maximum concentration allowable to protect water quality standards

**TABLE 1**

Biosolids ceiling concentration <sup>1</sup>	
Pollutant	Milligrams per kilogram dry weight
Arsenic	75
Cadmium	85
Copper	4,300
Lead	840
Mercury	57
Molybdenum	75
Nickel	420
Selenium	100
Zinc	7,500

<sup>1</sup> Land application is not allowed if the sludge concentration exceeds the maximum limits for any of these pollutants

- d. The low metal concentration biosolids has reduced requirements because of its higher quality and can safely be applied for 100 years or longer at typical agronomic loading rates. (See Table 2)

**TABLE 2**

Biosolids Low Metal Concentration <sup>1</sup>	
Pollutant	Milligrams per kilogram dry weight
Arsenic	41
Cadmium	39
Copper	1,500
Lead	300
Mercury	17
Nickel	420
Selenium	36
Zinc	2,800

<sup>1</sup> You may apply low metal biosolids without tracking cumulative metal limits, provided the cumulative application of biosolids does not exceed 500 dry tons per acre.

- e. Each pollutant in Table 3 has an annual and a total cumulative loading limit, based on the allowable pounds per acre for various soil categories.

**TABLE 3**

Pollutant	CEC 15+		CEC 5 to 15		CEC 0 to 5	
	Annual	Total <sup>1</sup>	Annual	Total <sup>1</sup>	Annual	Total <sup>1</sup>
Arsenic	1.8	36.0	1.8	36.0	1.8	36.0
Cadmium	1.7	35.0	0.9	9.0	0.4	4.5
Copper	66.0	1,335.0	25.0	250.0	12.0	125.0
Lead	13.0	267.0	13.0	267.0	13.0	133.0
Mercury	0.7	15.0	0.7	15.0	0.7	15.0
Nickel	19.0	347.0	19.0	250.0	12.0	125.0
Selenium	4.5	89.0	4.5	44.0	1.6	16.0
Zinc	124.0	2,492.0	50.0	500.0	25.0	250.0

<sup>1</sup> Total cumulative loading limits for soils with equal or greater than 6.0 pH (salt based test) or 6.5 pH (water based test)

**TABLE 4** - Guidelines for land application of other trace substances <sup>1</sup>

Cumulative Loading	
Pollutant	Pounds per acre
Aluminum	4,000 <sup>2</sup>
Beryllium	100
Cobalt	50
Fluoride	800
Manganese	500
Silver	200
Tin	1,000
Dioxin	(10 ppt in soil) <sup>3</sup>
Other	<sup>4</sup>

<sup>1</sup> Design of land treatment systems for Industrial Waste, 1979. Michael Ray Overcash, North Carolina State University and Land Treatment of Municipal Wastewater, EPA 1981.)

<sup>2</sup> This applies for a soil with a pH between 6.0 and 7.0 (salt based test) or a pH between 6.5 to 7.5 (water based test). Case-by-case review is required for higher pH soils.

<sup>3</sup> Total Dioxin Toxicity Equivalents (TEQ) in soils, based on a risk assessment under 40 CFR 744, May 1998.

<sup>4</sup> Case by case review. Concentrations in sludge should not exceed the 95<sup>th</sup> percentile of the National Sewage Sludge Survey, EPA, January 2009.

Best Management Practices – Based on Water Quality guide 426 (WQ426) published by the University of Missouri

- a. Use best management practices when applying biosolids.
- b. Biosolids cannot discharge from the land application site
- c. Biosolid application is subject to the Missouri Department of Agriculture State Milk Board concerning grazing restrictions of lactating dairy cattle.
- d. Biosolid application must be in accordance with section 4 of the Endangered Species Act.
- e. Do not apply more than the agronomic rate of nitrogen needed.
- f. The applicator must document the Plant Available Nitrogen (PAN) loadings, available nitrogen in the soil, and crop removal when either of the following occurs: 1) When biosolids are greater than 50,000 mg/kg TN; or 2) When biosolids are land applied at an application rate greater than two dry tons per acre per year.
  - i. PAN can be determined as follows and is in accordance with WQ426  
(Nitrate + nitrite nitrogen) + (organic nitrogen x 0.2) + (ammonia nitrogen x volatilization factor<sup>1</sup>).  
<sup>1</sup>Volatilization factor is 0.7 for surface application and 1 for subsurface application.
- g. Buffer zones are as follows:
  - i. 300 feet of a water supply well, sinkhole, lake, pond, water supply reservoir or water supply intake in a stream;
  - ii. 300 feet of a losing stream, no discharge stream, stream stretches designated for whole body contact recreation, wild and scenic rivers, Ozark National Scenic Riverways or outstanding state resource waters as listed in the Water Quality Standards, 10 CSR 20-7.031;
  - iii. 150 feet if dwellings;
  - iv. 100 feet of wetlands or permanent flowing streams;
  - v. 50 feet of a property line or other waters of the state, including intermittent flowing streams.
- h. Slope limitation for application sites are as follows;
  - i. A slope 0 to 6 percent has no rate limitation
  - ii. Applied to a slope 7 to 12 percent, the applicator may apply biosolids when soil conservation practices are used to meet the minimum erosion levels
  - iii. Slopes > 12 percent, apply biosolids only when grass is vegetated and maintained with at least 80 percent ground cover at a rate of two dry tons per acre per year or less.
- i. No biosolids may be land applied in an area that it is reasonably certain that pollutants will be transported into waters of the state.
- j. Do not apply biosolids to sites with soil that is snow covered, frozen or saturated with liquid without prior approval by the Department.
- k. Biosolids / sludge applicators must keep detailed records up to five years.

