

In the Matter of the Application of Union Electric)
Company d/b/a Ameren Missouri for Permission and)
Approval and a Certificate of Public)
Convenience and Necessity Authorizing)
it to Construct, Install, Own,) File No. EA-2012-0281
Operate, Maintain, and Otherwise Control and Manage)
A Utility Waste Landfill and Related Facilities at its)
Labadie Energy Center.)

Respectfully submitted,

/s/ James B. Lowery

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**ATTORNEYS FOR
UNION ELECTRIC COMPANY
d/b/a AMEREN MISSOURI**

CERTIFICATE OF SERVICE

I certify that a true and correct copy of the foregoing was served via e-mail to counsel for the parties of record on this 24th day of February, 2017:

/s/ James B. Lowery _____
James B. Lowery



Jeremiah W. (Jay) Nixon, Governor

Sara Parker Pauley, Director

DEPARTMENT OF NATURAL RESOURCES

dnr.mo.gov

Labadie Landfill
MORA04758, Franklin County
Ameren Missouri
1901 Chouteau Ave
St. Louis, MO 63166 - 6149

Enclosed please find your Missouri State Operating Permit which authorizes land disturbance activities for MORA04758. This permit has been issued as requested and is based upon application information entered in the Missouri Department of Natural Resources' (Department) ePermitting program. This permit contains several requirements and should be thoroughly read and understood. Please reference General Operating Permit number MORA04758 for future correspondences with the Department with regards to this land disturbance activity.

Acquisition of the permit does not imply that the requirements or ordinances of other local, state or federal permits are replaced or superseded. This permit does not authorize land disturbance activity in jurisdictional waters of the United States as defined by the Army Corps of Engineers (Corps), unless the permittee has obtained the required Clean Water Act Section 404 Permit. Not all land disturbance projects will require a 404 permit; however, if a 404 permit is required, land disturbance activities are not to be conducted in the jurisdictional area of the project until the 404 permit has been obtained. Information for the Missouri Corps offices can be found in the general operating permit's Fact Sheet.

Please contact the applicable Regional Office if you would like to schedule an Environmental Assistance Visit (EAV). Regional Office contact information is contained with the documents issued with the operating permit. During the visit, Department staff will review the requirements of the permit and answer questions pertaining to Land Disturbance activities.

Sincerely,

Water Protection Program

A handwritten signature in cursive script, reading "John Madras", is positioned above the printed name and title.

John Madras
Director

JM

EXHIBIT A

STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES

MISSOURI CLEAN WATER COMMISSION



MISSOURI STATE OPERATING PERMIT

General 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, 92nd Congress) as amended,

Permit No.: MORA04758

Owner: Ameren Missouri
Address: 1901 Chouteau Ave
St. Louis, MO 63166 - 6149

Continuing Authority: Ameren Missouri
1901 Chouteau Ave
St. Louis, MO 63166 - 6149

Facility Name: Labadie Landfill
Facility Address: 226 Labadie Power Plant Road
LABADIE, MO 63055

Legal Description: Sec. 17, T 44N, R 02E, Franklin County
UTM Coordinates: 689598.984 / 4270486.111
Receiving Stream: Tributary to Iman Branch (U)
First Classified Stream - ID#: Fiddle Cr. (C) 1698.00
USGS# and Sub Watershed#: 10300200 - 0603

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

FACILITY DESCRIPTION All Outfalls SIC # 1629

All Outfalls - Construction or land disturbance activity (e.g., clearing, grubbing, excavating, grading and other activities that result in the destruction of the root zone and/or land disturbance activity that is reasonably certain to cause pollution to waters of the state).

This permit authorizes only wastewater, including storm water, 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 RSMo Section 644.051.6 and 621.250, 10 CSR 20-6.020, and 10 CSR 20-1.020.

04/16/2014

Issue date

Sara Parker Pauley, Director
Department of Natural Resources

02/07/2017

Expiration date

John Madras
Director, Water Protection Program

A. APPLICABILITY

1. This general permit authorizes the discharge of stormwater and certain non-stormwater discharges from land disturbance sites that disturb one or more acres or disturb less than one acre when part of a larger common plan of development or sale that will disturb a cumulative total of one or more acres over the life of the project. This general permit also authorizes the discharge of stormwater and certain non-stormwater discharges from smaller projects where the Missouri Department of Natural Resources (Department) has exercised its discretion to require a permit [10 CSR 20-6.200 (1)(B)].

A Missouri State Operating Permit that specifically identifies the project must be issued before any site vegetation is removed or the site disturbed.

Any site owner/operator subject to these requirements for stormwater discharges and who disturbs land prior to permit issuance from the Department is in violation of both State and Federal Laws.

The legal owner of the property or the holder of an easement on the property, and operator on which the site is located are responsible for compliance with this permit.

2. This permit authorizes non-stormwater discharges from the following activities provided that these discharges are addressed in the permittee's specific Stormwater Pollution Prevention Plan (SWPPP) required by this general permit:
 - a. De-watering activities if there are no contaminants other than sediment present in the discharge, and the discharge is treated as specified in Requirements, Section C.3.m. of this permit;
 - b. Flushing water hydrants and potable water lines;
 - c. Water only (i.e., without detergents or additives) rinsing of streets and buildings; and
 - d. Site watering to establish vegetation.
3. This general permit does not authorize the placement of fill materials in flood plains, the obstruction of stream flow, directing stormwaters across private property not owned or operated by the permittee, or changing the channel of a defined drainage course. This general permit addresses only the quality of the stormwater runoff and the minimization of off-site migration of sediments and other water contaminants.
4. This general permit does not authorize any discharge to waters of the state of sewage or pollutants including but not limited to:
 - a. Any hazardous material, oil, lubricant, solid waste or other non-naturally occurring substance from the site, including fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance;
 - b. Soaps or solvents used in vehicle and equipment washing;
 - c. Hazardous substances or petroleum products from an on-site spill or handling and disposal practices;
 - d. Wash and/or rinse waters from concrete mixing equipment including ready mix concrete trucks, unless managed by an appropriate control. Any such pollutants must be adequately treated and addressed in the SWPPP, and cannot be discharged to waters of the state;
 - e. Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds and other construction materials;
 - f. Wastewater generated from air pollution control equipment or the containment of scrubber water in lined ponds;
 - g. Domestic wastewaters, including gray waters; or
 - h. Industrial stormwater runoff.

A. APPLICABILITY (continued)

5. The Department reserves the right to revoke or deny coverage under this general permit to applicants for stormwater discharges from land disturbance activities at sites that have contaminated soils that will be disturbed by the land disturbance activity or where such materials are brought to the site to use as fill or borrow. A site-specific permit may be required to cover such activities.
6. Discharges shall not cause violations of the Water Quality Standards 10 CSR 20-7.0.031(3). If at any time the Department determines that the quality of waters of the state may be better protected by requiring the owner/operator of the permitted site to apply for a site-specific permit, the Department may require any person to obtain a site-specific operating permit [10 CSR 20-6.010(13)(C)].

The Department may require the permittee to apply for and obtain a site-specific or different general permit if:

- a. The permittee is not in compliance with the conditions of this general permit;
- b. The discharge no longer qualifies for this general permit due to changed site conditions and/or regulations; or
- c. Information becomes available that indicates water quality standards have been or may be violated.

The permittee will be notified in writing of the requirement to apply for a site-specific permit or a different general permit. When a site-specific permit or different general permit is issued to the authorized permittee, the applicability of this general permit to the permittee is automatically terminated upon the effective date of the site specific or different general permit.

7. Any owner/operator authorized by a general permit may request to be excluded from the coverage of the general permit and apply for a site-specific permit [10 CSR 20-6.010(13)(D)].
8. This permit does not authorize land disturbance activity in jurisdictional waters of the United States as defined by the Army Corps of Engineers, unless the permittee has obtained the required 404/401 permit. Land disturbance activities may not begin in the affected portions of the site until the required 404/401 permits have been obtained.
9. This permit does not supersede compliance with the Historic Preservation Act or the Endangered Species Act.
10. This permit does not supersede any requirement for obtaining project approval under an established local authority.
11. This permit is not transferable to other owners or operators.

B. EXEMPTIONS FROM PERMIT REQUIREMENTS

1. Facilities that discharge all stormwater runoff directly to a combined sewer system are exempt from stormwater permit requirements.
2. Land disturbance activity as described in [10 CSR 20-6.200(1)(B)] and [10 CSR 20-6.010(1)(B)] where water quality standards are not exceeded.
3. Linear, strip, or ribbon construction (as described in [10 CSR 20-6.200(1)(B)8]) where water quality standards are not exceeded.
4. Sites that disturb less than one acre of total land area as described in [10 CSR20-6.200(1)(B)7], that are not part of a common plan or sale and that do not cause any violations of water quality standards, and are not otherwise designated by the Department as requiring a permit.
5. Agricultural stormwater discharges and irrigation return flows as described in [10CSR 20-6.200(1)(B)6].

C. REQUIREMENTS

These requirements do not supersede nor remove any requirement to comply with county or other local ordinances [10 CSR20-6.010(14)(D)]:

1. This permit is to ensure the design, the installation and the maintenance of effective erosion controls and sediment controls to minimize the discharge of pollutants. At minimum, such controls must be designed, installed and maintained to:
 - a. Control stormwater volume and velocity within the site to minimize soil erosion;
 - b. Control stormwater discharges, including both peak flow rates and total stormwater volume, to minimize erosion at outlets and to minimize downstream channel and stream bank erosion;
 - c. Minimize the amount of soil exposed during construction activity;
 - d. Minimize the disturbance of steep slopes;
 - e. Minimize sediment discharges from the site. The design, installation and maintenance of erosion and sediment controls must address factors such as the amount, frequency, intensity and duration of precipitation, the nature of resulting stormwater runoff, and soil characteristics, including the range of soil particle size expected to be present on the site.;
 - f. Provide and maintain natural buffers around surface waters, direct stormwater to vegetated areas to increase sediment removal and maximize stormwater infiltration, unless infeasible; and
 - g. Minimize soil compaction and, unless infeasible, preserve topsoil.
2. The primary requirement of this permit is the development and implementation of a SWPPP which incorporates site specific practices to best minimize the soil exposure, soil erosion, and the discharge of pollutants. The permittee shall fully implement the provisions of the SWPPP required under this part as a condition of this general permit throughout the term of the land disturbance project. **The SWPPP must be developed prior to issuance of the permit and must be specific to the land disturbance activities at the site.** A permit must be issued before any disturbance of root zone of the existing vegetation or other land disturbance activities may begin. A copy of the SWPPP must be available on-site when land disturbance operations are in progress, or other operational activities that may affect the maintenance or integrity of the Best Management Practices (BMP) structures and made available made available as specified under Section F. Records of this permit.

C. REQUIREMENTS (continued)

The SWPPP must:

- a. List and describe all outfalls;
- b. Incorporate required practices identified below;
- c. Incorporate erosion control practices specific to site conditions;
- d. Provide for maintenance and adherence to the plan;
- e. Discuss whether or not a 404/401 Permit is required for the project; and
- f. Name the person responsible for inspection, operation and maintenance of BMPs.

The purpose of the SWPPP is to ensure; the design, implementation, management and maintenance of BMPs in order to prevent sediment and other pollutants in stormwater discharges associated with the land disturbance activities; compliance with the Missouri Water Quality Standards; and compliance with the terms and conditions of this general permit.

The permittee shall select, install, use, operate and maintain appropriate BMPs for the permitted site. The following manuals are acceptable resources for the selection of appropriate BMPs. *Developing Your Stormwater Pollution Prevention Plan: A Guide for Construction Sites*, (Document number EPA 833-R-06-004) published by the United States Environmental Protection Agency (USEPA) in May 2007. This manual as well as other information, including examples of construction SWPPPs, is available at the USEPA internet site at <http://cfpub1.epa.gov/npdes/stormwater/swppp.cfm>; and

The latest version of *Protecting Water Quality: A field guide to erosion, sediment and stormwater best management practices for development sites in Missouri*, published by the Missouri Department of Natural Resources. This manual is available on the Department's internet site at: <http://www.dnr.mo.gov/env/wpp/wpcp-guide.htm>.

The permittee is not limited to the use of these guidance manuals. Other guidance publications may be used to select appropriate BMPs. However, all BMPs should be described and justified in the SWPPP.

3. SWPPP Requirements: The following information and practices shall be provided for in the SWPPP:
 - a. Nature of the Construction Activity: The SWPPP briefly must describe the nature of the construction activity, including:
 - 1) The function of the project (e.g., low density residential, shopping mall, highway, etc.);
 - 2) The intended sequence and timing of activities that disturb the soils at the site;
 - 3) Estimates of the total area expected to be disturbed by excavation, grading, or other construction activities including off-site borrow and fill areas; and
 - 4) A general map (e.g., United States Geological Survey quadrangle map, a portion of a city or county map, or other map) with enough detail to identify the location of the construction site and waters of the United States within one mile of the site.

C. REQUIREMENTS (continued)

- b. Site Map: The SWPPP must contain a legible site map showing the site boundaries and outfalls and identifying:
 - 1) Direction(s) of stormwater flow and approximate slopes anticipated after grading activities;
 - 2) Areas of soil disturbance and areas that will not be disturbed (or a statement that all areas of the site will be disturbed unless otherwise noted);
 - 3) Location of major structural and non-structural BMPs identified in the SWPPP;
 - 4) Locations where stabilization practices are expected to occur;
 - 5) Locations of off-site material, waste, borrow or equipment storage areas;
 - 6) Locations of all waters of the United States (including wetlands);
 - 7) Locations where stormwater discharges to a surface water; and
 - 8) Areas where final stabilization has been accomplished and no further construction-phase permit requirements apply.
- c. Site Description: In order to identify the site, the SWPPP shall include facility and outfall information. The SWPPP shall have sufficient information to be of practical use to contractors and site construction workers to guide the installation and maintenance of BMPs.
- d. Effluent Limits: The permittee must select control measurements (e.g., BMPs, controls, practices, etc.) to meet effluent limits found in Section E.1. of this permit. All control measures must be properly selected, installed and maintained in accordance with any relevant manufacturer specifications and good engineering practices. The permittee must implement the control measures from commencement of the construction activity until final stabilization is complete unless the exception noted in Section C.3.i. of this permit applies.
- e. Selection of Temporary and Permanent Non-Structural BMPs: The permittee shall select appropriate non-structural BMPs for use at the site and list them in the SWPPP. The SWPPP shall require existing vegetation to be preserved where practical. For surface waters located on or immediately adjacent to the site, the permittee must provide at minimum a 25-foot buffer of undisturbed natural vegetation between the disturbed portions of the site and the surface water unless infeasible or where there is a more stringent local requirement. The time period for disturbed areas to be without vegetative cover is to be minimized to the maximum extent practicable.

