



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 7**

11201 Renner Boulevard
Lenexa, Kansas 66219

VIA EMAIL

Michael Cullen
City Attorney
City of St. Charles, Missouri
Michael.Cullen@stcharlescitemo.gov

Re: Ameren Bioremediation Injections

Mr. Cullen:

The U.S. Environmental Protection Agency (EPA) has considered the City of St. Charles' August 14, 2023, email request for the EPA to require Ameren to immediately discontinue any remaining bioremediation treatments that have yet to be completed within the Substation property until Ameren can assess the impact on groundwater quality. The EPA appreciates the City's concern and the information provided in your emails and letters dated August 14, August 20, and August 21, as well as Mr. Aselyne's email dated August 21. The EPA evaluated the request and considered many factors when deciding to let Ameren complete the current bioremediation injection plan.

The EPA has entered into a site-specific interagency agreement with U.S. Geological Survey (USGS), an independent federal agency of scientists that provides expertise in environmental issues, to provide hydrogeological support on the Findett site. The USGS is considering numerous scenarios that could have led to the decreasing levels of ammonia detected at the City's water treatment plant. The USGS is of the general opinion that the reduced concentrations are unlikely from the bioremediation efforts but agrees with the EPA that additional sampling is warranted to determine the potential cause.

Additionally, CW-4 is in full operating mode, reportedly pumping approximately 1,100 gallons per minute. The water is being pumped to waste and not to the treatment plant. CW-4's pumping rate appears to have an impact on the localized groundwater flow, therefore any impact from bioremediation at the substation is unlikely to reach CW-10, which when in operation is going to the city treatment plant.

The EPA contacted Ameren technical staff to discuss the impact of discontinuing bioremediation injections. As of August 16, 2023, when the EPA made the decision to allow the injections to continue, Ameren's consultants had completed four of the twelve injection locations. The first four locations were in the center and north portions of the substation. The remaining eight injections were on the eastern side of the substation. Groundwater sampling in June 2023 of newly installed monitoring wells (MW18 and MW19) showed detections of site contaminants on the east side of the substation, making treatment of this area with bio-injections a priority. In addition, Ameren indicated the "bugs" used as part of the bio-injections would only survive around two to three weeks (the work is currently in its third week). If the



EPA requires Ameren to stop injections, the “bugs” will die and the process would need to start over, delaying the treatment of groundwater contaminants.

Based on the above information, the EPA believes it is unlikely that Ameren’s injections inside or near the substation are having a reducing effect on ammonia concentrations in groundwater at CW-10 that is being pumped to the city water treatment plant. **The EPA believes that it is more protective of the public water supply to allow Ameren to complete the injections than to have Ameren stop while the EPA conducts the groundwater sampling for ammonia. Thus, EPA’s recommendation to Ameren is to allow the current phase of bioremediation of the primary contaminants of concern to continue.** The current round of bio-injections is projected to be completed by Thursday, August 24, and as stated in the EPA’s August 18 letter to the City, no future injections will be approved by the EPA until a determination is made on whether the injections resulted in reductions to ammonia in the groundwater.

Once sampling is complete, the EPA will continue to work with the Missouri Department of Natural Resources and the USGS to evaluate the sampling results and the local hydrogeological conditions to determine the potential cause of the reduction of ammonia in the groundwater.

The EPA appreciates the City’s cooperation regarding this important matter.

Sincerely,

Robert D. Jurgens
Division Director
Superfund & Emergency Management Division