## SECTION H – CLOSURE REQUIREMENTS

1. This section applies to all wastewater facilities (mechanical, industrial, and lagoons) and sludge or biosolids storage and treatment facilities and incineration ash ponds. It does not apply to land application sites.
2. Permittees of a domestic wastewater facility who plan to cease operation must obtain Department approval of a closure plan which addresses proper removal and disposal of all residues, including sludge, biosolids. Mechanical plants, sludge lagoons, ash ponds and other storage structures must obtain approval of a closure plan from the Department. Permittee must maintain this permit until the facility is closed in accordance with the approved closure plan per 10 CSR 20 – 6. 010 and 10 CSR 20 – 6.015.
3. Residuals that are left in place during closure of a lagoon or earthen structure or ash pond shall not exceed the agricultural loading rates as follows:
  - a. Residuals shall meet the monitoring and land application limits for agricultural rates as referenced in Section H of these standard conditions.
  - b. If a wastewater treatment lagoon has been in operation for 15 years or more without sludge removal, the sludge in the lagoon qualifies as a Class B biosolids with respect to pathogens due to anaerobic digestion, and testing for fecal coliform is not required. For other lagoons, testing for fecal coliform is required to show compliance with Class B biosolids limitations. In order to reach Class B biosolids requirements, fecal coliform must be less than 2,000,000 colony forming units or 2,000,000 most probable number. All fecal samples must be presented as geometric mean per gram.
  - c. The allowable nitrogen loading that may be left in the lagoon shall be based on the plant available nitrogen (PAN) loading. For a grass cover crop, the allowable PAN is 300 pounds/acre.
    - i. PAN can be determined as follows:
$$(\text{Nitrate} + \text{nitrite nitrogen}) + (\text{organic nitrogen} \times 0.2) + (\text{ammonia nitrogen} \times \text{volatilization factor}^1).$$

<sup>1</sup> Volatilization factor is 0.7 for surface application and 1 for subsurface application.
4. When closing a domestic wastewater treatment lagoon with a design treatment capacity equal or less than 150 persons, the residuals are considered “septage” under the similar treatment works definition. See Section B of these standard conditions. Under the septage category, residuals may be left in place as follows:
  - a. Testing for metals or fecal coliform is not required
  - b. If the wastewater treatment lagoon has been in use for less than 15 years, mix lime with the sludge at a rate of 50 pounds of hydrated lime per 1000 gallons (134 cubic feet) of sludge.
  - c. The amount of sludge that may be left in the lagoon shall be based on the plant available nitrogen (PAN) loading. 100 dry tons/acre of sludge may be left in the basin without testing for nitrogen. If 100 dry tons/acre or more will be left in the lagoon, test for nitrogen and determine the PAN using the calculation above. Allowable PAN loading is 300 pounds/acre.
5. Residuals left within the domestic lagoon shall be mixed with soil on at least a 1 to 1 ratio, the lagoon berm shall be demolished, and the site shall be graded and contain  $\geq 70\%$  vegetative density over 100% of the site so as to avoid ponding of storm water and provide adequate surface water drainage without creating erosion.
6. Lagoons and/or earthen structure and/or ash pond closure activities shall obtain a storm water permit for land disturbance activities that equal or exceed one acre in accordance with 10 CSR 20-6.200
7. When closing a mechanical wastewater and/or industrial process wastewater plant; all sludge must be cleaned out and disposed of in accordance with the Department approved closure plan before the permit for the facility can be terminated.
  - a. Land must be stabilized which includes any grading, alternate use or fate upon approval by the Department, remediation, or other work that exposes sediment to stormwater per 10 CSR 20-6.200. The site shall be graded and contain  $\geq 70\%$  vegetative density over 100% of the site, so as to avoid ponding of storm water and provide adequate surface water drainage without creating erosion.
  - b. Per 10 CSR 20-6.015(4)(B)6, Hazardous Waste shall not be land applied or disposed during industrial and mechanical plant closures unless in accordance with Missouri Hazardous Waste Management Law and Regulations under 10 CSR 25.
  - c. After demolition of the mechanical plant / industrial plant, the site must only contain clean fill defined in RSMo 260.200 (5) as uncontaminated soil, rock, sand, gravel, concrete, asphaltic concrete, cinderblocks, brick, minimal amounts of wood and metal, and inert solids as approved by rule or policy of the Department for fill or other beneficial use. Other solid wastes must be removed.
8. If sludge from the domestic lagoon or mechanical treatment plant exceeds agricultural rates under Section G and/or H, a landfill permit or solid waste disposal permit must be obtained if the permittee chooses to seek authorization for on-site sludge disposal under the Missouri Solid Waste Management Law and regulations per 10 CSR 80, and the permittee must comply with the surface disposal requirements under 40 CFR 503, Subpart C.