Examples of non-structural BMPs which the permittee should consider specifying in the SWPPP include preservation of trees and mature vegetation, protection of existing vegetation for use as buffer strips, mulching, sodding, temporary seeding, final seeding, geotextiles, stabilization of disturbed areas, preserving existing stream channels as overflow areas when channel straightening or shortening is allowed, soil stabilizing emulsions and tackifiers, mulch tackifiers, stabilized site entrances/exits and other appropriate BMPs.
- f. Selection of Temporary and Permanent Structural BMPs: The permittee shall select appropriate structural BMPs for use at the site and list them in the SWPPP. Examples of structural BMPs that the permittee should consider specifying in the SWPPP include diverting flows from undisturbed areas away from disturbed areas, silt (filter fabric and/or straw bale) fences, earthen diversion dikes, drainage swales, sediment traps, rock check dams, subsurface drains (to gather or transport water for surface discharge elsewhere), pipe slope drains (to carry concentrated flow down a slope face), level spreaders (to distribute concentrated flow into sheet flow), storm drain inlet protection and outlet protection, reinforced soil retaining systems, gabions, temporary or permanent sediment basins and other appropriate BMPs.

C. REQUIREMENTS (continued)

- g. Description of BMPs: The SWPPP shall include a description of both structural and non-structural BMPs that will be used at the site.

The SWPPP shall provide the following general information for each BMP which will be used one or more times at the site:

- 1) Physical description of the BMP;
- 2) Site and physical conditions that must be met for effective use of the BMP;
- 3) BMP installation/construction procedures, including typical drawings; and
- 4) Operation and maintenance procedures for the BMP.

The SWPPP shall provide the following information for each specific instance where a BMP is to be installed:

- 1) Whether the BMP is temporary or permanent;
- 2) Where, in relation to other site features, the BMP is to be located;
- 3) When the BMP will be installed in relation to each phase of the land disturbance procedures to complete the project; and
- 4) Site conditions that must be met before removal of the BMP if the BMP is not a permanent BMP.

- h. Disturbed Areas: Slopes for disturbed areas must be defined in the SWPPP. A site map or maps defining the sloped areas for all phases of the project must be included in the SWPPP. Stabilization must be initiated immediately and completed within seven (7) calendar days where soil disturbing activities have temporarily ceased on any portion of the site and will not resume for a period exceeding fourteen (14) calendar days the permittee shall construct BMPs to establish interim stabilization. Interim stabilization shall consist of well established and maintained BMPs that are reasonably certain to protect waters of the state from sediment pollution over an extended period of time. This may require adding more BMPs to an area than is normally used during daily operations. These BMPs may include a combination of sediment basins, check dams, sediment fences and mulch. The types of BMPs used must be suited to the area disturbed, taking into account the number of acres exposed and the steepness of the slopes. If the slope of the area is greater than 3:1 (three feet horizontal to one foot vertical) or if the slope is greater than 3% and greater than 150 feet in length, then the permittee shall establish interim stabilization within seven days of ceasing operations on that part of the site. Final stabilization of disturbed areas must be initiated immediately and completed within seven (7) calendar days whenever any clearing, grading, excavating or other earth disturbing activities have permanently ceased on any portion of the site. Allowances to the seven (7) day completion period for temporary and final stabilization may be made due to weather and equipment malfunctions. The use of allowances shall be documented in the SWPPP.
- i. Installation: The permittee shall ensure the BMPs are properly installed at the locations and relative times specified in the SWPPP. Peripheral or border BMPs to control runoff from disturbed areas shall be installed or marked for preservation before general site clearing is started. Note that this requirement does not apply to earth disturbances related to initial site clearing and establishing entry, exit and access of the site, which may require that stormwater controls be installed immediately after the earth disturbance. Stormwater discharges from disturbed areas which leave the site shall pass through an appropriate impediment to sediment movement such as a sedimentation basin, sediment traps and silt fences prior to leaving the land disturbance site. A drainage course change shall be clearly marked on a site map and described in the SWPPP. The location of all BMPs must be indicated on a site map, included in the SWPPP.

C. REQUIREMENTS (continued)

- j. Sedimentation Basins: The SWPPP shall include a sedimentation basin for each drainage area with ten or more acres disturbed at one time. The sedimentation basin shall be sized to contain a volume of at least 3,600 cubic feet per each disturbed acre draining thereto. Accumulated sediment shall be removed from the basin when basin is 50% full. When discharging from basins and impoundments, utilize outlet structures that withdraw water from the surface unless infeasible. Discharges from the basin shall not cause scouring of the banks or bottom of the receiving stream. The SWPPP shall require the basin be maintained until final stabilization of the disturbed area served by the basin.

Where use of a sediment basin is impractical, the SWPPP shall evaluate and specify other similarly effective BMPs to be employed to control erosion and sediment delivery. These similarly effective BMPs shall be selected from appropriate BMP guidance documents authorized by this permit. The BMPs must provide equivalent water quality protection to achieve compliance with this permit. The SWPPP shall require both temporary and permanent sedimentation basins to have a stabilized spillway to minimize the potential for erosion of the spillway or basin embankment.

- k. Pollution Prevention Measures: The SWPPP shall include BMPs for pollution prevention measures. At minimum such measures must be designed, installed, implemented and maintained to:
- 1) Minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other wash waters. Wash waters must be treated in a sediment basin or alternative control that provides equivalent or better treatment prior to discharge;
 - 2) Minimize the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste, and other materials present on the site to precipitation and to stormwater; and
 - 3) Minimize the discharge of pollutants from spills and leaks and implement chemical spill and leak prevention and response procedures. Included but not limited to the installation of containment berms and use of drip pans at petroleum product and liquid storage tanks and containers.
- l. Roadways: Where applicable, upon installation of or connection to roadways, all efforts should be made to prevent the deposition of earth and sediment onto roadways through the use of proper BMPs. Stormwater inlets susceptible to receiving sediment from the permitted land disturbance site shall have curb inlet protection. Where stormwater will flow off the end of where a roadway terminates, a sediment catching BMP such as gravel berm or silt fence shall be provided. Roadways and curb inlets shall be cleaned weekly or following a rainfall that generates a run-off. Where practicable, construction entrance BMP controls shall be used to prevent sediment trackout.
- m. Dewatering: Discharges from dewatering activities, including discharges from dewatering of trenches and excavations, are prohibited unless managed by appropriate controls. The SWPPP shall include a description of any anticipated dewatering methods including the anticipated volume of water to be discharged and the anticipated maximum flow discharged from these dewatering activities expressed in gallons per minute. Maximum flow may be stated in the SWPPP as an estimate based on the type and capacity of equipment being used for dewatering. The SWPPP shall call for specific BMPs designed to treat water pumped from trenches and excavations and in no case shall this water be pumped off-site without being treated by the specified BMPs. When discharging from basins and impoundments utilize outlet structures that withdraw water from the surface, unless infeasible.

C. REQUIREMENTS (continued)

4. Good housekeeping practices shall be maintained at all times to keep waste from entering waters of the state. Solid and hazardous waste management include providing trash containers and regular site clean up for proper disposal of solid waste such as scrap building material, product/material shipping waste, food containers and cups, and providing containers and proper disposal of waste paints, solvents and cleaning compounds. The provision of portable toilets for proper disposal of sanitary sewage and the storage of construction materials should be kept away from drainage courses and low areas.
5. All fueling facilities present shall at all times adhere to applicable federal and state regulations concerning underground storage, above ground storage and dispensers.
6. Hazardous wastes that are transported, stored, or used for maintenance, cleaning, or repair shall be managed according to the provisions of the Missouri Hazardous Waste Laws and Regulations.
7. All paint, solvents, petroleum products, petroleum waste products and storage containers such as drums, cans, or cartons shall be stored according to BMPs. The materials exposed to precipitation shall be stored in watertight, structurally sound, closed containers. All containers shall be inspected for leaks or spillage during the once per week inspection of BMPs.
8. Amending/Updating the SWPPP: The permittee shall amend and update the SWPPP as appropriate during the term of the land disturbance activity. The permittee shall amend the SWPPP at a minimum whenever the:
 - a. Design, operation, or maintenance of BMPs is changed;
 - b. Design of the construction project is changed that could significantly affect the quality of the stormwater discharges;
 - c. Permittee's inspections indicate deficiencies in the SWPPP or any BMP;
 - d. Department notifies the permittee in writing of deficiencies in the SWPPP;
 - e. SWPPP is determined to be ineffective in minimizing or controlling erosion and sedimentation (e.g., there is visual evidence of excessive site erosion or excessive sediment deposits in streams or lakes);
 - f. Settleable Solids from a stormwater outfall exceed 2.5 ml/L; and
 - g. Department determines violations of water quality standards may occur or have occurred.
9. An individual shall be designated by the permittee as responsible for environmental matters. The individual responsible for environmental matters shall have a thorough and demonstrable knowledge of the site's SWPPP and sediment and erosion control practices in general. The individual responsible for environmental matters or a designated inspector knowledgeable in erosion, sediment and stormwater control principles shall inspect all structures that function to prevent pollution of waters of the state. These inspections shall be conducted in accordance with C.10 of these requirements.

C. REQUIREMENTS (continued)

10. Site Inspections Reports: The permittee (or a representative of the permittee) shall conduct regularly scheduled inspections at least once per seven calendar days. These inspections shall be conducted by a qualified person, one who is responsible for environmental matters at the site, or a person trained by and directly supervised by the person responsible for environmental matters at the site. For disturbed areas that have not been finally stabilized, all installed BMPs and other pollution control measures shall be inspected for proper installation, operation and maintenance. All stormwater outfalls shall be inspected for evidence of erosion or sediment deposition. When practicable the receiving stream shall also be inspected for 50 feet downstream of the outfall. Any structural or maintenance problems shall be noted in an inspection report and corrected within seven calendar days of the inspection. If a rainfall causes stormwater runoff to occur on-site, the BMPs must be inspected within a reasonable time period after the rainfall event has ceased. These inspections must occur within 48 hours after the rain event has ceased during a normal work day and within 72 hours if the rain event ceases during a non-work day such as a weekend or holiday.

The SWPPP must explain how the person responsible for erosion control will be notified when stormwater runoff occurs. If weather conditions prevent correction of BMPs within 7 calendar days, the reasons for the delay must be documented (including pictures) and there must be a narrative explaining why the work cannot be accomplished within the 7 day time period. The documentation must be filed with the regular inspection reports. The permittee shall correct the problem as soon as weather conditions allow. Areas on-site that have been finally stabilized must be inspected at least once per month.

A log of each inspection and copy of the inspection report shall be kept on-site. The inspection report shall be signed by the permittee or by the person performing the inspection if duly authorized to do so. The inspection report is to include the following minimum information:

- a. Inspector's name;
 - b. Date of inspection;
 - c. Observations relative to the effectiveness of the BMPs;
 - d. Actions taken or necessary to correct the observed problem; and
 - e. Listing of areas where land disturbance operations have permanently or temporarily stopped.
11. Proper Operation and Maintenance: The permittee shall at all times maintain all pollution control measures and systems in good order to achieve compliance with the terms of this general permit.
12. Notification to All Contractors: The permittee shall be responsible for notifying each contractor or entity (including utility crews and city employees or their agents) who will perform work at the site of the existence of the SWPPP and what action or precautions shall be taken while on-site to minimize the potential for erosion and the potential for damaging any BMP. The permittee is responsible for any damage a subcontractor may do to established BMPs and any subsequent water quality violation resulting from the damage.
13. Public Notification: The permittee shall post a copy of the public notification sign described by the Department at the main entrance to the site. The public notification sign must be visible from the public road that provides access to the site's main entrance. An alternate location is acceptable provided the public can see it and it is noted in the SWPPP. The public notification sign must remain posted at the site until the permit has been terminated.

D. OTHER DISCHARGES

1. Hazardous Substance and Oil Spill Reporting: Refer to Section B, #14 of Part I of the Standard Conditions that accompany this permit.
2. Removed substances: Refer to Section B, #6 of Part I of the Standard Conditions that accompany this permit.
3. Change in discharge: In the event soil contamination or hazardous substances are discovered at the site during land disturbance activities, the permittee shall notify the Department's regional office by telephone as soon as practicable but no later than 24 hours after discovery. The permittee must also notify the Department's regional office in writing no later than 14 calendar days after discovery.

E. SAMPLING REQUIREMENTS AND EFFLUENT LIMITATIONS

1. The effluent limitation for Settleable Solids from a stormwater outfall discharging shall not exceed 2.5 ml/L per Standard Method 2540 F, except immediately following the local 2-year, 24-hour storm event. The Settleable Solids limit is not enforceable during or greater than the local 2-year, 24-hour storm event.
2. The Department may require sampling and reporting as a result of illegal discharges, compliance issues, complaint investigations, or other such evidence of contamination from activities at the site. If such an action is needed, the Department will specify in writing any sampling requirements, including such information as location, extent and parameters.

F. RECORDS

1. The permittee shall retain copies of this general permit, the SWPPP and all amendments for the site named in the State Operating Permit, results of any monitoring and analysis and all site inspection records required by this general permit. The records shall be accessible during normal business hours. The records shall be retained for a period of at least three years from the date of the Letter of Termination.
2. The permittee shall provide a copy of the SWPPP to the Department, USEPA, or any local agency or government representative if they request a copy in the performance of their official duties.
3. The permittee shall provide a copy of the SWPPP to those who are responsible for installation, operation, or maintenance of any BMP. The permittee, their representative, and/or the contractor(s) responsible for installation, operation and maintenance of the BMPs shall have a current copy of the SWPPP with them when on the project site.

G. LAND PURCHASE AND CHANGE OF OWNERSHIP

1. Federal and Missouri stormwater regulations [10 CSR 20-6.200] require a stormwater permit and erosion control measures for all land disturbances of one or more acres. These regulations also require a permit for less than one acre lots if the lot is part of a common plan of development or sale where that plan is at least one acre in size. If the permittee sells less than one acre of the permitted site to an entity for, commercial, industrial, or residential use, (unless sold to an individual for the purpose of building his/her own private residence and in accordance with G.3 of this section) this land remains a part of the common sale and regulated by this permit. Therefore, the permittee is still responsible for erosion control on the sold property until termination of the permit.
2. If the permittee sells one or more acres of the permitted site to an entity, the new owner of the property must obtain a land disturbance permit for the purchased property. The original permittee must amend the SWPPP to show that the property (one acre or more) has been sold and therefore no longer under the original permit jurisdiction.
3. If the permittee has stabilized the less than one acre lot which is part of a larger common plan of development and the lot is sold to an individual for purposes of building his/her own private residence, the permittee is no longer responsible for erosion control on the lot.
4. Property of any size which is part of a larger common plan of development where the property has been stabilized and the original permit terminated will require application of a new land disturbance permit for any future land disturbance activity.
5. If the entire tract is sold to a single entity, then this permit shall be terminated when the new owner obtains a new land disturbance permit for the site.

