Mr. Paul R. Pike  
Environmental Science Executive  
Ameren Missouri  
1901 Chouteau Avenue  
P.O. Box 66149, MC 602  
St. Louis, MO 63166-6149  

RE: Groundwater Detection Monitoring System for a Proposed Utility Waste Landfill,  
Ameren Missouri Labadie Energy Center, Franklin County  

Dear Mr. Pike:  

On January 4, 2013, the Missouri Department of Natural Resources’ (Department) Solid Waste Management Program (SWMP) received the proposed groundwater detection monitoring system for the proposed utility waste landfill titled “Ameren Missouri Labadie Energy Center Groundwater Detection Monitoring System for a Proposed Utility Waste Landfill Franklin County, Missouri”, dated January 3, 2013, and prepared on behalf of Ameren Missouri by Reitz & Jens, Inc. and Gredell Engineering Resources, Inc. The SWMP, Geological Survey Program (GSP), and the Water Protection Program (WPP) reviewed this document to ensure compliance with 10 CSR 80-11.010(11).  

This document proposes the monitoring network to consist of the installation of 29 groundwater monitoring wells. Twenty-two (22) wells are designated as downgradient wells: MW-1 through MW-21, and TMW-1. These wells will be located generally on the north, east, and south sides of the site. The 7 wells designated as upgradient wells, MW-22 through MW-28, will be located on the west side of the site. The proposed well TMW-1 is a temporary well which will be located downgradient for Cells 1 and 2 until Cell 3 becomes operational, at which time TMW-1 will be removed.  

The SWMP grants the facility approval to install the proposed monitoring network with the condition that the following comments will be fully addressed during the Construction Permit Application phase. The SWMP, GSP, and the WPP have the following comments that are based on the review of this document.
COMMENTS:

1. The submitted document indicates the prevailing groundwater flow direction during periods of high river elevations is generally eastward. Conversely, Appendix W, Groundwater Hydraulic Data Summary, states “During periods of relatively low river elevations (November-February) the prevailing direction of groundwater flow was north-northwest toward the river.” The proposed locations of several wells designated as upgradient may potentially be in the groundwater flow path during periods of relatively low river elevations. In the event that the upgradient monitoring wells intercept downgradient groundwater, they may not provide sufficient data as initially intended.

2. As documented in the 2011 Detailed Site Investigation (DSI) of the site, groundwater flow direction in this alluvial setting fluctuates seasonally. As a result of the DSI, 22 proposed groundwater monitoring wells have been designated as downgradient and 7 wells have been designated as upgradient for the purpose of this groundwater monitoring program. In the event that data collected from a designated upgradient well has shown to be characteristic of a downgradient well, the well designation may need to be changed and the well spacing requirements for that monitoring area may need to be modified and justified.

3. Section 8.3 states that the facility will have two potential methods for purging of the groundwater monitoring wells prior to sampling. These purging methods consist of a purge/recover sampling method and the low-flow sampling method. It is encouraged that the facility implement a sampling procedure that will minimize the drawdown and agitation, and mixing of the stagnant casing waters. The use of bailers is not a prohibited sampling method, but the purging/recover method and sampling with a bailer may produce sample results that are biased and that are not representative to the groundwater. Therefore, it is strongly recommended that the facility implement a sampling method using the low-flow dedicated pumps.

4. In Appendix 2, titled “Missouri Solid Waste Management Rule Constituents for Detection Monitoring (10 CSR 80-11.010, Appendix I)”, please include the constituent molybdenum to the sampling list. It is requested to sample for molybdenum because this constituent has been identified as a pollutant of concern by EPA’s documents on coal ash. In addition, in the National Pollution Discharge Elimination System permit Ameren is required to have for water discharges, molybdenum was identified during the Technology Based Effluent Limit (TBEL) determination required for the coal ash pond. With molybdenum’s presence in the ash pond discharge and EPA’s identification of it as a pollutant of concern, the WPP requests that molybdenum monitoring be established and added to the sampling list.
Mr. Paul R. Pike  
Ameren Missouri Labadie Energy Center UWLF  
Page 3

If you have any questions concerning this letter, please contact Mr. Darrell Hartley of my staff at (573) 526-3940 or at P.O. Box 176, Jefferson City, Missouri, 65102-0176.

Sincerely,

SOLID WASTE MANAGEMENT PROGRAM

Charlene S. Fitch
Charlene S. Fitch, P.E.
Chief, Engineering Section

CSF:cr1

c:  
Mr. Kevin Gerhardt, Ameren Missouri  
Tom Gredell, P.E., Gredell Engineering Resources, Inc.  
Mr. Paul Reitz, Reitz & Jens, Inc.  
Mr. Peter Price, Chief, Environmental Geology Section, DGLS  
Mr. Chris Wieberg, Unit Chief, WPP  
St. Louis Regional Office