**SECTION I – MONITORING FREQUENCY**

1. At a minimum, sludge or biosolids shall be tested for volume and percent total solids on a frequency that will accurately represent sludge quantities produced and disposed. Please see the table below.

**TABLE 5**

Design Sludge Production (dry tons per year)	Monitoring Frequency (See Notes 1, 2 and 3)			
	Metals, Pathogens and Vectors	Nitrogen TKN <sup>1</sup>	Nitrogen PAN <sup>2</sup>	Priority Pollutants and TCLP <sup>3</sup>
0 to 100	1 per year	1 per year	1 per month	1 per year
101 to 200	biannual	biannual	1 per month	1 per year
201 to 1,000	quarterly	quarterly	1 per month	1 per year
1,001 to 10,000	1 per month	1 per month	1 per week	-- <sup>4</sup>
10,001 +	1 per week	1 per week	1 per day	-- <sup>4</sup>

<sup>1</sup> Test total Kjeldahl nitrogen, if biosolids application is 2 dry tons per acre per year or less.  
<sup>2</sup> Calculate plant available nitrogen (PAN) when either of the following occurs: 1) when biosolids are greater than 50,000 mg/kg TN; or 2) when biosolids are land applied at an application rate greater than two dry tons per acre per year.  
<sup>3</sup> Priority pollutants (40 CFR 122.21, Appendix D, Tables II and III) and toxicity characteristic leaching procedure (40 CFR 261.24) is required only for permit holders that must have a pre-treatment program.  
<sup>4</sup> One sample for each 1,000 dry tons of sludge.

Note 1: Total solids: A grab sample of sludge shall be tested one per day during land application periods for percent total solids. This data shall be used to calculate the dry tons of sludge applied per acre.  
 Note 2: Total Phosphorus: Total phosphorus and total potassium shall be tested at the same monitoring frequency as metals.  
 Note 3: Table 5 is not applicable for incineration

2. If you own a wastewater treatment lagoon or sludge lagoon that is cleaned out once a year or less, you may choose to sample only when the sludge is removed or the lagoon is closed. Test one composite sample for each 100 dry tons of sludge or biosolids removed from the lagoon during the year within the lagoon at closing. Composite sample must represent various areas at one-foot depth.
3. Additional testing may be required in the special conditions or other sections of the permit. Permittees receiving industrial wastewater may be required to conduct additional testing upon request from the Department.
4. At this time, the Department recommends monitoring requirements shall be performed in accordance with, “POTW Sludge Sampling and Analysis Guidance Document,” United States Environmental Protection Agency, August 1989, and the subsequent revisions.

**SECTION J – RECORD KEEPING AND REPORTING REQUIREMENTS**

1. The permittee shall maintain records on file at the facility for at least five years for the items listed in these standard conditions and any additional items in the Special Conditions section of this permit. This shall include dates when the sludge facility is checked for proper operation, records of maintenance and repairs and other relevant information.
2. Reporting period
  - a. By January 28<sup>th</sup> of each year, an annual report shall be submitted for the previous calendar year period for all mechanical wastewater treatment facilities, sludge lagoons, and sludge or biosolids disposal facilities.
  - b. Permittees with wastewater treatment lagoons shall submit the above annual report only when sludge or biosolids are removed from the lagoon during the report period or when the lagoon is closed.
3. Report Forms. The annual report shall be submitted on report forms provided by the Department or equivalent forms approved by the Department.
4. Reports shall be submitted as follows:

Major facilities (those serving 10,000 persons or 1 million gallons per day) shall report to both the Department and EPA. Other facilities need to report only to the Department. Reports shall be submitted to the addresses listed as follows:

DNR regional office listed in your permit  
 (see cover letter of permit)  
 ATTN: Sludge Coordinator

EPA Region VII  
 Water Compliance Branch (WACM)  
 Sludge Coordinator  
 11201 Renner Blvd.  
 Lenexa, KS 66219

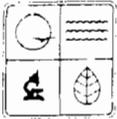
5. Annual report contents. The annual report shall include the following:
- a. Sludge and biosolids testing performed. Include a copy or summary of all test results, even if not required by the permit.
  - b. Sludge or biosolids quantity shall be reported as dry tons for quantity generated by the wastewater treatment facility, the quantity stored on site at the end of the year, and the quantity used or disposed.
  - c. Gallons and % solids data used to calculate the dry ton amounts.
  - d. Description of any unusual operating conditions.
  - e. Final disposal method, dates, and location, and person responsible for hauling and disposal.
    - i. This must include the name, address for the hauler and sludge facility. If hauled to a municipal wastewater treatment facility, sanitary landfill, or other approved treatment facility, give the name of that facility.
    - ii. Include a description of the type of hauling equipment used and the capacity in tons, gallons, or cubic feet.
  - f. Contract Hauler Activities:

If contract hauler, provide a copy of a signed contract from the contractor. Permittee shall require the contractor to supply information required under this permit for which the contractor is responsible. The permittee shall submit a signed statement from the contractor that he has complied with the standards contained in this permit, unless the contract hauler has a separate sludge or biosolids use permit.
  - g. Land Application Sites:
    - i. Report the location of each application site, the annual and cumulative dry tons/acre for each site, and the landowners name and address. The location for each spreading site shall be given as a legal description for nearest ¼, ¼, Section, Township, Range, and county, or UTM coordinates. The facility shall report PAN when either of the following occurs: 1) When biosolids are greater than 50,000 mg/kg TN; or 2) when biosolids are land applied at an application rate greater than two dry tons per acre per year.
    - ii. If the “Low Metals” criteria are exceeded, report the annual and cumulative pollutant loading rates in pounds per acre for each applicable pollutant, and report the percent of cumulative pollutant loading which has been reached at each site.
    - iii. Report the method used for compliance with pathogen and vector attraction requirements.
    - iv. Report soil test results for pH, CEC, and phosphorus. If none was tested during the year, report the last date when tested and results.

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AP-181018

11/22/08



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
WATER PROTECTION PROGRAM, WATER POLLUTION BRANCH  
FORM B - APPLICATION FOR CONSTRUCTION OR OPERATING PERMIT FOR  
FACILITIES WHICH RECEIVE PRIMARILY DOMESTIC WASTE (100,000 gallons per  
day) UNDER MISSOURI CLEAN WATER LAW

FOR AGENCY USE ONLY  
CHECK NUMBER  
DATE RECEIVED 5/28/13  
FEE SUBMITTED \$

NOTE ► PLEASE READ THE ACCOMPANYING INSTRUCTIONS BEFORE COMPLETING THIS FORM

4-28-14 O-J.S.

1. This application is for:  
 An operating permit and antidegradation review public notice.  
 A construction permit following an appropriate operating permit and antidegradation review public notice.  
 A construction permit and a concurrent operating permit and antidegradation review public notice.  
 A construction permit (submitted before Aug. 30, 2008 or antidegradation review is not required).  
 An operating permit for a new or unpermitted facility. Construction Permit # \_\_\_\_\_  
 An operating permit renewal: Permit #MO- 0117731 Expiration Date 03/06/2013  
 An operating permit modification: Permit #MO- \_\_\_\_\_ Reason: \_\_\_\_\_

1.1 Is this a Federal/State Funded Project?  YES  NO Funding Agency/Project # \_\_\_\_\_  
1.2 Is the appropriate fee included with the application (See instructions for appropriate fee)?  YES  NO

2. FACILITY (Outfall 001 of 004 )

NAME: A&A INC TELEPHONE WITH AREA CODE: (573) 346-5123  
ADDRESS (PHYSICAL): HWY 54& ROUTE A. CITY: LINN CREEK STATE: MO ZIP CODE: 65052  
2.1 LEGAL DESCRIPTION: NW 1/4, NE 1/4, 1/4, Sec. 08, T 38 N, R 16 W County: Camden  
2.2 UTM Coordinates Easting (X): \_\_\_\_\_ Northing (Y): \_\_\_\_\_  
For Universal Transverse Mercator (UTM). Zone 15 North referenced to North American Datum 1983 (NAD83)  
2.3 Name of receiving stream: Trib To Lake of the Ozarks

3. OWNER

NAME: ROBERT ARNALL E-MAIL ADDRESS: aasepticservice@hotmail.com TELEPHONE WITH AREA CODE: (573) 346-5123  
ADDRESS: PO BOX 589 CITY: LINN CREEK STATE: MO ZIP CODE: 65052  
3.1 Request review of draft permit prior to Public Notice?  YES  NO

4. CONTINUING AUTHORITY: Permanent organization which will serve as the continuing authority for the operation, maintenance and modernization of the facility.