H. TERMINATION

This permit may be terminated when the project is stabilized. The project is considered to be stabilized when perennial vegetation, pavement, buildings, or structures using permanent materials cover all areas that have been disturbed. With respect to areas that have been vegetated, vegetation cover shall be at least 70% plant density over 100% of the site. In order to terminate the permit, the permittee shall notify the Department.

The Cover Page (Certificate Page) of the Master General Permit for Land Disturbance specifies the “effective date” and the “expiration date” of the Master General Permit. The “issued date” along with the “expiration date” will appear on the State Operating Permit issued to the applicant. This permit does not continue administratively beyond the expiration date.

If the project or development completion date will be after the expiration date of this general permit, then the permittee must reapply to the Department for a new permit. The applicant must file a request to the Department for a new permit 180 days prior to the expiration of this permit.

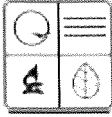
If the permittee has not terminated the permit and the permit expires, and the permittee has not applied for a new permit the permittee will be considered “operating without a permit” if the site does not meet the requirements for termination.

I. MODIFICATION, REVOCATION, AND REOPENING

1. The U.S. Environmental Protection Agency (EPA) has proposed stormwater requirements that may direct the State to reopen this permit. The EPA is proposing to change its construction general permit (CGP) with more prescriptive requirements and design standards for buffers to prevent stormwater runoff, increased monitoring requirements and more frequent inspections. While the EPA permit is only effective in areas where EPA has permitting authority these requirements are likely to act as a template, setting a baseline for the EPA approval of state plans for permitting sites.
2. If at any time the Department determines that the quality of waters of the state may be better protected by reopening this permit, or revoking this permit and requiring the owner/operator of the permitted site to apply for a site-specific permit, the Department may revoke a general permit and require any person to obtain such an operating permit as authorized by 10 CSR 20-6.010(13) and 10 CSR 20-6.200(1)(B).
3. If this permit is reopened, modified or revoked pursuant to this Section, the permittee retains all rights under Chapter 536 and 644 Revised Statutes of Missouri upon the Department's reissuance of the permit as well as all other forms of administrative, judicial, and equitable relief available under law.

J. DUTY TO COMPLY

The permittee must comply with all conditions of this general permit. Any noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.



**STANDARD CONDITIONS FOR NPDES PERMITS
ISSUED BY
THE MISSOURI DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION**

Revised
October 1, 1980

**PART I - GENERAL CONDITIONS
SECTION A - MONITORING AND REPORTING**

1. **Representative Sampling**
 - a. Samples and measurements taken as required herein shall be representative of the nature and volume, respectively, of the monitored discharge. All samples shall be taken at the outfall(s), and unless specified, before the effluent joins or is diluted by any other body of water or substance.
 - b. Monitoring results shall be recorded and reported on forms provided by the Department, postmarked no later than the 28th day of the month following the completed reporting period. Signed copies of these, and all other reports required herein, shall be submitted to the respective Department Regional Office, the Regional Office address is indicated in the cover letter transmitting the permit.
2. **Schedule of Compliance**

No later than fourteen (14) calendar days following each date identified in the "Schedule of Compliance", the permittee shall submit to the respective Department Regional Office as required therein, either a report of progress or, in the case of specific actions being required by identified dates, a written notice of compliance or noncompliance. In the latter case, the notice shall include the cause of noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirements, or if there are no more scheduled requirements, when such noncompliance will be corrected. The Regional Office address is indicated in the cover letter transmitting the permit.
3. **Definitions**

Definitions as set forth in the Missouri Clean Water Law and Missouri Clean Water Commission Definition Regulation 10 CSR 20-2.010 shall apply to terms used herein.
4. **Test Procedures**

Test procedures for the analysis of pollutant shall be in accordance with the Missouri Clean Water Commission Effluent Regulation 10 CSR 20-7015.
5. **Recording of Results**
 - a. For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:
 - (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. 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 this permit 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 both.
 - c. Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the Director in the permit.
6. **Additional Monitoring by Permittee**

If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit, using approved analytical methods as specified above, the results of such monitoring shall be included in the calculation and reporting of the values required in the Monitoring Report Form. Such increased frequency shall also be indicated.

7. **Records Retention**

The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recording for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this 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.

SECTION B - MANAGEMENT REQUIREMENTS

1. **Change in Discharge**

- a. All discharges authorized herein shall be consistent with the terms and conditions of this permit. The discharge of any pollutant not authorized by this permit or any pollutant identified in this permit more frequently than or at a level in excess of that authorized shall constitute a violation of the permit.
- b. Any facility expansions, production increases, or process modifications which will result in new, different, or increased discharges of pollutants shall be reported by submission of a new NPDES application at least sixty (60) days before each such changes, or, if they will not violate the effluent limitations specified in the permit, by notice to the Department at least thirty (30) days before such changes.

2. **Noncompliance Notification**

- a. If, for any reason, the permittee does not comply with or will be unable to comply with any daily maximum effluent limitation specified in this permit, the permittee shall provide the Department with the following information, in writing within five (5) days of becoming aware of such conditions:
 - (i) a description of the discharge and cause of noncompliance; and
 - (ii) the period of noncompliance, including exact dates and times or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate and prevent recurrence of the noncomplying discharge.
- b. Twenty-four hour reporting. The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally with 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided with five (5) days of the time the permittee becomes aware of the circumstances. The Department may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.

3. **Facilities Operation**

Permittees shall operate and maintain facilities to comply with the Missouri Clean Water Law and applicable permit conditions. Operators or supervisors of operations at publicly owned or publicly regulated wastewater treatment facilities shall be certified in accordance with 10 CSR 209.020(2) and any other applicable law or regulation. Operators of other wastewater treatment facilities, water contaminant source or point sources, shall, upon request by the Department, demonstrate that wastewater treatment equipment and facilities are effectively operated and maintained by competent personnel.

4. **Adverse Impact**

The permittee shall take all necessary steps to minimize any adverse impact to waters of the state resulting from noncompliance with any effluent limitations specified in this permit or set forth in the Missouri Clean Water Law and Regulations (hereinafter the Law and Regulations), including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge.

5. **Bypassing**

- a. Any bypass or shut down of a wastewater treatment facility and tributary sewer system or any part of such a facility and sewer system that results in a violation of permit limits or conditions is prohibited except:
- (i) where unavoidable to prevent loss of life, personal injury, or severe property damages; and
 - (ii) where unavoidable excessive storm drainage or runoff would catastrophically damage any facilities or processes necessary for compliance with the effluent limitations and conditions of this permit;
 - (iii) where maintenance is necessary to ensure efficient operation and alternative measures have been taken to maintain effluent quality during the period of maintenance.
- b. The permittee shall notify the Department in writing of all bypasses or shut down that result in a violation of permit limits or conditions. This section does not excuse any person from liability, unless such relief is otherwise provided by the statute.

6. **Removed Substances**

Solids, sludges, filter backwash, or any other pollutants removed in the course of treatment or control of wastewaters shall be disposed of in a manner such as to prevent any pollutants from entering waters of the state unless permitted by the Law, and a permanent record of the date and time, volume and methods of removal and disposal of such substances shall be maintained by the permittee.

7. **Power Failures**

In order to maintain compliance with the effluent limitations and other provisions of this permit, the permittee shall either:

- a. in accordance with the "Schedule of Compliance", provide an alternative power source sufficient to operate the wastewater control facilities; or,
- b. if such alternative power source is not in existence, and no date for its implementation appears in the Compliance Schedule, halt or otherwise control production and all discharges upon the reduction, loss, or failure of the primary source of power to the wastewater control facilities.

8. **Right of Entry**

For the purpose of inspecting, monitoring, or sampling the point source, water contaminant source, or wastewater treatment facility for compliance with the Clean Water Law and these regulations, authorized representatives of the Department, shall be allowed by the permittee, upon presentation of credentials and at reasonable times:

- a. to enter upon permittee's premises in which a point source, water contaminant source, or wastewater treatment facility is located or in which any records are required to be kept under terms and conditions of the permit;
- b. to have access to, or copy, any records required to be kept under terms and conditions of the permit;
- c. to inspect any monitoring equipment or method required in the permit;
- d. to inspect any collection, treatment, or discharge facility covered under the permit; and
- e. to sample any wastewater at any point in the collection system or treatment process.

9. **Permits Transferable**

- a. Subject to Section (3) of 10 CSR 20-6-010 an operating permit may be transferred upon submission to the Department of an application to transfer signed by a new owner. Until such time as the permit is officially transferred, the original permittee remains responsible for complying with the terms and conditions of the existing permit.
- b. The Department, within thirty (30) days of receipt of the application shall notify the new permittee of its intent to revoke and reissue or transfer the permit.

10. **Availability of Reports**

Except for data determined to be confidential under Section 308 of the Act, and the Law and Missouri Clean Water Commission Regulation for Public Participation, Hearings and Notice to Governmental Agencies 10 CSR 20-6-020, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Department. As required by statute, effluent data shall not be considered confidential. Knowingly making any false statement on any such report shall be subject to the imposition of criminal penalties as provided in Section 204.076 of

the Law.

11. **Permit Modification**

- 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) violation 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 and 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.

12. **Permit Modification - Less Stringent Requirements**

If any permit provisions are based on legal requirements which are lessened or removed, and should no other basis exist for such permit provisions, the permit shall be modified after notice and opportunity for a hearing.

13. **Civil and Criminal Liability**

Except as authorized by statute and provided in permit conditions on "Bypassing" (Standard Condition B-5) and "Power Failures" (Standard Condition B-7) nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance.

14. **Oil and Hazardous Substance Liability**

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Section 311 of the Act, and the Law and Regulations. Oil and hazardous materials discharges must be reported in compliance with the requirements of the Federal Clean Water Act.

15. **State Laws**

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state statute or regulations.

16. **Property Rights**

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, no does it authorize any injury to private property or any invasion of personal rights, nor any infringement of or violation of federal, state or local laws or regulations.

17. **Duty to Reapply**

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for a new permit 180 days prior to expiration of this permit.

18. **Toxic Pollutants**

If a toxic effluent standard, prohibition, or schedule of compliance is established, under Section 307(a) of the Federal Clean Water Act for a toxic pollutant in the discharge of permittee's facility and such standard is more stringent than the limitations in the permit, then the more stringent standard, prohibition, or schedule shall be incorporated into the permit as one of its conditions, upon notice to the permittee.

19. **Signatory Requirement**

All reports, or information submitted to the Director shall be signed (see 40 CFR-122.6).

20. **Rights Not Affected**

Nothing in this permit shall affect the permittee's right to appeal or seek a variance from applicable laws or regulations as allowed by law.

21. **Severability**

The provisions of this permit are severable, and if any provisions of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

State of Missouri
Missouri Department of Natural Resources

FACT SHEET

MORA00000 LAND DISTURBANCE GENERAL PERMIT
2012 Reissue

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.

This Factsheet is for a Major ☐, Minor ☐, Industrial Facility ☐; Variance ☐; Master General Permit ☒; General Permit Covered Facility ☐; and/or permit with widespread public interest ☐.

PART I. NPDES Stormwater General Permit

The vast majority of discharges associated with construction activity are covered under NPDES general permits. General permits cover a group of similar dischargers under one permit. General permits simplify the process for dischargers to obtain authorization to discharge, provide permit requirements for any discharger that applies for coverage, and reduce the administrative workload for NPDES permitting authorities.

This General Permit is for regulating stormwater discharge at land disturbance construction sites in Missouri. This program requires the owner or operator of a construction site disturbing land of one acre or greater, or less than one acre but part of a larger common plan of development, to obtain this permit prior to conducting any land disturbance activity.

PART II. The Need for Stormwater Regulations at Construction Sites

Stormwater runoff is a major source of urban water pollution endangering humans by polluting the water resources used for drinking, household purposes, recreation and fishing. Stormwater discharges often contain pollutants in amounts that could reduce water quality. The primary pollutants of concern from construction activities are silt and sediment, but other pollutants such as oils and grease, vehicle fluids, and debris are present as well.

Stormwater runoff from construction activities can have a significant impact on water quality. As stormwater flows over a construction site, it can pick up pollutants like sediment, debris, and chemicals and transport these to a nearby storm sewer system or directly to a river, lake, or coastal water. Polluted stormwater runoff can harm or kill fish and other wildlife. Sedimentation can destroy aquatic habitat, and high volumes of runoff can cause stream bank erosion. Debris can clog waterways and potentially reach the ocean where it can kill marine wildlife and impact habitat.

Construction activities increase pollutant loads in runoff. The volume and rate of runoff are typically increased, providing a larger capacity to transport pollutants to rivers and lakes. In addition, the removal of vegetation leaves bare soil which is much more vulnerable to erosion, resulting in sediment moving into receiving waters.

Additional stormwater information and requirements including application for a land disturbance permit can be found at <http://dnr.mo.gov/env/wpp/stormwater/sw-land-disturb-permits.htm>.

PART III. Key Components of this Permit

The key components of this permit are effluent limitations that require the permittee to minimize discharge of pollutants in stormwater by using control measures that reflect best engineering practices based on federal and state government best professional judgment. Dischargers must minimize their discharge of pollutants in stormwater using appropriate erosion and sediment controls and control measures for other pollutants such as litter, construction debris, and construction chemicals that could be exposed to stormwater and other wastewater. This general permit requires dischargers to develop a stormwater pollution prevention plan (SWPPP) to document the steps they will take to comply with the terms, conditions and effluent limitations of the permit. Note that the SWPPP is not an effluent limitation, nor does it include effluent limitations. Information including examples of a SWPPP can be found at the following <http://cfpub.epa.gov/npdes/stormwater/swppp.cfm#model>. These examples should be used for educational or training purposes only. Construction site SWPPPs must be developed following the requirements of Missouri's land disturbance permit and describe the specific conditions of the site and plans for development.

