



November 16, 2020

MR. JEFFREY DANKO
JOHNSON CONTROLS, INC
5757 N. GREEN BAY AVENUE
MILWAUKEE, WI 53209

MR. SCOTT WAHL
TYCO FIRE PRODUCTS LP
1 STANTON STREET
MARINETTE, WI 54143

SUBJECT: Response to Revised Long-Term Potable Well Sampling Plan
JCI/Tyco FTC (PFAS), 2700 Industrial Parkway, Marinette, WI
BRRTS Activity #02-38-580694

Dear Mr. Danko and Mr. Wahl:

On April 10, 2020, the Wisconsin Department of Natural Resources (DNR) received the *Revised Long-Term Potable Well Sampling Plan* (Plan) for the above-referenced site, dated April 1, 2020, and submitted by your consultant, Arcadis US, Inc. (Arcadis) on your behalf. The report was accompanied by the appropriate fee of \$425 for formal DNR review and response.

Background

On January 17, 2018, Johnson Controls, Inc. on behalf of Tyco Fire Products, LP (JCI/Tyco) reported a discharge of per- and polyfluoroalkyl substances (PFAS) to the environment. The discharge occurred as the result of PFAS-containing aqueous film forming foams (AFFF) being discharged as part of firefighting training activities conducted at the JCI/Tyco Ansul Fire Technology Center (FTC), located at 2700 Industrial Parkway in Marinette, Wisconsin (the Site), from approximately the 1960s through the fall of 2017.

Data collected as part of site investigation activities indicate PFAS contaminants have spread from the FTC via surface water and groundwater, impacting private and public potable wells and surface water in the Town of Peshtigo. Data indicate PFAS contaminants have spread east to the Bay of Green Bay in Lake Michigan. As a result, JCI/Tyco has conducted private and public potable well sampling in an area located generally east and southeast of the Site. The potable well sampling area (PWSA) is within the Town of Peshtigo and City of Marinette and is roughly bound to the north by University Drive, to the west by County Road B, to the south by Rader Road, and to the east by the Bay of Green Bay. The original *Long-Term Potable Well Sampling Plan* was submitted to the DNR on March 8, 2018, and the DNR provided general concurrence with revised comments submitted by JCI/Tyco on April 24, 2018.

Revised Long-Term Potable Well Sampling Plan

As requested by DNR, the Plan provides an update to the *Long-Term Potable Well Sampling Plan* submitted on March 8, 2018 and approved by DNR on April 24, 2018. The Plan presents the intended approach for monitoring of private and public potable wells, point of entry treatment (POET) systems, bottled water service, and POET system operation and maintenance. The Plan was required following the June 2019 recommendation from the

Wisconsin Department of Health Services (DHS) for a groundwater enforcement standard of 20 part per trillion (ppt) for combined perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS). The 20 ppt value is included for consideration in the Plan for discussion purposes. At DNR's request, the Plan will be revised and updated every six months, and relevant or potentially relevant PFAS benchmarks will be considered in future updates.

Plan Summary

The Plan states that new private and/or public potable wells brought into the monitoring program will be sampled twice, in consecutive quarterly events, pending access granted by the well owner/tenant. Based on the analytical results derived from these two monitoring events, subsequent sampling events will occur as follows:

- Annual sampling will be conducted if the combined concentrations of PFOA+PFOS are below 20 ppt for one or both events;
- Semi-annual (every 6 months) sampling will be conducted if the combined concentrations of PFOA+PFOS are between 20 and 70 ppt for one or both events;
- Quarterly sampling will be conducted if the combined concentrations of PFOA+PFOS are above 70 ppt for one or both events.

Potable wells currently in the monitoring program that have been sampled previously on four or more occasions as part of the program, or potable wells that have been subject to sampling four or more times using the criteria outlined above, will be sampled as follows:

- Biennial sampling (every 2 years) will be conducted if the combined concentrations of PFOA+PFOS are below 20 ppt for one or more prior events.
- Annual sampling will be conducted if the combined concentrations of PFOA+PFOS are above 20 ppt for one or more prior events.

In addition to potable well sampling, the Plan includes proposed monitoring schedules for existing and new POET systems. Any POET systems with original granular activated carbon (GAC) tanks that have been in operation for one year or more will be maintained by replacing the GAC tanks once per year without the collection of additional samples. Sediment filters will continue to be changed out every three months and the UV light and quartz sleeves will continue to be changed out once per year.