NAME: SAME AS ABOVE TELEPHONE WITH AREA CODE: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_ CITY: \_\_\_\_\_ STATE: \_\_\_\_\_ ZIP CODE: \_\_\_\_\_

5. OPERATOR

NAME: ROBERT ARNALL CERTIFICATE NUMBER: 6999 TELEPHONE WITH AREA CODE: (573) 346-5123

6. FACILITY CONTACT

NAME: ROBERT ARNALL TITLE: PRESIDENT TELEPHONE WITH AREA CODE: (573) 346-5123

7.0 ADDITIONAL FACILITY INFORMATION Same AS Permit

7.1 Description of facilities (Attach additional sheet if required). Attach a 1" = 2,000' scale U.S. Geological Survey topographic map showing location of all outfalls and downstream landowners. (See Item 9.)  
7.2 Facility SIC code: 7699, Discharge SIC code: \_\_\_\_\_, Facility NAICS code: \_\_\_\_\_, Discharge NAICS code: \_\_\_\_\_  
7.3 Number of people presently connected or population equivalent (P.E.): \_\_\_\_\_ Design P.E.: \_\_\_\_\_ NA  
Number of units presently connected: Homes \_\_\_\_\_ Trailers \_\_\_\_\_ Apartments \_\_\_\_\_ Other NA  
Design flow for this outfall: \_\_\_\_\_ Total design flow for the facility: \_\_\_\_\_ Actual flow for this outfall: \_\_\_\_\_  
Commercial Establishment: Daily number of employees working \_\_\_\_\_ Daily number of customers/guests \_\_\_\_\_  
7.4 Length of pipe in the sewer collection system? \_\_\_\_\_ feet/miles (Please denote which unit is appropriate.)  
7.5 Does any bypassing occur in the collection system or at the treatment facility?  Yes  No (If yes, attach explanation.)  
7.6 Does significant infiltration occur in the collection system?  Yes  No (If yes, attach explanation and proposed repair)  
7.7 Is industrial waste discharged to the facility identified in Item 2?  Yes  No (If yes, see instructions.)  
7.8 Will the discharge be continuous through the year?  Yes  No  
a Discharge will occur during the following months: JULY OR AUGUST  
b How many days of the week will the discharge occur? \_\_\_\_\_  
7.9 Is wastewater land applied?  Yes  No (If yes, attach Form I)  
7.10 Will chlorine be added to the effluent?  Yes  No  
a If chlorine is added, what is the resulting residual? \_\_\_\_\_ µg/l (micrograms per liter)  
7.11 Does this facility discharge to a losing stream or sinkhole?  Yes  No  
7.12 Attach a flow chart showing all influents, treatment facilities and outfalls.  
7.13 Has a waste load allocation study been completed for this facility?  Yes  No  
7.14 List all permit violations, including effluent limit exceedances in the last five years. Attach a separate sheet if necessary.  
If none, write none. NONE

**8. SLUDGE HANDLING, USE AND DISPOSAL**

8.1 Is the sludge a hazardous waste as defined by 10 CSR 25?  Yes  No

8.2 Sludge Production, including sludge received from others: <sup>460</sup> Design Dry Tons/Year \_\_\_\_\_ Actual Dry Tons/Year \_\_\_\_\_

8.3 Capacity of sludge holding structures:  
 Sludge storage provided: <sup>2,327,456</sup> cubic feet; \_\_\_\_\_ days of storage; \_\_\_\_\_ average percent solids of sludge;  
 No sludge storage is provided.

8.4 Type of Storage:  Holding tank  Building  
 Basin  Other (Please describe) \_\_\_\_\_  
 Concrete Pad

8.5 Sludge Treatment:  
 Anaerobic Digester  Lagoon  Composting  
 Storage Tank  Aerobic Digester  Other (Attach description)  
 Lime Stabilization  Air or Heat Drying

8.6 Sludge Use or Disposal:  
 Land Application  Surface Disposal (Sludge Disposal Lagoon, Sludge held for more than two years)  
 Contract Hauler  Incineration  
 Hauled to Another Treatment Facility  Sludge Retained in Wastewater treatment lagoon  
 Solid Waste Landfill  Other \_\_\_\_\_ Attach explanation sheet.