PART IV. Additional Information for the Purpose of Permit Clarity

Applicability

- **“Industrial stormwater run-off”** are activities that take place at industrial facilities, such as material handling and storage, that are often exposed to the weather. As runoff from rain or snowmelt comes into contact with these activities, it can pick up pollutants and transport them to a nearby storm sewer system or directly to a river, lake, or coastal water. To minimize the impact of stormwater discharges from industrial facilities, the NPDES program includes an industrial stormwater permitting component that covers 10 categories of industrial activity that require authorization under an NPDES industrial stormwater permit for stormwater discharges. More information on industrial permit requirements can be found at <http://dnr.mo.gov/env/wpp/stormwater/sw-industrial-permits.htm>.
- A **“larger common plan of development or sale”** is a contiguous area where multiple separate and distinct construction activities may be taking place at different times on different schedules under one plan. For example, if a developer buys a 20-acre lot and builds roads, installs pipes, and runs electricity with the intention of constructing homes or other structures sometime in the future, this would be considered a larger common plan of development or sale. If the land is parceled off or sold, and construction occurs on plots that are less than one acre by separate, independent builders, this activity still would be subject to stormwater permitting requirements if the smaller plots were included on the original site plan. Other than the less than one acre property sold to the individual for construction of their personal residence, property of any size which is part of a larger common plan of development where the property has been stabilized and the original permit terminated will require application of a new land disturbance permit for any future land disturbance activity. The larger common plan of development or sale also applies to other types of land development such as industrial parks or well fields. A permit is required if one or more acres of land will be disturbed, regardless of the size of any of the individually-owned or developed sites.
- Documentation of Permit Eligibility Related to **Endangered Species**: The SWPPP must include documentation supporting a determination of permit eligibility with regard to Endangered Species.

For more information please visit the following links:

For information on understand what critical habitat is, please go to the following link, www.fs.fed.us/r9/wildlife/tes/docs/esa_references/critical_habitat.pdf.

For information on listed species by State & County, please go to the following link, <http://cfpub.epa.gov/npdes/stormwater/esa.cfm>.

The Missouri Department of Conservation's internet site for the Natural Heritage Review may be very helpful and can be found at the following link, <http://mdcgis.mdc.mo.gov/heritage/newheritage/heritage.htm>. Also helpful are the local offices of the U.S. Fish and Wildlife Service (FWS) and the National Marine Fisheries Service (NMFS), these centers often maintain lists of federally listed endangered or threatened species on their internet sites.

If there are listed species in the county or township, check to see if critical habitat has been designated and if that area overlaps or is near the project area. Critical habitat designations and associated requirements may also be found at 50 CFR Parts 17 and 226. For additional information, use the mapview tool at <http://criticalhabitat.fws.gov/crithab/> to find data specific to your state and county.

- A Clean Water Act **Section 404 Department of the Army Permit** and the Department's Clean Water Act Section 401 Water Quality Certification (certification) are needed when placing material or fill into jurisdictional waters of the United States. Any impacts to jurisdictional streams or wetlands would require an application to be sent to the appropriate US Army Corps of Engineers District Regulatory Branch. A map of the district offices and contact information can be located online at: <http://www.dnr.mo.gov/env/wpp/401/corps-map3.gif>). Not all land disturbance projects will require a 404 permit; however, if a 404 permit is required, land disturbance activities are not to be conducted in the jurisdictional area of the project until the 404 permit has been obtained. A discussion on the need for a 404/401 permit as a requirement of this permit and is to be included in the SWPPP.

Exemptions from Permit Requirements

- The USEPA defines **linear projects** to include the construction of roads, bridges, conduits, substructures, pipelines, sewer lines, towers, poles, cables, wires, connectors, switching, regulating and transforming equipment and associated ancillary facilities in a long, narrow area. Missouri regulation 10 CSR 20-6.200 (1)(B) 8 exempts linear project construction from stormwater permit regulations which meet one of the following: A. Grading of existing dirt or gravel roads which does not increase the runoff coefficient and the addition of an impermeable surface over an existing dirt or gravel road; B. Cleaning or routine maintenance of roadside ditches, sewers, waterlines, pipelines, utility lines or similar facilities; C. Trenches two (2) feet in width or less; or D. Emergency repair or replacement of existing facilities as long as best management practices are employed during the emergency repair.

Permit Requirements

- The permittee is required to conduct inspections of the site. The person(s) inspecting the site may be a staff person or a hired third party to conduct such inspections. The permittee is responsible for ensuring that the person who conducts inspections is a “qualified person or personnel.” A “**qualified person**” is a person knowledgeable in the principles and practice of erosion and sediment controls and pollution prevention, who possesses the skills to assess conditions at the construction site that could impact stormwater quality, and the skills to assess the effectiveness of any stormwater controls selected to control the quality of stormwater discharges from the construction activity.
- A sample **inspection report** has been developed as a helpful tool to aid in completing site inspections. This sample inspection report was created consistent with USEPA’s Developing Your Stormwater Pollution Prevention Plan and can be found at http://www.epa.gov/npdes/pubs/sw_swppp_inspection_form.doc. Both the guide and the sample inspection report (formatted in Microsoft Word) can be found at <http://cfpub.epa.gov/npdes/stormwater/swppp.cfm>.
- For common drainage locations that serve an area with 10 or more acres disturbed at one time, a temporary (or permanent) **sediment basin** that provides storage for a calculated volume of runoff from the drainage area from a 2-year, 24-hour storm, or equivalent control measures, must be provided where attainable until final stabilization of the site. Where no such calculation has been performed, a temporary (or permanent) sediment basin providing 3,600 cubic feet of storage per acre drained, or equivalent control measures, must be provided where attainable until final stabilization of the site. When computing the number of acres draining into a common location, it is not necessary to include flows from offsite areas and flows from on-site areas that are either undisturbed or have undergone final stabilization where such flows are diverted around both the disturbed area and the sediment basin. In determining whether installing a sediment basin is attainable, the operator may consider factors such as site soils, slope, available area on-site, etc. In any event, the operator must consider public safety, especially as it relates to children, as a design factor for the sediment basin, and alternative sediment controls must be used where site limitations would preclude a safe design.
- **Public Notification:** A public notification sign has been added to the permit. If a different sign is to be used it should be one of the same size sign and lettering and containing the same information as that of the one supplied with the permit. The required information includes a statement for those with questions or concerns, the permit number and the Department’s toll free phone number. The permittee shall post a copy of the public notification sign described by the Department at the main entrance to the site. An alternate location is acceptable provided the public can see it and it is noted in the SWPPP. The public notification sign must remain posted at the site until the permit has been terminated.

Other Discharges

- Machinery should be kept out of the waterway as much as possible. Fuel, oil and other petroleum products, equipment and any solid waste should not be stored below the ordinary high water mark at any time or in the adjacent floodway beyond normal working hours. All precautions are to be taken to avoid the release of wastes or fuel as a result of this operation. Petroleum products spilled should be immediately cleaned up and disposed of properly. Any such **spills of petroleum or other chemicals** are to be reported as soon as possible to the Department's 24-hour Environmental Emergency Response number at (573) 634-2436.

Sampling Requirements and Other Effluent Limitations

- 40 CFR 450.21 Subpart B - Construction and Development (C&D) Effluent Guidelines are **non-numeric effluent limits** and are structured to require construction operators to first prevent the discharge of sediment and other pollutants through the use of effective planning and erosion control measures; and second, to control discharges that do occur through the use of effective sediment control measures. Permittees are also required to implement a range of pollution prevention measures to limit or prevent discharges of pollutants including those from dry weather discharges. The C&D rule's non-numeric effluent limits are available at the following internet site: <http://www.gpo.gov/fdsys/pkg/CFR-2010-title40-vol29/xml/CFR-2010-title40-vol29-sec450-21.xml>. The associated fact sheet can be found at: http://www.epa.gov/npdespub/pubs/cgp_proposedfs.pdf.
- The USEPA has proposed numeric **effluent limitation guidelines** (ELGs) to control the discharge of pollutants from construction sites of a certain size. The Department may modify this permit upon finalization of the USEPA effluent limitation guidelines. The proposed Effluent limitation guidelines can be view at the following website <http://water.epa.gov/scitech/wastetech/guide/construction/>.

Land Purchase and Change of Ownership

- A person having **operational control over only a portion of a larger project** (e.g., one of four homebuilders in a subdivision), is responsible for compliance with all applicable effluent limits, terms, and conditions of the permit as it relates to the activities on that portion of the construction site, including protection of endangered species, critical habitat, and historic properties, and implementation of control measures described in the SWPPP. This person must ensure either directly or through coordination with other permittees, that these activities do not render another party's pollutant discharge controls ineffective. This person must either implement their own portion of a common SWPPP or develop and implement their own SWPPP. For more effective coordination of BMPs and opportunities for cost sharing, a cooperative effort by the different operators at a site to prepare and participate in a comprehensive SWPPP is encouraged. Individual operators at a site may, but are not required to, develop separate SWPPPs that cover only their portion of the project provided referenced is made to other operators at the site. In instances where there is more than one SWPPP for a site, cooperation between the permittees is encouraged to ensure stormwater discharge control measures are consistent with one another (e.g., provisions to protect listed species and critical habitat).
- The Department does not allow the transfer of a land disturbance permit from one owner to another; however, to facilitate the change in the ownership status of a property the Department developed the "Application for Change of Ownership" form. This form will allow the new owner to receive a new permit and number. The form may also be used to terminate the original permit if all the property included in the original permit is no longer the responsibility of the original owner. The "Application for Change of Ownership" (form MO780-2051) can be found online at <http://www.dnr.mo.gov/forms/#StormWater>.

Termination

- To begin the process of terminating this permit, the permittee should submit Form H – "Request for Termination" (MO780-1409) to the Department. The form can be found at the following web location: <http://www.dnr.mo.gov/forms/#StormWater>.

PART V. Addendums to Fact Sheet

Addendum #1

Individual Lot Certification

This form is not a requirement of the permit, but may be used by the permittee when selling individual lots that are part of the property that has been authorized by a Missouri Water Pollution Control General Permit under the NPDES for stormwater discharged associated with construction activity. This is a certification between the purchaser and the seller to cooperatively implement the SWPPP and the conditions of the NPDES permit and does not constitute a transfer of the permit. The permittee shall maintain this form on-site, or in a readily available location. The permittee shall provide individual lot certification forms or a copy of the contract for land sale having the equivalent wording to the Missouri Department of Natural Resources.

Addendum #2

Response to Comments

The public comment period for this permit expired on October 30, 2011. Addendum #2 contains the Missouri Department of Natural Resources' response to comments received during the public comment period.

ADDENDUM #1
INDIVIDUAL LOT CERTIFICATION

For Storm Water Discharges Associated with Construction Activity Authorized by a Missouri Water Pollution Control General Permit under the National Pollutant Discharge Elimination System

TO BE COMPLETED BY THE NEW LOT OWNER

I certify, under penalty of law, that I have received a copy of the general NPDES permit referenced below, which authorized the original lot owner or developer to discharge storm water runoff from construction activities, and the Storm Water Pollution Prevention Plan (SWPPP) prepared by the original lot owner or developer. I have reviewed the terms and conditions of the general permit and the SWPPP. I accept responsibility for erosion and sediment control during construction of the home or building for each of the lot(s) listed below. In the event the Missouri Department of Natural Resources notifies the undersigned of water quality violations due to conditions at any lot listed below and I am unable or unwilling to take action within 30 days to further reduce erosion or control sediment, then I agree to allow the original lot owner or developer to have reasonable access to the site to implement erosion and sediment control measures. I understand this certification is an agreement between the purchaser and seller to cooperatively implement the SWPPP and the conditions of the general NPDES permit.

Facility Name: _____
(as listed on permit)

Permit Number: MOR _____

Lot Number(s): _____

New Owner's Signature: _____

Name (typed or printed): _____

Phone Number: _____

Complete Only if New Owner is a Corporation and not an Individual:

Company Name: _____

Company Address: _____

Company Phone #: _____

TO BE COMPLETED BY THE PERMIT HOLDER

As permittee for the overall tract wherein the above listed lot(s) are located, I certify that I have provided the above named lot purchaser with a copy of the general NPDES permit and the Storm Water Pollution Prevention Plan (SWPPP) for the project, and I have informed the lot purchaser of their responsibility to minimize erosion and control sedimentation. I understand this certification does not constitute a transfer of the permit and understand this certification is an agreement between the purchaser and seller to cooperatively implement the SWPPP and the conditions of the general NPDES permit.

Signature: _____

Name (typed or printed): _____

Phone Number: _____

The permittee shall maintain this form on-site, or in a readily available location. The permittee shall provide individual lot certifications forms or a copy of the contract for land sale having the equivalent wording to the Missouri Department of Natural Resources upon request.

ADDENDUM #2

MORA00000 Land Disturbance Permit Response to Public Notice Comments

(The Missouri Department of Natural Resources' public notice comment period for this permit expired on October 30, 2011.)

GENERAL COMMENT RESPONSES

LAND DISTURBANCE PERMIT MOR100

The Department received certain comments specifically related to the MOR100 permit (the area-wide permit for state, federal, local government, etc.). These comments may be considered in the development of that permit. The MOR100 permit expires March 2012. There has been no change to the permit as a result of these comments.

FEDERAL REGULATION 40 CFR 450.21

As the NPDES authorized permitting authority, the Department is required to incorporate into the permit the federal regulation 40 CFR 450.21. These are non-numeric effluent limitations reflecting the best practicable technology currently available (BPT). Some limitations come with the words "unless infeasible." The Department received several questions on who determines what is or isn't feasible. The owner or operator is to make the determination for a specific project site if a requirement is infeasible and document in the SWPP as to why it is infeasible. There has been no change to the permit as a result of this comment.

EPERMITTING and FEES

The Department received a few comments regarding electronic permitting (epermitting) and permit fees. These comments have been relayed to the respective workgroups. The first phase of epermitting is expected to be completed mid-year 2012 and will include the issuance of new land disturbance permits. At this time, all renewals will be processed without epermitting. More information regarding electronic permitting will be placed on the Department's webpage in the very near future. There has been no change to the permit as a result of these comments.

TYPOS/RENUMBERING/DEFINITIONS

The Department received comments regarding typos, renumbering and similar items in the proposed permit. These entries have been corrected in the final permit.

The Department received comments suggesting definition and clarification to several areas of the proposed permit. All suggestions were considered and many have been added to the permit Fact Sheet.

SPECIFIC COMMENT RESPONSES

SECTION A. APPLICABILITY

OWNER/OPERATOR

Section A.1. - The Department received comments regarding the owner/operator statement asking for clarification of primary responsibility for compliance with the permit and to expand the responsibility to include the holder of an easement on the property as an alternative to the property owner. If there are enforcement actions the Department has the authority to involve all parties as necessary and to the extent possible. The Department has revised the applicability language to include easement in lieu of property owners where appropriate.

The Department received a comment requesting there be a differentiating permit between land development and vertical house construction. With exception to lots that are part of a larger common plan of development or sale, this permit is required for land disturbances for any reason based on the size (the acreage) of the disturbance. There has been no change to the permit as a result of this comment.

The Department received comments requesting the inclusion of other areas (borrow pits) which are outside the permitted area as well as an allowance for a specific activity (portable concrete and asphalt plants) to be listed in the permit. The Department believes that the permitted areas should be sufficiently stated in the application and the SWPPP to include all areas where land disturbance activities are planned to take place. There has been no change to the permit as a result of these comments.