New POET systems will be monitored quarterly for the duration of one year to determine the GAC maintenance schedule and monitor any fluctuation of potable well results. The year of monitoring is to be conducted on the following scheduled:

- Initial sampling upon system installation and start-up;
- After three months of system operation;
- After six months of system operation;
- After nine months of system operation;
- After 12 months of system operation.

DNR Review

The DNR has conducted a review of the Plan. Given that a remedial action has not yet been proposed or implemented by JCI/Tyco, many of the proposed changes to the *Long-Term Potable Well Sampling Plan* cannot be approved as written. Therefore, DNR conditionally approves the *Long-Term Potable Well Sampling Plan* dated April 10, 2020, subject to the revision of the plan incorporating comments below in accordance with Wis. Admin. Code § NR 724.17:

- Clarify which potable wells fall into each category of proposed sampling.
 - For example, it is unclear if potable wells with POET systems remain in the general monitoring program. Please clarify if the general monitoring schedule is to be separate from the POET system monitoring.
 - The DNR recommends the Plan include a table to illustrate the sampling schedule for all well types discussed.
- Based upon information data provided in the Plan, the DNR does not concur with scaling back the monitoring frequency for wells identified as being previously sampled. The Plan should identify the reasoning used to support the reduction in overall monitoring frequency and should be further supported by data from previous reports, citing both data ranges (e.g. of PFAS concentrations) and report submittal dates as a part of this report.
- DNR does not concur with reducing the monitoring schedule for new potable wells entering the monitoring program as outlined in the Plan. The DNR directs that the following monitoring schedule be applied, based on laboratory analytical results:
 - Any new well with a recorded detection of PFAS compounds should be sampled quarterly for the first year, regardless of the levels of PFAS concentrations detected;
 - Wells with a full year of quarterly data with PFAS contamination concentrations below the laboratory reporting limit (RL) may be reduced to semiannually (every 6 months);
 - Wells with a full year of semiannual data with PFAS concentrations below the laboratory RL may move to annual sampling;
 - Wells with a full year of annual data with PFAS concentrations below the laboratory RL may move to biennial (every 2 years) sampling;
 - The DNR concurs with the POET monitoring and maintenance program as outlined in the plan.
- The plan discusses reporting results in relation to the United States Environmental Protection Agency's Health Advisory Level (HAL) of 70 ppt PFOA+PFOS. The guiding measure for health-based decision making at the Site are the recommendations for PFAS groundwater standards from Wisconsin DHS, rather than the 2016 EPA recommendation of 70 ppt for drinking water. Therefore, DNR directs that JCI/Tyco adhere to the following:
 - When sampling results are reported to property owners, tenants or both per Wis. Admin. Code § NR 716.14, PFAS results, as well as any additional sampled parameters, should be reported in accordance with the DNR letter, dated August 12, 2020, regarding DHS's recommendations for communicating private well testing results.
 - In future revisions of the *Long-Term Potable Well Sampling Plan*, review all applicable DHS recommendations for groundwater standards from Cycle 10 and Cycle 11 and apply these as decision-making criteria to private well sampling results. (Links to the DHS's recommended Cycle 10 and Cycle 11 groundwater standards are included below for reference).

The DNR appreciates your efforts to investigate and remediate this Site. If you have any questions about this letter, please contact me, the DNR Project Manager, at (608) 622-8606 or Alyssa.Sellwood@wisconsin.gov.

Sincerely,

A handwritten signature in black ink that reads "Alyssa Sellwood". The signature is written in a cursive, flowing style.

Alyssa Sellwood, PE
Complex Sites Project Manager - Remediation & Redevelopment Program
Central Office

Links:

DHS Cycle 10 Health-based Recommendations for ch. NR 140 Groundwater Standards (6/21/19)
<https://dnr.wi.gov/topic/Contaminants/documents/pfas/DHSLetter20190621.pdf>

DHS Cycle 11 Health-based Recommendations for ch. NR 140 Groundwater Standards (11/6/20)
<https://dnr.wisconsin.gov/sites/default/files/topic/PFAS/DHSCycle11Letter20201106.pdf>

cc: Mike Bedard, Arcadis (via email: Michael.bedard@arcadis.com)
Ben Verburg, Arcadis (via email: ben.verburg@arcadis.com)
Bridget Kelly, DNR (via email: bridgetb.kelly@wisconsin.gov)