8.7 PERSON RESPONSIBLE FOR HAULING SLUDGE TO DISPOSAL FACILITY  
 By Applicant  By Others (complete below)

NAME  
ROBERT ARNALL

ADDRESS 52 ASHLAND AVE	CITY LINN CREEK	STATE MO	ZIP CODE 65052
CONTACT PERSON ROBERT ARNALL	TELEPHONE WITH AREA CODE 573-346-5123	PERMIT NO MO-0117731	

8.8 SLUDGE USE OR DISPOSAL FACILITY  
 By Applicant  By Others (Please complete below.)

NAME  
A-A INC

ADDRESS PO BOX 589	CITY Linn creek	STATE MO	ZIP CODE 65052
CONTACT PERSON Robert Arnall	TELEPHONE WITH AREA CODE 573-346-5123	PERMIT NO MO-0117731	

8.9 Does the sludge or biosolids disposal comply with federal sludge regulations under 40 CFR 503?  
 Yes  No (Please attach explanation)

**9. DOWNSTREAM LANDOWNER (S). ATTACH ADDITIONAL SHEETS AS NECESSARY. SEE INSTRUCTIONS.**

NAME  
Nicky Williams

ADDRESS A ROAD	CITY Linn creek	STATE MO	ZIP CODE 65052
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**10. DRINKING WATER SUPPLY INFORMATION**

10.1 WHAT IS THE SOURCE OF YOUR DRINKING WATER SUPPLY:  
 A. Public supply (municipal or water district water) NA  
 If public, please give name of the public supply NA  
 B. Private well NA  
 C. Surface water (lake, pond or stream) NA

10.2 Does your drinking water source serve at least 25 people at least 60 days per year (not necessarily consecutive days)?  
 Yes  No NA

10.3 Does your supply serve housing which is occupied year round by the same people? This does not include housing which is occupied seasonally?  Yes  No NA

11. I certify that I am familiar with the information contained in the application, that to the best of my knowledge and belief such information is true, complete and accurate, and if granted this permit, I agree to abide by the Missouri Clean Water Law and all rules, regulations, orders and decisions, subject to any legitimate appeal available to applicant under the Missouri Clean Water Law.

NAME AND OFFICIAL TITLE (TYPE OR PRINT) ROBERT ARNALL	TELEPHONE WITH AREA CODE 573-346-5123
SIGNATURE Robert Arnall	DATE SIGNED 10-12-12

Missouri Department of Natural Resources

Division of Water

ANGELA FALLS, Director

STATE OF MISSOURI  
DEPARTMENT OF NATURAL RESOURCES

Jefferson City, Missouri • State Parks • Parks • Director

[www.dnr.mo.gov](http://www.dnr.mo.gov)

**MAY 23 2014**

Mr. Robert Arnall  
A&A, Inc.  
P.O. Box 589  
Linn Creek, MO 65052

Dear Mr. Arnall:

The Missouri Department of Natural Resources' Water Protection Program received your application for renewal of Missouri State Operating Permit #MO-0117731 on April 28, 2014. Your application has been assigned to me for review. Applications are processed in the order they are received. If you would like to meet in person or via conference call to discuss your application, please contact me by phone or e-mail.

Phone: (573) 751-1419  
E-mail: [angela.falls@dnr.mo.gov](mailto:angela.falls@dnr.mo.gov)  
Fax: (573) 522-9920

Unfortunately, your application is being returned to you. Please fill out Section 3.21 "Land Application rates per acre" of Form I for each land application field. The Department requires actual land application rates to properly process your application for permit renewal. Once a complete application is received, the review will continue.

If you have any questions about this letter or the anticipated timing of the process, or would like to schedule a meeting to discuss the permit, please contact me by phone or e-mail above, or by mail at the Missouri Department of Natural Resources, Water Protection Program, Operating Permits Section, P.O. Box 176, Jefferson City, MO 65102-0176.

Sincerely,

WATER PROTECTION PROGRAM



Angela Falls  
Domestic Wastewater Unit

AF/pc

Enclosure

*Celebrating 40 years of taking care of Missouri's natural resources. To learn more about the Missouri Department of Natural Resources visit [dnr.mo.gov](http://dnr.mo.gov).*



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MISSOURI DEPARTMENT OF NATURAL RESOURCES  
WATER PROTECTION PROGRAM, WATER POLLUTION BRANCH  
SERVING THE APPROPRIATE REGIONAL OFFICE  
**FORM I - PERMIT APPLICATION FOR CONSTRUCTION AND  
OPERATION OF WASTEWATER IRRIGATION SYSTEMS**

FOR AGENCY USE ONLY  
PERMIT NUMBER  
MO-  
DATE RECEIVED  
2/10/14 ESB

INSTRUCTIONS: The following forms must be submitted with Form I: FORM B for domestic wastewater. Submit FORMS E and G for land disturbance permit if construction areas total one acre or more.