DISCHARGES

Section A.2. - The Department received a comment asking to identify non-stormwater discharges. For the purposes of this rule, non-stormwater discharges are identified in this section of the permit. There has been no change to the permit as a result of this comment.

Section A.2. - The Department received comments requesting we add “flushing fire hydrants and potable water lines” back to the list of authorized non-stormwater discharges. Current regulation (10CSR 20.6.010 (1) (B)7) exempts these discharges from all general permitting. However, the Department has added these items back to the permit.

Section A.4. - The Department has clarified, in the permit Fact Sheet, what is meant by “industrial stormwater runoff”.

OTHER FEDERAL REGULATION

Section A.8. - A Clean Water Act Section 404 Department of the Army Permit and the Department's Clean Water Act Section 401 Water Quality Certification (certification) are needed when placing material or fill into jurisdictional waters of the United States. Any impacts to jurisdictional streams or wetlands would require an application to be sent to the appropriate US Army Corps of Engineers District Regulatory Branch. Contact information can be found at <http://www.dnr.mo.gov/env/wpp/401/corps-map3.gif>. Not all land disturbance projects will require a 404 permit; however, if a 404 permit is required then land disturbance activities are not to be conducted in the jurisdictional area of the project until the 404 permit has been obtained. Language in the permit has been reworded and additional information added to the permit Fact Sheet to help better clarify this concern.

Section A.9. - Compliance with the Historic Preservation Act and the Endangered Species Act is not a requirement to obtain a land disturbance permit. However, NPDES permittees must be in compliance with these federal regulations. The Department has added a statement to the permit Fact Sheet, that this permit does not supersede compliance with other federal requirements.

Section A.10. – The Department added language to the permit that the permit does not superseded any local authority requirement to obtain approval for a land disturbance project.

SECTION B. EXEMPTIONS FROM PERMIT REQUIREMENTS

Section B.2. – The Department received a comment requesting that we list the general permit exemptions outlined in the cited regulations. Missouri State Regulations 10CSR 20-6.200 (1) (B) and 10 CSR 20.6.010 (1) (B) outline exemptions from NPDES stormwater permits and all NPDES general permits, respectively. There has been no change to the permit as a result of this comment.

Section B.3. – The Department received comments requesting we include the words “maintenance operations” in this sentence. The permit language has been updated with this inclusion. A discussion on linear, strip, and ribbon construction and maintenance exemptions can be found in the permit Fact Sheet.

Section B.5. – The Department received a comment recommending the inclusion of CAFOs in the Agriculture Exemption. The Department removed the second sentence from the draft permit so that this section continues to read as it did in the previous permit.

SECTION C. REQUIREMENTS

Section C.1. a-g. – This section of the permit outlines verbatim the federal requirements of 40 CFR 450.21 effluent limitations reflecting the best practicable technology currently available (BPT). These are non-numeric effluent limits which the NPDES permitting authority must include in the permit. The Department received several comments regarding this section of the permit; it was recommended that we remove this section of the permit, it was recommended that we delete some of the wording, and there were comments which questioned the practicality of some items. When the Department does not have design guidelines for federal requirements, it is left to the discretion of the stormwater professional as to the proper design protocol. There were no changes to the permit as a result of these comments.

Section C.2.e. – The Department received comments regarding the need to comply with 404/401 permitting versus the requirement to comply in order to obtain a stormwater permit and identifying this in the SWPPP. The Department has added language to the permit Fact Sheet which describes the SWPPP requirement regarding 404/401 permitting is only to verify that the need for a 404/401 permit was addressed. For additional discussion on the 404/401 requirement, please refer to the Department's response to Section A.8. of this document.

SELECTION OF TEMPORARY AND PERMANENT NON-STRUCTURAL BMPS

Section C.3.e. – The Department received several comments regarding this section of the permit. The requirement of a buffer is part of federal regulation 40 CFR 450.21. This is the federal requirement which covers the non-numeric effluent limits which the permitting authority must include in the permit.

The regulation states, "The permittee is to provide and maintain natural buffers around surface waters, direct stormwater to vegetated areas to increase sediment removal and maximize stormwater infiltration, unless infeasible.." The permit requires a 25-foot buffer at minimum. The Department has added language to the permit which will allow for a more stringent local government buffer requirement.

For additional related discussion please refer to the earlier section of this document titled "General Comment Responses"

DISTURBED AREAS

Section C.3.h. - The Department received several comments regarding this section of the permit. Stabilization is addressed in federal regulation 40 CFR 450.21. This is the federal requirement which covers the non-numeric effluent limits which the permitting authority must include in the permit. The regulation states - "Stabilization of disturbed areas must, at minimum, be initiated immediately whenever any clearing, grading, excavating or other earth disturbing activities have permanently ceased on any portion of the site, or temporarily ceased on any portion of the site

and will not resume for a period exceeding 14 calendar days. Stabilization must be completed within a period of time determined by the permitting authority.” The Department has included the exact federal language into the permit and has designated a period of 7 days to complete stabilization activities. Temporary (interim) stabilization clarification: Stabilization is to begin as soon as the operator knows an area will need interim stabilization. The Department has also included, in the permit, allowances for weather and equipment malfunctions. For additional related discussion please refer to the earlier section of this document titled “General Comment Responses”

BMP INSTALLATION

Section C.3.i. – The Department received one comment regarding the installation of BMPs and another comment recommending the words “not to exceed 24 hours” be added after the word “immediately”. The permit will continue to allow for certain BMP installations to occur after initial site clearing to establish entry, exit and access and to require that stormwater controls be installed immediately after the earth disturbance. There were no changes to the permit as a result of this comment.

SEDIMENT BASINS

Section C.3.j. – The Department received two comments regarding the removal of sediments from sediment basins. The Department additionally received suggested wording when the use of sediment basin is impracticable. The Department has made changes to the permit to address these comments. The Department also received a comment regarding the feasibility of the use of outlet structures that withdraw water from the surface. Withdrawing water from the surface is a requirement of federal regulation 40 CFR 450.21. This is the federal requirement which covers the non-numeric effluent limits which the permitting authority must include in the permit. For additional related discussion please refer to the earlier section of this document titled “General Comment Responses”.

ROADWAYS

Section C.3.m. – The Department received several similar comments on this section of the permit and has responded with rewording the second sentence of this paragraph. The new sentence reads, “Stormwater inlets susceptible to receiving sediment from the permitted land disturbance site shall have curb inlet protection.” In addition, the Department has reworded the last sentence of this paragraph. The new sentence reads; “Where practicable, construction entrance BMP controls shall be used to prevent sediment track-out”.

Section C.6. - This section has to do with the individual designated by the permittee as responsible for environmental matters. This section has been moved so that it precedes Section C.9. Site Inspection Reports.

AMENDING AND UPDATING THE SWPPP

Section C.8.e. - The proposed permit states, “SWPPP is determined to be ineffective in preventing or controlling erosion and sedimentation (e.g., there is visual evidence of excessive site erosion or excessive sediment deposits in streams or lakes). The Department received two comments recommending a change to this sentence. The Department has replaced the word “preventing” with the word “minimizing” in the final permit.

Section C.8.g. - The Department changed this line to read “Exceedances of effluent limitations for new source performance standards for construction activities in accordance with 40 CFR Part 450.21.” This is the federal requirement which covers the non-numeric effluent limits which the permitting authority must include in the permit. For additional related discussion please refer to the earlier section of this document titled “General Comment Responses”.

INSPECTION REPORTS

Section C.9. - The Department received several comments regarding site inspection reports. The Department has made changes to this section of the permit to address most of the comments received. The Department added the words “When practicable” to the middle sentence of the first paragraph so that it reads, “When practicable the receiving stream shall also be inspected for 50 feet downstream of the outfall.” The Department has made changes to the last sentence of the first paragraph so that it now reads, “If rainfall causes stormwater runoff to occur on-site, the BMPs must be inspected within a reasonable time period after the rainfall event has ceased. Inspections must occur within 48 hours during normal work days, plus an additional 24 hours for each non-workday for weekends and holidays.”

PUBLIC NOTIFICATION

Section C.12. - The Public Notification sign is included with the issued permit. The Department has added language to the permit Fact Sheet to describe what is acceptable should a different sign be posted. An alternate location is acceptable provided the public can see it and it is noted in the SWPPP.

SECTION E. SAMPLING REQUIREMENTS AND EFFLUENT LIMITATIONS

Section E.2. - The Department received several comments regarding the proposed effluent limitations. Commenters have requested that the settleable solid limit remain at 2.5 ml/L just as it was in the previous standard land disturbance permit. The permit has been revised to a settleable solid (SS) limit of 2.5 ml/L per Standard Methods 2540 F and includes a local 2-year 24-hour storm event. Runoff and peak discharge information can be found online at ftp://ftp-fc.sc.egov.usda.gov/MO/eng/EFH/EFH_MO_Sup_Chap_02-1.pdf.

SECTION G. LAND PURCHASE AND CHANGE OF OWNERSHIP

The Department received four comments related to this section of the permit. In addition to recommendations received from commenters, the Department has also looked at how other states address this area of their permit. To better clarify the Department's intent with regard to property belonging to "a larger common plan of development or sale" a new statement has been added to the permit. This statement as well as language in the permit Fact Sheet clarifies that any property which was once permitted as "a larger common plan of development or sale" will require and an application for a new permit for any future land disturbance on that property.

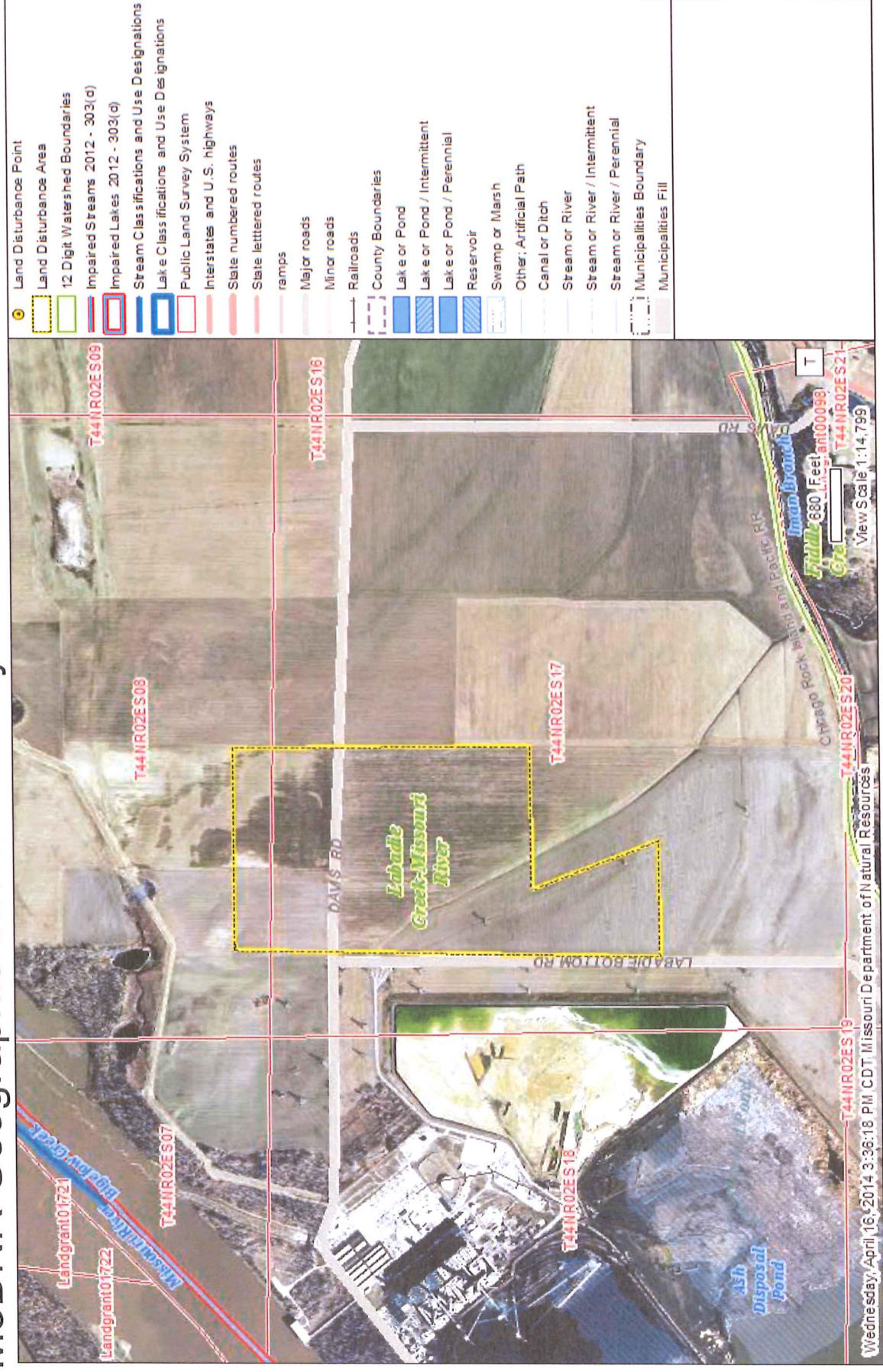
The Department received a request that there be a differentiating permit between land development and vertical house construction. The Department would need more discussion and justification to fully explore and respond to this request. There has been no change to the permit as a result of this comment.

SECTION H. TERMINATION

The Department received a few comments regarding permit transfer and permit coverage continuance. The Department does not allow the transfer of a land disturbance permit from one owner to another; however, to facilitate the change in the ownership status of a property the Department developed the "Change of Ownership" form. This is an application that will allow the new owner to receive a new permit and number. The form may also be used to terminate the original permit if all the property included in the original permit is no longer the responsibility of the original owner. The "Change of Ownership" application form can be found online at <http://dnr.mo.gov/forms/index.html#WaterPollution>. This web location has been added to the permit Fact Sheet.

The Department received a comment regarding the administrative continuance of an issued permit. This permit does not continue administratively. The permit is not valid after the expiration date. A new permit would need to be issued for the site where work has not been completed and the property has not been stabilized in accordance with the termination requirements. Language has been added to the permit in order to better clarify this issue.

