

MEMORANDUM

DATE: March 31, 2021

TO: Ted Corrigan, P.E., CEO and General Manager

FROM: Michael J. McCurnin, P.E., Director of Engineering Services

SUBJECT: TCE South Plume

The “infiltration gallery” at the Fleur Drive Water Treatment Plant (FDWTP) continues to be an instrumental component in water treatment success for DMWW. Plant Operators maximize the volume of gallery water withdrawn every day as the water quality is optimal relative to the available direct surface-water sources. Lower treatment costs ensue by maximizing this withdrawal. Water quality in the gallery is also buffered from many of the dynamic water quality changes that are present in the Raccoon River (turbidity, nitrate, ammonia, total organic carbon, algal blooms, and cyanotoxins). In recent months, we have discussed threats and concerns to the gallery system. The “DICO site” and its TCE (Trichloroethylene) plume to the east of FDWTP and the arrival of PFAS in the western reaches of the gallery have been covered. A third concern for the gallery involves what staff refer to as the “TCE South Plume”.

State regulators (Iowa Department of Natural Resources) have been investigating the broad area south of George Flagg Parkway and north of Bell Avenue (between Fleur Drive and SW 30th) since 2004. There had been a known solvent release in the vicinity and a variety of monitoring wells were initially installed to assess the situation. Results from initial monitoring wells prompted the installation of additional monitoring wells and bore sites. By 2009, IDNR was in contact with DMWW to discuss installation of four sets of monitoring wells on DMWW property. After several years of monitoring and evaluating, IDNR believes the most elevated source concentrations are present at a property at 2201 Bell Ave. This property is the location of the former Stone Container and is owned by Mid-America Development Company.

While not accepting responsibility, initial discussions between Mid-America Development Company and IDNR were amicable enough that there was optimism that a remediation plan could be developed that would meet the approval of both parties. DMWW was supportive of that approach as only trace concentrations of the compounds have been detected thus far in source and finished waters. Unfortunately, in 2019, impasse was reached. In February of 2020, IDNR submitted a Request for Federal Action to the U.S. EPA. This effort by IDNR places the site into a further investigation phase to be completed by U.S. EPA and with possible removal and remediation by a determined responsible party.

In January of 2021, U.S. EPA and their contractor (Tetra Tech) made an initial visit to Des Moines and DMWW to take samples at various locations within the infiltration gallery system. While this is a lone test date, staff can report that detection of cis-1,2-dichloroethene (DCE) at very low concentrations (near 1 part per billion) was found at gallery Valve Chamber #4, the intercept shaft, and the north shaft. The maximum contaminant level (MCL) for cis-1,2-dichloroethene is 70 parts per billion. Also telling here was that there was no detection in Valve Chambers 3, 5, 7 and 8, which would indicate that the pollutant was not present in western and northern collection elements of the infiltration gallery.

Staff will continue to coordinate with U.S. EPA and monitor this situation.