1.00 FACILITY INFORMATION

1.10 Facility Name  
A + A Inc

1.20 Application for:  
 Construction Permit (attach Engineering report, Plans and Specifications per 10 CSR 20-8)  
 Operating Permit: (if no construction permit, attach engineering documents, Date Irrigation System Began Operation)  
 Operating Permit Renewal

1.30 Type of wastewater to be irrigated:  Domestic  Municipal  State/National Park  Seasonal business  
 Municipal with Pretreatment Program or Significant Industrial Users  Other (explain)  
SIC Codes (list all that apply, in order of importance) 7699

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

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

1.60 List the Facility outfalls which will be applicable to the irrigation system from outfalls listed on Form B  
Outfall Nos. 001 002

2.00 STORAGE BASINS

2.10 Number of storage basins: 2 Type of basin:  Steel  Concrete  Fiberglass  Earthen  Earthen with membrane liner

2.20 Storage basin dimensions at inside top of berm (feet). Report freeboard as feet from top of berm to emergency spillway or overflow pipe. (Complete Attachment A Profile Sketch.)  
Basin #1: Length 134 Width 120 Depth 4 Freeboard 2 Berm Width 4 Slope 4:1  
Basin #2: Length 300 Width 137 Depth 6 Freeboard 2 Berm Width 4 Slope 4:1

2.30 Storage Basin operating levels (report as feet below emergency overflow level)  
Basin #1: Maximum water level 2 ft. Minimum operating water level 4 ft.  
Basin #2: Maximum water level 2 ft. Minimum operating water level 6 ft.

2.40 Depth of sludge in lagoons and storage basins: \_\_\_\_\_ ft.  
Total sludge stored: 460 dry tons \_\_\_\_\_ cu ft.

3.00 LAND APPLICATION SYSTEM Same as Permit

3.10 Number of irrigation sites: \_\_\_\_\_ Total Acres 193.8 Maximum field slopes 12  
Location 1-4 1-4 1-4 Sec. T R County Acres  
Location 1-4 1-4 1-4 Sec. - R County Acres  
Attach extra sheets as necessary.

3.11 Type of vegetation:  Grass hay  Pasture  Timber  Row crops  Other (describe) Lespedeza

3.20 Wastewater flow (dry weather) gallons/day  
 Average annual NA Seasonal \_\_\_\_\_ Off-season \_\_\_\_\_  
 Months of seasonal flow \_\_\_\_\_  
 Human Population Equivalent \_\_\_\_\_

3.21 Land Application rate per acre (design flow including 1 in 10 year storm water flows) Sludge land Applied once a yr. 20 min per acre  
 Design \_\_\_\_\_ inches/year \_\_\_\_\_ inches/hour \_\_\_\_\_ inches/day \_\_\_\_\_ inches/week  
 Actual \_\_\_\_\_ inches/year \_\_\_\_\_ inches/hour \_\_\_\_\_ inches/day \_\_\_\_\_ inches/week  
 Total Irrigation per year (gallons): \_\_\_\_\_ Design \_\_\_\_\_ Actual \_\_\_\_\_  
 Actual months used for irrigation (circle): Jan Feb Mar Apr May Jun Jul Aug Sept Oct Nov Dec

3.22 Land Application Rate is based on:  
 Nutrient Management Plan (N&P)  
 Hydraulic Loading  
 Other (describe) \_\_\_\_\_

3.23 Equipment type:  Sprinklers  Gated pipe  Center pivot  Traveling gun  Other (describe) Truck  
 Equipment Flow Capacity \_\_\_\_\_ Gallons per hour \_\_\_\_\_ Total hours of operation per year \_\_\_\_\_

3.24 Public Access Restrictions for irrigation sites:  Site is Fenced  Wastewater disinfection prior to irrigation  
 Other (describe) \_\_\_\_\_

3.25 Separation distance (in feet) from the outside edge of the wetted irrigation area to down gradient features:  
 Permanent flowing stream: 300 ft Losing Stream \_\_\_\_\_ Intermittent (wet weather) stream: 300 ft Lake or pond \_\_\_\_\_  
 Property boundary \_\_\_\_\_ Dwellings \_\_\_\_\_ Water supply well \_\_\_\_\_ Other (describe) \_\_\_\_\_

3.26 SOILS INFORMATION Use information from the County Soil Survey, NRCS, or professional soil scientist  
 Soil Series Name \_\_\_\_\_ Depth to bedrock \_\_\_\_\_ Feet \_\_\_\_\_ Depth to water table \_\_\_\_\_ Feet \_\_\_\_\_  
 Soil Infiltration rate (inches/hour) (in./hr) for most restrictive layer within the following soil depth ranges:  
 In./hr for 0-12 inch soil depth \_\_\_\_\_ In./hr for 12-24 inch soil depth \_\_\_\_\_ In./hr for 24-60 inch soil depth \_\_\_\_\_

3.27 Include a recent Geologic Report by the Department's Geological Survey and Resource Assessment Division with your construction permit

3.28 Attach a current copy of the Operation and Maintenance (O&M) Plan for the irrigation system. Date of O&M Plan July 1996

3.29 Attach a site map showing topography, storage basins, irrigation sites, property boundary, streams, wells, roads, dwellings and other pertinent features.