MoDNR Geographic Information System Editor



Missouri
Department of
Natural Resources

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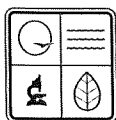


Missouri
Department of
Natural Resources

STORMWATER DISCHARGES
FROM THIS LAND DISTURBANCE
SITE ARE AUTHORIZED BY THE
MISSOURI STATE OPERATING
PERMIT NUMBER:

ANYONE WITH QUESTIONS OR
CONCERNS ABOUT
STORMWATER DISCHARGES
FROM THIS SITE, PLEASE
CONTACT THE MISSOURI
DEPARTMENT OF NATURAL
RESOURCES AT

1-800-361-4827



MISSOURI DEPARTMENT OF NATURAL RESOURCES

REGIONAL AND SATELLITE OFFICES

Kansas City Area

- **Kansas City Regional Office**
500 NE Colbern Rd.
Lee's Summit, MO 64086-4710
816-251-0700
FAX: 816-622-7044
- **Northwest Missouri Satellite Office**
Northwest Missouri State University
Environmental Services Building,
800 University Dr.
Maryville, MO 64468-6015
660-562-1876 or 660-562-1877
FAX: 660-562-1878
- **Truman Lake Satellite Office**
Harry S Truman State Park
28761 State Park Road West
Warsaw, MO 65355
660-438-3039
FAX: 660-438-5271

Southwest Area

- **Southwest Regional Office**
2040 W. Woodland
Springfield, MO 65807-5912
417-891-4300
FAX: 417-891-4399
- **Lake of the Ozarks Satellite Office**
Lake of the Ozarks Satellite Office
5570 Osage Beach Parkway
Osage Beach, MO 65065
573-348-2442
FAX: 573-348-2568
- **Newton County Satellite Office**
Crowder College
601 Laclede, Smith Hall, Room 201
Neosho, MO 64850
417-455-5180 or 417-455-5158
FAX: 417-455-5157

Northeast Area

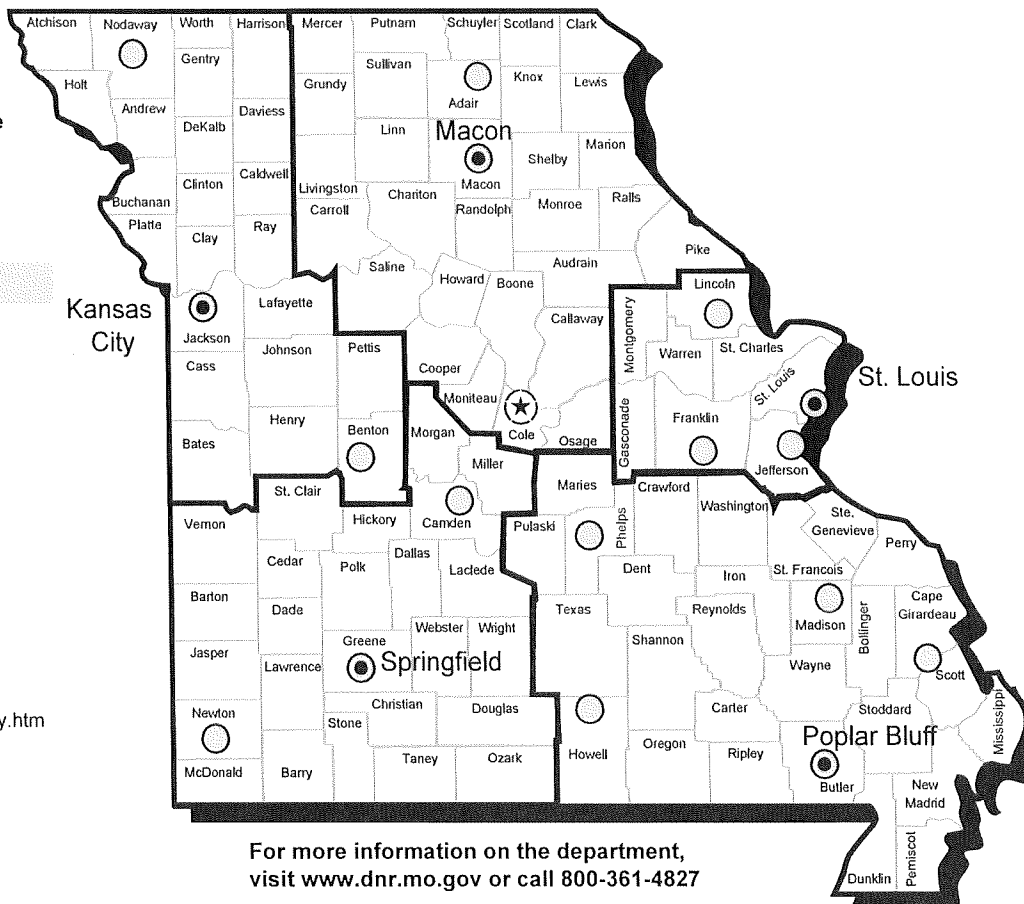
- **Northeast Regional Office**
1709 Prospect Drive
Macon, MO 63552-2602
660-385-8000
FAX: 660-385-8090
- **Kirkville Satellite Office**
Truman State University
Magruder Hall, Room 3068
100 E. Normal St.
Kirkville, MO 63501
660-785-4610
- ★ **Department Central Offices**
P.O. Box 176
Jefferson City, MO 65102-0176
573-751-3443
www.dnr.mo.gov/shared/map-jeffcity.htm

St. Louis Area

- **St. Louis Regional Office**
7545 S. Lindbergh, Ste 210
St. Louis, MO 63125
314-416-2960
FAX: 314-416-2970
- **Franklin County Satellite Office**
Meramec State Park
Hwy. 185 S./115 Meramec Park Drive
Sullivan, MO 63080
573-860-4308
FAX: 573-468-5051
- **Jefferson County Satellite Office**
Eastern District Parks Office
2901 Hwy. 61
Festus, MO 63028
636-931-5200
FAX: 636-931-5204
- **Lincoln County Satellite Office**
Cuivre River State Park
678 State Rt. 147
Troy, MO 63379
636-528-4779
FAX: 636-528-8362

Southeast Area

- **Southeast Regional Office**
2155 North Westwood Blvd.
Poplar Bluff, MO 63901
573-840-9750
FAX: 573-840-9754
- **Cape Girardeau County Satellite Office**
2007 Southern Expressway
Cape Girardeau, MO 63701
573-651-3008 (phone and FAX)
- **Howell County Satellite Office**
700 W. Main St.
Willow Springs, MO 65793
417-469-0025 (phone and FAX)
- **Madison County Satellite Office**
120 W. Main St.
Fredericktown, MO 63645
573-783-2385
FAX: 573-783-6294
- **Rolla Satellite Office**
111 Fairgrounds Rd.
Rolla, MO 65402
573-368-3625
FAX: 573-368-3912



For more information on the department,
visit www.dnr.mo.gov or call 800-361-4827

Labadie Landfill
MORA04758

ePermitting Certification and Signature Document

Missouri State Operating General Permit number MORA04758 was issued on 04/16/2014 based on information entered into the Missouri Department of Natural Resources' electronic Permitting (ePermitting) system. Missouri Regulation 10 CSR 20-6.010(2)(B) requires that all applications for construction and operating permits be signed. Please print, review, sign, and mail this document to the Missouri Department of Natural Resources (Department) within 30 days of the Issue Date (04/16/2014).

If the Department does not receive this document with signature within 30 days, this general operating permit may be considered not valid and subsequently revoked.

Labadie Landfill, Franklin County
226 Labadie Power Plant Road
LABADIE, MO 63055
Total Permitted Area: 140.00 Acres
Total Number of Permitted Features: 1

The below Certifications were electronically certified in the ePermitting system by:
Name: Nancy Morgan
Title: Consulting Engineer
Date: 04/16/2014

Is any part of the area that is being disturbed in a jurisdictional water of the United States? If yes, you must also receive a Clean Water Act, Section 404 Permit for this site from the United States Army Corp of Engineers.
No

I understand there may be an established Local Authority Erosion Control Plan in the city or the unincorporated area of the county where land disturbance activities covered under this general permit will occur. (Note - you may want to contact your local authority to determine if there are any requirements).
Agreed

A Storm Water Pollution Prevention Plan (SWPPP) must be developed for this site. This plan must be developed in accordance with requirements and guidelines specified within the general permit for storm water discharges from land disturbance activities. The application, as completed in ePermitting is considered incomplete if the SWPPP has not been developed.
Agreed

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 being granted this permit, I agree to abide by the Missouri Clean Water Law and all rules, regulations, orders and decisions, and terms of this permit, subject to any legitimate appeal available to an applicant under the Missouri Clean Water Commission.
Agreed

Signature

Date

The above must be signed by the Owner, Continuing Authority, or Main Facility Contact. Please send this document with original signature to the Water Protection Program, PO Box 176, Jefferson City, MO 65102. If you do not agree with the above Certifications, please contact the Department by phone at (573) 751-1300.



Jeremiah W. (Jay) Nixon, Governor • Sara Parker Pauley, Director

DEPARTMENT OF NATURAL RESOURCES

www.dnr.mo.gov

JAN - 2 2015

CERTIFIED MAIL # 7009 3410 0001 9190 2422
RETURN RECEIPT REQUESTED

Mr. Ajay Arora
Vice President, Environmental Services
Ameren Missouri
P.O. Box 66149, MC 602
1901 Chouteau Avenue
St. Louis, MO 63166-6149

RE: Ameren Missouri, Ameren Missouri Labadie Utility Waste Landfill, Construction Permit
Number 0907101, Franklin County

Dear Mr. Arora:

An application for a construction permit to construct the above-referenced solid waste disposal area was filed with the Missouri Department of Natural Resources' Solid Waste Management Program (SWMP) on December 11, 2013. The application was submitted to the department by Thomas R. Gredell, P.E., GREDELL Engineering Resources, Inc. and Paul Reitz, P.E., Reitz and Jens, for review and approval. The application includes engineering plans, specifications, operating procedures, and subsequent correspondence or amendments for the subject disposal area. The application was reviewed for compliance with the Missouri Solid Waste Management Law (Sections 260.200 to 260.345, RSMo), and the Missouri Solid Waste Management Regulations.

On December 19, 2014, the EPA Administrator Gina McCarthy signed the Disposal of Coal Combustion Residuals from Electric Utilities final rule and it was submitted for publication in the *Federal Register*. The rule establishes technical requirements for CCR landfills and surface impoundments under Subtitle D of the Resource Conservation and Recovery Act. Ameren's proposed project met or exceeded all of the requirements in EPA's proposed rule. However, with the final rule, EPA made a significant change to the requirements for the placement of CCR units with respect to groundwater. The proposed rule called for any new landfill or lateral expansion to have a base located a minimum of two feet above the upper limit of the natural water table. In the final rule, EPA amended this provision to require new CCR landfills and all lateral expansions to be constructed with a base no less than 1.52 meters (five feet) above the upper limit of the uppermost aquifer or demonstrate that there will not be an intermittent, recurring, or sustained hydraulic connection between any portion of the base of the CCR unit and the uppermost aquifer due to normal fluctuations in groundwater elevations (including the

Mr. Ajay Arora

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seasonal high water table). The effective dates of the new federal rule are not yet known because the dates will be triggered by the rule's publication in the *Federal Register*. An argument can be made that Ameren's initial cell would be considered an "existing" landfill under the new rule, and thus not subject to this requirement. Nonetheless, as we have discussed with you, the department will be requiring Ameren to comply with the requirement for the initial cell and future expansions. Consequently, the department has included a condition in the permit to reflect this requirement.

In accordance with Section 260.205.5(7), RSMo, the SWMP hereby approves the application as provided in the enclosed "Solid Waste Disposal Area Construction Permit Number 0907101" issued to Ameren Missouri as owner/operator to construct a solid waste disposal area as of the date of this letter. This facility is a utility waste landfill located at 226 Labadie Power Plant Road, about 2.5 miles northeast of the town of Labadie and immediately southeast of the Missouri River in northeast Franklin County, Missouri. The general legal description is as follows: Part of Sections 8 and 17 and part of U.S. Survey 98, Township 44 North, Range 2 East, Missouri Quadrangle Map in Franklin County, Missouri. The Latitude is 38 degrees, 33 minutes, 47 seconds North, and the Longitude is 90 degrees, 48 minutes, 08 seconds West. This permit applies only to that tract of land consisting of approximately 813 acres as described by the engineering plans, specifications, and operating procedures submitted to the SWMP. The disposal area contains approximately 166.5 acres divided into four (4) cells to be used for waste disposal. The remaining approximately 646.5 acres are to be utilized for utility waste landfill-related design features such as borrow area, all-weather access roads, buffer zone, leachate collection and removal system, gas monitoring system, and storm water diversion structures.

The department may review this permit after the date of issuance and notify the permit holder as necessary to assure the utility waste landfill continues to comply with the currently applicable requirements and provisions of the Missouri Solid Waste Management Law and rules adopted thereunder. This permit is not to be construed as compliance with any existing federal or state environmental laws other than the Missouri Solid Waste Management Law; nor should this be construed as a waiver for any other regulatory requirements. This permit is not to be construed as compliance with any existing local ordinances or zoning requirements.

As the holder of this permit, you are required to comply with all applicable federal and state environmental laws and regulations enforced by the department. These environmental requirements are administered by the department's Air Pollution Control Program, Water Protection Program, Land Reclamation Program, Hazardous Waste Program and the SWMP. In addition, you are required to comply with all applicable environmental laws administered by the government of Franklin County, Missouri. Noncompliance with these environmental laws and

Mr. Ajay Arora
Page Three

regulations may, in certain circumstances, result in the suspension or revocation of this permit and may subject the permit holder to civil and criminal liability.

If you are aggrieved by this decision, you may be entitled to seek further administrative review within 30 days of this notice pursuant to Section 260.235 and Chapter 536 of the Missouri Revised Statutes.

The department reserves the right to revoke, suspend, or modify Permit Number 0907101 if the permit holder fails to maintain the facility in compliance with the state's Solid Waste Management Law and regulations, the terms and conditions of the permit, and the approved engineering plans and specifications.

I appreciate your cooperation. If you have any questions, please contact Mr. Darrell G. Hartley, P.E., Permits Unit Chief of the SWMP at (573) 526-3940 or P.O. Box 176, Jefferson City, MO 65102-0176.

Thank you.

Sincerely,

DIVISION OF ENVIRONMENTAL QUALITY

A handwritten signature in cursive script, reading "Leanne Tippet Mosby".

Leanne Tippet Mosby
Director

LTM:dpl

Enclosure

c: Senator Nieves, Missouri Senate
Representative Curtman, Missouri House of Representatives
The Honorable John Griesheimer, Presiding Commissioner, Franklin County
Thomas R. Gredell, P.E., GREDELL Engineering Resources, Inc.
Mr. Chuck Eichmeyer, Planner, East Central SWMD, Region I
St. Louis Regional Office via Electronic Shared File

**MISSOURI DEPARTMENT OF NATURAL RESOURCES
SOLID WASTE PERMIT**

Ameren Missouri Labadie Utility Waste Landfill
Solid Waste Disposal Area Construction Permit Number 0907101
Franklin County, Missouri

Issue Date: January 2, 2015

FACILITY DESCRIPTION

This facility is a utility waste landfill located at 226 Labadie Power Plant Road, about 2.5 miles northeast of the town of Labadie and immediately southeast of the Missouri River in northeast Franklin County, Missouri. The general legal description is as follows: Part of Sections 8 and 17 and part of U.S. Survey 98, Township 44 North, Range 2 East, Missouri Quadrangle Map in Franklin County, Missouri. The Latitude is 38 degrees, 33 minutes, 47 seconds North, and the Longitude is 90 degrees, 48 minutes, 08 seconds West. This permit applies only to that tract of land consisting of approximately 813 acres as described by the engineering plans, specifications, and operating procedures submitted to the Missouri Department of Natural Resources' Solid Waste Management Program (SWMP). The disposal area contains approximately 166.5 acres divided into four (4) cells to be used for waste disposal. The remaining approximately 646.5 acres are to be utilized for utility waste landfill-related design features such as borrow area, all-weather access roads, buffer zone, leachate collection and removal system, groundwater monitoring system, and storm water diversion structures.

