

July 25, 2019

Attn: Mr. Roddy Rogers, P.E., D.WRE, F.ASCE  
City Utilities of Springfield, Missouri  
P.O. Box 551  
Springfield MO 65801

Subject: **Notification of Groundwater Protection Standard Exceedance**

Dear Mr. Rogers,

Pursuant to the Federal Coal Combustion Residuals (CCR) Rule notification requirements under 40 Code of Federal Regulations (CFR) 257.95(g), Jacobs is notifying City Utilities of Springfield, Missouri that antimony was recently detected at statistically significant levels above the Groundwater Protection Standard (GWPS) at the John Twitty Energy Center (JTEC) utility waste landfill (UWL). The GWPS for antimony at JTEC is 9.82 micrograms per liter ( $\mu\text{g/l}$ ) based on upgradient statistical data.

In April 2019, the sixteenth round of groundwater samples was collected from the JTEC groundwater monitoring well network over a two-week period. Analytical procedures/measurements were reviewed, and final data validation and statistical analyses were completed on July 15, 2019. Validated results from round sixteen include antimony concentrations above the GWPS at three groundwater monitoring wells, as summarized below:

- 1) MW-PZ-09D: An antimony concentration of 12.9  $\mu\text{g/l}$  well was initially recorded for this upgradient monitoring well. A laboratory reanalysis was requested because this result was an outlier from historical data for this monitoring well. The reanalysis concentration is 13.3  $\mu\text{g/l}$ .
- 2) MW-PZ-03D: An antimony concentration of 17.5  $\mu\text{g/l}$  was initially recorded for this downgradient monitoring well. A laboratory reanalysis was requested because this result was an outlier from historical data for this monitoring well. The reanalysis concentration is 18.9  $\mu\text{g/l}$ .
- 3) MW-SA-3: An antimony concentration of 10.6  $\mu\text{g/L}$  was recorded for this downgradient monitoring well. This concentration was within historical data ranges, and therefore, reanalysis was not requested.

Following the antimony exceedance that occurred during the thirteenth round of groundwater sampling in July 2018, an Alternative Source Demonstration (ASD) was prepared for the JTEC UWL (dated January 3, 2019) in accordance with 40 CFR 257.95(g)(3). The ASD demonstrated that the presence of antimony in the groundwater monitoring network is due to sources other than the JTEC UWL. The ASD concluded that the antimony detected in the JTEC UWL groundwater monitoring system is primarily caused by mobilized and transported antimony contained in surrounding soils from historical plant process wastewater piping releases upgradient of the JTEC UWL. Based on the low hydraulic conductivity of the site and slow-moving groundwater

through the monitoring system as documented in the JTEC Groundwater Characterization Report (2018), the historical wastewater pipeline releases could impact the groundwater monitoring system for the next several years. For this reason, the ASD covers future detections of antimony in the JTEC groundwater monitoring system. The antimony exceedance at the MW-PZ-09D well in July 2019 is important to note as it is upgradient of the JTEC UWL that further supports the conclusions in the ASD.

Should you have any questions, please contact me at (314) 335-4038 or by email at [jeff.farah@jacobs.com](mailto:jeff.farah@jacobs.com).

Sincerely,



Jeff Farah, PE  
Project Manager  
Jacobs Engineering Group Inc.

CC: Gary Pendergrass, GeoEngineers