3.30 Attach a facility sketch showing treatment units, storage basins, pipelines, irrigation equipment, application sites and other features.

**4.00 CERTIFICATION**  
 I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that based on my inquiry of those individuals immediately responsible for obtaining this information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment.

CONSULTING ENGINEER - Name and Official Title \_\_\_\_\_ (TYPE OR PRINT) \_\_\_\_\_  
 \_\_\_\_\_ (TYPE OR PRINT) \_\_\_\_\_

SIGNATURE \_\_\_\_\_ DATE (MM/DD/YY) \_\_\_\_\_

OWNER OR AUTHORIZED REPRESENTATIVE - Name and Official Title \_\_\_\_\_ (TYPE OR PRINT) \_\_\_\_\_  
 \_\_\_\_\_ (TYPE OR PRINT) \_\_\_\_\_

SIGNATURE Shelly Arnall Secretary 573-280-4810  
 \_\_\_\_\_ DATE (MM/DD/YY) \_\_\_\_\_

SIGNATURE [Signature] \_\_\_\_\_ DATE (MM/DD/YY) 10-12-12





FACILITY NAME: \_\_\_\_\_

Permit Number #MO-0117731

County Camden County

Month: Aug

Year: 2013

LAND APPLICATION OPERATIONAL CONTROL PARAMETERS

Outfall #00 <u>2</u>	Lagoon Freeboard	Rainfall	Irrigation Period	Volume Irrigated	Application Area	Application Rate
DATE	Feet below overflow Once Month	Inches Daily	Hours Daily	Gallons Daily	Acres Daily	Inches/Acre Daily
1		0	5 min	3000	1/4	
2		.51				
3		0				
4		1.				
5		0				
6		5.32				
7		2.75				
8		.04				
9		1.25				
10		0	we used outfall			
11		0	#005			
12	Cell 1 / Cell 2 2' / 5'	0				
13		0	10 min	6600	1/2	
14		0	10 min	7200	1/2	
15		0	20 min	13200	1	
16		0	20 min	13200	1	
17		0	30 min	19800	1 1/2	
18		0	10 min	6000	1/2	
19		0	0	0	0	
20		0	15 min	9000	3/4	
21		0	30 min	19800	1 1/2	
22		0	15 min	10200	3/4	
23		0	15 min	9000	3/4	
24		0	30 min	20400	1 1/2	
25		0	0	0	0	
26		0	10 min	6600	1/2	
27		0	25 min	15600	1 1/4	
28		0	40 min	26400	2	
29		0	35 min	22800	1 3/4	
30		0	0	0	0	
31		0	15 min	10200	3/4	
Total:		11.07	335 min	219000	16 1/4	



Permit Number #MO-0117731  
 County Camden County

Page 2 of 2  
 Month 11 to 12 5-8  
 Year (4-digit) 2013

LAND APPLICATION OPERATIONAL CONTROL PARAMETERS

Outfall #00 <u>1</u>	Lagoon Freeboard	Rainfall	Irrigation Period	Volume Irrigated	Application Area	Application Rate
DATE	Feet below overflow Once Month	Inches Daily	Hours Daily	Gallons Daily	Acres Daily	Inches Acre Daily
1		0	0	0	0	
2		0	0	0	0	
3		0	5 min	3000	1/4	
4		0	0	0	0	
5		0	5 min	3600	1/4	
6		0	10 min	6600	1/2	
7		0	25 min	15600	1 1/4	
8		0	30 min	19800	1 1/2	
9		0	10 min	7200	1/2	
10		0	15 min	9600	3/4	
11		0	20 min	12000	1	
12		0	30 min	19800	1 1/2	
13		0	15 min	9000	3/4	
14	Cell 1 / Cell 2 5' / 8'	0	10 min	7200	1/2	
15		0	10 min	7200	1/2	
16		0	0	0	0	
17		0	5 min	3600	1/4	
18		.50	25 min	16200	1 1/4	
19		0	30 min	19800	1 1/2	
20		0				
21		0				
22		0				
23		0				
24		0				
25		0				
26		0				
27		0				
28		0				
29		0				
30		0				
31						
Total		0.51	245 min	159600	12 1/4	