PERMIT DOCUMENTS

These documents are incorporated by this reference into Permit Number 0907101:

1. "Ameren Missouri Labadie Energy Center Construction Permit Application for a Proposed Utility Waste Landfill, Franklin County, Missouri", including Appendices A through Z, prepared by Reitz & Jens, Inc., and GREDELL Engineering Resources, Inc., first received December 11, 2013, last revised January 31, 2014. The construction permit application designates Ameren Missouri as the Owner and Operator of the landfill, with Reitz & Jens, Inc. and GREDELL Engineering Resources, Inc., as the project engineering team. Paul H. Reitz, P.E. and Thomas R. Gredell, P.E. are the certifying professional engineers registered in Missouri.
2. Engineering drawings numbered Sheet 1 through 23 titled, "Labadie Energy Center Proposed Utility Waste Landfill, Franklin County, Missouri", prepared by GREDELL Engineering Resources, Inc., dated January 2013 and signed and sealed on December 11, 2013. Thomas R. Gredell, P.E. is the certifying professional engineer registered in Missouri.

GENERAL CONDITIONS

The following general conditions are an integral part of Permit Number 0907101. Compliance with these general conditions shall, in part, determine compliance with the permit. All reports, plans, and data required to satisfy these general conditions shall be prepared or approved by a professional engineer registered in the state of Missouri.

1. Operation and Design

Any change in the operation and/or design of this facility other than that which has been described in the application and approved in this permit is a modification of the permit, and prior written approval shall be obtained in advance of the permittee making that change.

2. Easement, Notice and Covenant

The owner and the department shall execute:

- A. An easement to allow the department, its agents or its contractors, to enter the premises to complete work specified in the closure plan, monitor or maintain the site, or take remedial action during the post-closure period; and
- B. A notice and covenant indicating that the property has been permitted as a solid waste disposal area and prohibiting use of the land in any manner which interferes with the closure filed with the department.

To satisfy these requirements, the department's SWMP has prepared a standard document titled Agreement for Easement, Notice and Covenant Running with the Land. A copy of the document is enclosed for your use. At least two (2) copies of the original document shall be submitted to the department's SWMP for approval and signature within thirty (30) days of the date of this permit.

3. Borehole Abandonment

All exploratory boreholes, abandoned monitoring wells and abandoned piezometers shall be plugged in accordance with 10 CSR 23-3.110 "Permanent Abandonment of Wells" and 10 CSR 23-4.080 "Plugging of Monitoring Wells", or an alternate method approved by the department. Proof of proper abandonment of boreholes and piezometers within each cell boundary shall be submitted to the department's SWMP for approval prior to requesting an operating permit for each subsequent cell.

4. Groundwater Monitoring

- A. Groundwater monitoring shall be required as per the following documents, of which are hereby incorporated by reference into Solid Waste Permit Number 0907101:
 - 1. Engineering Appendix Q, Groundwater Sampling and Analysis Plan found in "Ameren Missouri Labadie Energy Center Construction Permit Application", prepared by Reitz & Jens, Inc. and GREDELL Engineering Resources, Inc.
 - 2. The enclosed document titled, "Groundwater Monitoring Program Ameren Missouri Labadie Utility Waste Landfill Permit Number 0907101" dated January 2, 2015, which is hereby incorporated by reference into Solid Waste Permit Number 0907101.
- B. Before an operating permit will be granted, the construction of all groundwater monitoring wells shall be approved by the department. Two (2) copies of the geologist's boring logs and as-built drawings showing the well construction for any new monitoring wells, as well as two (2) copies of plan sheets that show the as-built locations of these wells, shall be submitted to the department's SWMP.

5. Liner and Final Cover

- A. All borrow material used for liner and cover construction shall be from a previously sampled and approved borrow area.
- B. The top surface of each lift of the compacted clay soil liner and final cover shall be scarified prior to placement of an over-lying lift of liner soil.
- C. The top surface of the final lift of the compacted clay soil liner shall be smooth drum rolled prior to flexible membrane liner placement to ensure intimate contact between the compacted clay liner and the flexible membrane liner.
- D. The soils to be used for liner and cover construction shall be periodically tested and analyzed to ensure they meet the requirements as described in the engineering report. The compaction of the soil liner and final cover shall be confirmed via the following Quality Assurance/Quality Control (QA/QC) procedures. All QA/QC data results shall be submitted to the department's SWMP:
 - 1. Whenever soil conditions change, perform laboratory tests of grain size, soil classification, Atterberg limits, permeability, and density/moisture testing

(Standard or Modified Proctor) to determine new specifications for placing liner and cover material.

2. All laboratory analysis on soil shall be performed prior to initial placement of soil.
 3. Nuclear gauge field density and moisture tests (ASTM D 2922) shall be performed on each lift of the soil liner and final cover. Testing shall be performed at a maximum horizontal spacing of one hundred (100) foot centers, offset fifty (50) feet, for each lift of the liner. Any portion of the liner and final cover which fails to meet the minimum compaction shall be remediated before placing additional liner in the same area.
 4. A moisture/density calibration adjustment shall be performed at the start of each construction phase, when the soil used for liner/cover construction changes, when you change instruments, or every 12 months; whichever occurs first. Calibration adjustment procedures are covered in Annex A1 paragraph A1.3 of ASTM D 3017.
 5. Conduct laboratory hydraulic conductivity testing on undisturbed (e.g., Shelby tube) samples collected from the in-place compacted soil liner and final cover for every 5,000 cubic yards of soil placed and compacted, unless a zone of acceptability for soil placement was approved by the department.
 6. Elevations of the bottom and top of the landfill compacted soil liner and final cover shall be checked at a maximum horizontal spacing of one hundred (100) foot centers.
- E. Installation of the flexible membrane liner and cover shall be performed in accordance with the QA/QC measures specified in the approved engineering report, and with the manufacturer's recommendations.
- F. Supply the department's SWMP with QA/QC data and results on the composite liner's geosynthetic components for each phase and conduct both nondestructive and destructive testing on the geomembrane.
- G. The permittee shall provide seven (7) days advance notice of the following activities to the department's SWMP:
1. Subgrade excavation;

2. Test pad construction;
3. Placement of the soil component of the liner system, including final surface preparation;
4. Placement of the geosynthetic components of the liner system; and
5. Placement of the leachate collection system and its protective layer.

The department's SWMP reserves the right to inspect, and approve or disapprove any of the above-mentioned activities during the construction of the landfill.

6. Test Pad

- A. Test pad construction and testing shall be required as per the following document, which is hereby incorporated by reference into Solid Waste Permit Number 0907101:

"Construction Quality Assurance Plan for a Utility Waste Landfill" Appendix P, Section 3.2, "Test Pad," of the Construction Permit Application.

- B. The test pad shall only need to be constructed once for phased construction, as long as the same soil type and clay liner construction equipment are used.
- C. The compacted soil liner shall be constructed from the same soil type, design specifications, equipment, and procedures as are used for the test pad.

7. Construction Quality Assurance Plan

- A. The department may require you to revise the Construction Quality Assurance (CQA) plan included in Appendix P of the approved engineering report following completion of the test pad. All construction and testing methods determined to be necessary during test pad construction shall be incorporated into the CQA plan at that time. The department must review and approve the revised CQA plan prior to construction of the liner system for the first landfill phase or cell.
- B. Determination of soil placement criteria and construction of a test pad are required for each soil type proposed for use in liner construction. The department reserves the right to require test pads for future phases.

- C. In addition to the testing outlined in the approved engineering report, a minimum of five (5) uniformly spaced nuclear moisture/density tests, per ASTM D 3017 and ASTM D 2922, shall be performed on each lift of the test pad.
1. A detailed discussion explaining how each soil type was identified and characterized to determine the acceptable placement range. The discussion shall also take into account the soil testing performed during the detailed site investigation. This discussion shall include, at a minimum, a comparison of the following soil properties:
 - a) Grain Size
 - b) Atterbergs
 - c) USCS soil classification
 - d) Optimum moisture content
 - e) Maximum dry density
 - f) Color
 - g) Texture
 2. For each soil type, one plot showing the Proctor curves using symbology indicating which Proctor points passed the hydraulic conductivity criteria and which failed.
 3. For each soil type, one plot showing the field moisture/density test results compared with the Proctor curves and the moisture and density pass/fail criteria.
 4. A map showing soil sample locations and depths. All laboratory test reports shall be clearly correlated to sample locations.
 5. A detailed discussion of the successful and unsuccessful construction techniques used, including:
 - a) Methods of moisture conditioning
 - b) Methods of surface preparation for each lift
 - c) Depth of penetration of the compactor feet
 6. A discussion of the amount of compactive effort applied to each lift of compacted soil based on the type and weight of equipment used, the number of passes, and the lift thicknesses.

7. A detailed discussion of how each soil type was identified in the field in order to correlate it to the proper soil placement range.
8. Documentation that all required calibration procedures specified by ASTM D 2922 and ASTM D 3017 (nuclear density and moisture testing) were performed before/during test pad construction.
9. A description of the methods used for subgrade preparation.
10. Copies of all field notes taken during test pad construction.

8. Operating Permit

When requesting the Operating Permit for the initial cell, three (3) copies of a written report shall be submitted containing all QA/QC data/results, as-built drawings, drawing(s) showing details of inter-phase berms, and a certification by a professional engineer who is registered in the state of Missouri stating that the landfill cell was constructed as per the department-approved engineering design plans and specifications. The certification shall be signed, or sealed, and dated by both the permittee and a professional engineer registered in the state of Missouri. The closure Financial Assurance Instrument (FAI) shall be submitted along with the request for the Operating Permit. The report, certification, and FAI shall be approved by the department's SWMP before the Operating Permit for the initial cell will be granted.

If an application for the Operating Permit for the initial cell of the solid waste disposal area is not received by the department within sixty (60) months of issuance of a Construction Permit, the applicant, prior to submittal of an Operating Permit Application, shall hold a public awareness and community involvement session, solicit comments, and respond to the comments; submit to the department for approval any necessary changes to the design and operating of the facility so as to be in compliance with currently applicable law and rules, and submit to the department an updated violation history disclosure statement.

9. Authorization to Operate

When requesting Authorization to Operate (ATO) for all subsequent cells, two (2) copies of a written report shall be submitted containing all QA/QC data/results, as-built drawings, drawing(s) showing the details of inter-phase berms and the tie-in of liner elements to previously constructed phases, and a Missouri registered professional engineer's certification that each was constructed as per the department-approved engineering design plans and specifications. The certification shall be signed, or sealed,

and dated by both the permittee and the Missouri registered professional engineer. The report and certification must be approved by the department's SWMP before an ATO for that cell will be issued. Additionally, the closure FAIs for the subsequent cells must be submitted and approved.

10. Surface Water Control

Before an Operating Permit will be issued, the permittee shall provide correspondence to the department showing that all applicable permits and design approvals have been acquired from the Missouri Department of Natural Resources' Water Protection Program, including the Antidegradation Review and Operating Permit Modification.

11. Air Pollution Control

Before an Operating Permit will be issued, the permittee shall provide correspondence to the department showing that all applicable permits and design approvals have been acquired from the Missouri Department of Natural Resources' Air Pollution Control Program.

12. Statistical Evaluation of Groundwater Data

- A. The department's SWMP shall be notified and allowed to review any changes in the statistical evaluation as they occur.
- B. The permittee shall notify the department's SWMP of any statistical deviations in the groundwater data as they occur.
- C. A minimum of eight (8) rounds of groundwater monitoring data must be collected prior to filling.

SITE SPECIFIC CONDITIONS

1. Subsequent Operating Permit & Local Approval

Permittee shall not dispose of coal combustion residuals unless and until so authorized by a subsequent operating permit issued under Section 260.205, RSMo. The Department will again seek local verification pursuant to Section 260.003, RSMo prior to issuance of an operating permit.

2. Pending Litigation

There are currently pending legal challenges to Franklin County's landfill ordinance and issuance of a local permit thereunder. Permittee shall suspend construction activities to the extent so ordered by a court of competent jurisdiction, subject to Permittee's appeal and bonding rights.

3. New federal rule regarding disposal of CCR from electric utilities

Permittee's authorization to commence construction is contingent upon the initial cell and all subsequent lateral expansions being constructed with a landfill base no less than 1.52 meters (five feet) above the upper limit of the uppermost aquifer. With respect to the site, such distance shall be measured from the ground surface as determined by the most recent land survey performed by the Permittee. As required by section 260.205.6 RSMo, prior to construction of the landfill base, Permittee shall submit to the Department by a registered professional engineer licensed by the State of Missouri, updated plans, designs, and relevant data in order to demonstrate compliance with this condition and to demonstrate the suitability of the fill material to be used to increase the elevation of the landfill base, and obtain Department approval prior to such construction.

DISPOSAL AREA DESCRIPTION

The types of waste accepted shall consist of coal combustion by-products including, but not limited to, fly ash, bottom ash, boiler slag and flue gas desulfurization waste. The area fill method of utility waste landfill operation shall be utilized.

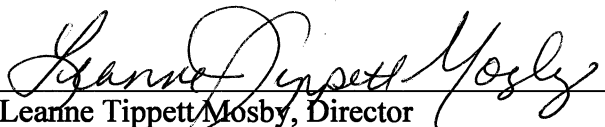
The excavation depths and solid waste fill locations shall be completed as shown on the approved engineering plans and specifications. Upon completion of the disposal area, the final cover shall be graded, limed, fertilized as necessary, and seeded with grasses to control erosion. Continued maintenance of the area shall be provided in accordance with the approved closure plan.

All fencing, gates, equipment maintenance buildings, all-weather access roads, signs, surface water control devices, leachate treatment facilities, operating equipment, standby equipment, and other necessary appurtenances shall be provided as per the approved plans, specifications, and operating procedures. The plans, specifications, and operating procedures described above have been examined as to engineering features of design which might affect the operation of the solid waste disposal area as a utility waste landfill.

MODIFICATION AND TERMINATION OF PERMIT

The department reserves the right to revoke, suspend, or modify Permit Number 0907101 if the permit holder fails to maintain the facility in compliance with the Missouri Solid Waste Management Law and regulations, the terms and conditions of the permit, and the approved engineering plans and specifications.

January 2, 2015
Date of Permit



Leanne Tippet Mosby, Director
DIVISION OF ENVIRONMENTAL QUALITY

GROUNDWATER MONITORING PROGRAM
Ameren Missouri Labadie Utility Waste Landfill
Solid Waste Disposal Area Construction Permit Number 0907101
Franklin County, Missouri

DATE: January 2, 2015

A. INCORPORATED DOCUMENTS

The following documents are incorporated by reference into the Groundwater Monitoring Program of Permit Number 0907101:

1. Engineering Appendix Q, Groundwater Sampling and Analysis Plan found in "Ameren Missouri Labadie Energy Center Construction Permit Application", prepared by Reitz & Jens, Inc. and GREDELL Engineering Resources, Inc., first received December 11, 2013, revised January 31, 2014, and
2. Engineering drawing number 3, "Project Overview" of the December 11, 2013, set of revised drawings for "Ameren Missouri Labadie Energy Center Construction Permit Application", prepared by GREDELL Engineering Resources, Inc. and signed by Thomas R. Gredell, P.E., certifying professional engineer registered in Missouri.
3. This document, prepared by the Solid Waste Management Program titled "GROUNDWATER MONITORING PROGRAM Ameren Missouri Labadie Utility Waste Landfill," dated January 2, 2015 is hereby incorporated by reference into solid waste Permit Number 0907101.

B. MONITORING WELLS

The groundwater monitoring network of the Ameren Missouri Labadie Utility Waste Landfill shall consist of thirty-five (35) permanent monitoring wells and one (1) temporary monitoring well. This monitoring system will be used to monitor groundwater flowing beneath the landfill. Eight (8) monitoring wells are designated as generally upgradient and twenty-seven (27) monitoring wells are designated as generally downgradient. TMW-1 is to serve as a sentry well during Cell 1 development and will be removed from the network at a later date.

The Missouri Department of Natural Resources' Solid Waste Management Program (SWMP) and the Missouri Geological Survey (MGS) shall review any changes in direction of groundwater flow from potentiometric surface maps and as waste filling progresses in the landfill. The department's SWMP shall review all groundwater monitoring data to evaluate statistical determinations.

The proposed monitoring wells listed in Table I below are those for which Ameren Missouri Labadie Utility Waste Landfill is responsible for monitoring, including purging, field observations, sampling, chemical analysis and reporting of representative samples from the Ameren Missouri Labadie Utility Waste Landfill. For consistency in designations, the department's SWMP will use the monitoring point designations as shown in Table I.

These designations shall appear on subsequent electronic submissions of groundwater data and groundwater monitoring reports. These monitoring designations shall be referenced in future correspondence associated with this permit.

Table I

COMPLIANCE STATUS (SUBJECT TO CHANGE BY THE SWMP AND MGS)	APPROVED GROUNDWATER MONITORING SYSTEM WELLS & LOCATIONS	MONITORING WELL DESIGNATIONS FOR SAMPLING & REPORTING
Compliance	Monitoring well 1 located at: N 995572 / E 727213	MW-1
Compliance	Monitoring well 2 located at: N 995657 / E 727664	MW-2
Compliance	Monitoring well 3 located at: N 995740 / E 728101	MW-3
Compliance	Monitoring well 4 located at: N 995818 / E 728546	MW-4
Compliance	Monitoring well 5 located at: N 995546 / E 728819	MW-5
Compliance	Monitoring well 6 located at: N 995177 / E 729227	MW-6
Compliance	Monitoring well 7 located at: N 994621 / E 729411	MW-7
Compliance	Monitoring well 8 located at: N 994383 / E 729643	MW-8
Compliance	Monitoring well 9 located at: N 994168 / E 729893	MW-9
Compliance	Monitoring well 10 located at: N 993950 / E 730149	MW-10

COMPLIANCE STATUS (SUBJECT TO CHANGE BY THE SWMP AND MGS)	APPROVED GROUNDWATER MONITORING SYSTEM WELLS & LOCATIONS	MONITORING WELL DESIGNATIONS FOR SAMPLING & REPORTING
Compliance	Monitoring well 11 located at: N 993725 / E 730398	MW-11
Compliance	Monitoring well 12 located at: N 993470 / E 730662	MW-12
Compliance	Monitoring well 13 located at: N 993256 / E 730913	MW-13
Compliance	Monitoring well 14 located at: N 993052 / E 731166	MW-14
Compliance	Monitoring well 15 located at: N 992807 / E 731406	MW-15
Compliance	Monitoring well 16 located at: N 992618 / E 731651	MW-16
Compliance	Monitoring well 17 located at: N 992302 / E 731675	MW-17
Compliance	Monitoring well 18 located at: N 991678 / E 730928	MW-18
Compliance	Monitoring well 19 located at: N 992089 / E 730178	MW-19
Compliance	Monitoring well 20 located at: N 991669 / E 729952	MW-20
Compliance	Monitoring well 21 located at: N 991334 / E 729950	MW-21
Compliance	Monitoring well 29 located at: N 995679 / E 726962	MW-29

COMPLIANCE STATUS (SUBJECT TO CHANGE BY THE SWMP AND MGS)	APPROVED GROUNDWATER MONITORING SYSTEM WELLS & LOCATIONS	MONITORING WELL DESIGNATIONS FOR SAMPLING & REPORTING
Compliance	Monitoring well 30 located at: N 995760 / E 727409	MW-30
Compliance	Monitoring well 31 located at N 995836 / E 727854	MW-31
Compliance	Monitoring well 32 located at: N 995914 / E 728306	MW-32
Compliance	Monitoring well 33(D) located at: N 995750 / E 727359	MW-33(D)
Compliance	Monitoring well 34(D) located at: N 995544 / E 728880	MW-34(D)
Background	Monitoring well 22 located at: N 990929 / E 729355	MW-22
Background	Monitoring well 23 located at: N 991099 / E 728511	MW-23
Background	Monitoring well 24 located at: N 991819 / E 727992	MW-24
Background	Monitoring well 25 located at: N 992707 / E 727529	MW-25
Background	Monitoring well 26 located at: N 993976 / E 726911	MW-26
Background	Monitoring well 27 located at: N 994664 / E 726608	MW-27

COMPLIANCE STATUS (SUBJECT TO CHANGE BY THE SWMP AND MGS)	APPROVED GROUNDWATER MONITORING SYSTEM WELLS & LOCATIONS	MONITORING WELL DESIGNATIONS FOR SAMPLING & REPORTING
Background	Monitoring well 28 located at: N 995276 / E 726640	MW-28
Background	Monitoring well 35(D) located at: N 992613 / E 727529	MW-35(D)
Compliance	Temporary monitoring well 1 located at: N 993783 / E 728657	TMW-1

For each monitoring event, prepurging water level elevations from all monitoring wells shall be recorded and the data electronically submitted to the department's SWMP in a separate file concurrent with the results of Appendix I groundwater sampling analytical testing. The department's MGS shall be notified 72 hours prior to mobilization of any drilling so that on-site technical assistance can be provided to the driller and site manager.

Any field investigations shall include a descriptive log as noted in the department's guidance document entitled, APPENDIX 1, GUIDANCE FOR CONDUCTING AND REPORTING DETAILED GEOLOGIC AND HYDROLOGIC INVESTIGATIONS AT A PROPOSED SOLID WASTE DISPOSAL AREA. At the time of construction of any new monitoring well, full details concerning the drilling procedures and development shall be reported to the department's SWMP and the department's MGS before the department will grant approval for each well. The information and data submitted to the department's SWMP and the department's MGS shall include, but not be limited to, the following:

1. Depth and lithologic description of all water bearing or saturated zones encountered during drilling;
2. Descriptions of all geologic materials encountered and sampled during drilling, including: lithology, mineralogy, texture, grain size, color, fossil occurrence, percent sample recovery, and primary/secondary porosity features;
3. Changes in porosity and degrees of saturation of all geologic materials encountered, (e.g., dry, damp, moist, wet, and/or saturated) including their associated depths from the ground surface;

4. Water level depths measured from the ground surface immediately following daily final drilling activity and measured preceding any subsequent drilling activity;
5. Complete records of drilling fluid volumes, including any lost fluid volumes and depths at which they are lost;
6. Complete records of recovered (lost) fluids prior to installation and development of well;
7. A description of all sources and chemical analyses of potable water used in drilling or boring, analyzing for the same chemical parameters as specified in the enclosed groundwater parameters to establish baseline groundwater quality;
8. Complete details or methods(s) of drilling, including starting and ending times, depth and location of any drilling equipment refusals;
9. Measurements of drilling rate, including pressure gauges or weights on bit read during drilling and coring;
10. Measurements of soil sampling advance (e.g., loads on the sampling device as specified by the weight or number of blow counts to sample and/or refusal);
11. Complete details of well development, including starting and ending times;
12. Appearance of well fluids before, during, and after development;
13. Records of indicator parameters monitored throughout development;
14. Initial and final water levels immediately prior and immediately after development;
15. Initial well bore fluid volume (gallons);
16. Initial depth of well prior to development in feet from a specified point;
17. Total depth of well immediately after development from a specified point;
18. Total volume (gallons) evacuated during development;
19. Completed copies of all field notes;
20. Complete copies of monitoring well construction summaries having north and east location survey coordinates;

21. Complete copies of monitoring well boring logs having detailed soil and lithologic graphics/descriptions; and
22. Complete copies of the Monitoring Well Certification Record.

Existing or new wells improperly constructed, or screened to monitor improper or inadequate zones shall be abandoned as per 10 CSR 23-4.

All wells shall be constructed in accordance with Missouri Department of Natural Resources' Well Construction Codes, 10 CSR 23-1 through 6.

As per monitoring well construction standards cited above, each well borehole shall be at least four (4) inches larger than the outside diameter of the casing used.

Well construction (including locking cap security casing) shall be completed the same day the well casing is installed.

No wells shall be located in swales, drainage ditches, or any place where water can accumulate around the well. Proposed monitoring well locations are based on hydrogeologic and topographic information, and do not take into account the location of any man-made alterations to the site. Alternate locations, upon prior approval, may be accepted if conflicts arise with the proposed locations.

C. SAMPLING FREQUENCY/PARAMETERS

1. Baseline and Background Sampling

Prior to filling in a phase/cell, baseline groundwater sampling shall be conducted. The appropriate number of background samples being the greater of four (4) quarters of independent samples as described in 10 CSR 80-11.010(11)(C)3 or required pursuant to the statistical method approved for the site as per 10 CSR 80-11.010(11)(C)5 for all monitoring wells designated in this document. A minimum of eight (8) independent samples shall be taken over the first eight (8) quarters after the date of development of any new monitoring well. Each of these baseline samples shall be analyzed for the groundwater monitoring parameters contained in the enclosed list titled Groundwater Monitoring Parameters. During baseline sampling, compliance monitoring wells shall be sampled during the first, second, third, and fourth quarters of a year for the parameters contained in the enclosed list.

Subsequent to the first eight (8) quarters of baseline monitoring, the background database for each monitoring well will continuously be updated with detection monitoring data as described in "Groundwater Monitoring Plan" Appendix Q of the approved permit application. A report detailing the graphical and mathematical evaluation of historic and background groundwater data, including recommendations

for intrawell or interwell statistical analysis shall be provided to the SWMP prior to issuance of any authorization to operate within the disposal area.

2. Detection Monitoring

After the previously described eight (8) quarters of baseline sampling have been completed, all monitoring wells shall be sampled semi-annually in November and May for the parameters contained in the enclosed table entitled Groundwater Monitoring Parameters. Historic detection monitoring sampling results from existing monitoring wells must be compiled in electronic format and submitted to the SWMP prior to issuance of any authorization to operate within the disposal area.

All sampling results shall be submitted electronically to the department's SWMP within ninety (90) days from the date the sample is obtained. Data must be submitted in the precise format as prescribed at <http://www.dnr.mo.gov/env/swmp/gdwtrsub.htm>. Written reports detailing sampling activities and statistical analysis must be submitted to the SWMP within ninety (90) days from the date the sample is obtained. Reports must be bound and in duplex format.

3. Assessment Monitoring

The Permittee shall follow the procedures outlined in 10 CSR 80-11.010(11)(C)6 as a response to statistical analysis of significant difference in groundwater sampling results.

D. GROUNDWATER MONITORING PROGRAM

Statistical analyses of groundwater data or additional hydrogeologic characterization through subsurface sampling and testing could alter the interpretation of previous hydrogeologic investigations. Approval of this Groundwater Monitoring Program does not preclude it from any future revision.

E. INQUIRIES

All inquiries concerning these reporting procedures and/or any discussion of possible deviations from these reporting procedures shall first be directed to the department's SWMP at 573-751-5401 for consideration by the department.

**List of 10 CSR 80-11- Appendix I
GROUNDWATER MONITORING PARAMETERS***

Constituent Name (Appendix I) ***	Constituent Abbreviation	Reporting Unit	Constituent Name (Appendix I)	Constituent Abbreviation	Reporting Unit
Aluminum	Al	ug/l	Magnesium	Mg	mg/l
Antimony	Sb	ug/l	Manganese	Mn	ug/l
Arsenic	As	ug/l	Mercury	Hg	ug/l
Barium	Ba	ug/l	Molybdenum	Mo	mg/l
Beryllium	Be	mg/l	Nickel	Ni	mg/l
Boron	B	ug/l	pH **	----	S.U.
Cadmium	Cd	ug/l	Selenium	Se	ug/l
Calcium	Ca	mg/l	Silver	Ag	ug/l
Chemical Oxygen Demand	COD	mg/l	Sodium	Na	mg/l
Chloride	Cl	mg/l	Specific	----	umhos/c
Chromium	Cr	ug/l	Conductance **		m
Cobalt	Co	ug/l	Sulfate	SO4	mg/l
Copper	Cu	ug/l	Thallium	TI	ug/l
Fluoride	Fl	mg/l	Total Dissolved	TDS	mg/l
Hardness	Calculated	mg/l	Solids		
Iron	Fe	ug/l	Total Organic	TOC	mg/l
Lead	Pb	ug/l	Carbon		
			Total Organic	TOX	mg/l
			Halogens		
			Zinc	Zn	ug/l

* Groundwater Elevations are a required parameter and must be collected prior to purging

** ALL FIELD OBSERVATIONS SHOULD BE REPORTED ON THE CHAIN-OF-CUSTODY FORM AND SUBMITTED FROM THE LABORATORY IN THE ELECTRONIC FORMAT DESCRIBED BY THE DEPARTMENT.

*** ALL METALS ARE TOTAL ANALYSIS - DO NOT FIELD FILTER SAMPLES

