

Mr. David Neste
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Wisconsin Department of Natural Resources
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Subject:

Response to Comments on the *March 2018 Long-Term Potable Well Sampling Plan*, Tyco Fire Technology Center, Marinette, WI
BRRTS Activity #: 02-38-580694

ENVIRONMENT

Date:

April 20, 2018

Contact:

Michael Bedard

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Dear Mr. Neste:

On behalf of Tyco Fire Products, LP (Tyco), Arcadis US, Inc. (Arcadis) submits the following responses to the March 30, 2018 Wisconsin Department of Natural Resources (WDNR) comments on the Long-Term Potable Well Sampling Plan (LTPWSP) referenced above. Each WDNR comment is presented below, followed by Tyco's response. A revised version of the Long-Term Potable Well Sampling Plan has been sent to WDNR along with this letter.

Comment 1: The Sampling Plan should state that all potable well sampling results must be provided to the Department, well owner(s), and occupant(s), as applicable, within 10 business days after receiving the sampling results Wis. Admin. Code§ NR716.14(1)].

Tyco Response: The LTPWSP has been revised to state that potable well sampling results will be provided to WDNR, well owner(s), and occupant(s), as applicable, within 10 business days. This modification is provided in the first paragraph of the "Project Communication" section of the document.

Comment 2: The Department recommends the potable well sampling area be expanded to include all properties south of Radar Road and west of Green Gable Road to County Trunk Highway (CTH) B. The additional area includes approximately three (3) properties and serves as a logical southern boundary as there is very little development in the area immediately south of Radar Road.

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Wisconsin Department of Natural Resources
April 20, 2018

Tyco Response: Three properties south of Rader Road, just west of its intersection with Green Gable Road have been added to the potable well sampling area, and the potable wells reported to be present on those properties have been sampled. No changes are necessary to the LTPWSP.

Comment 3: The Sampling Plan states that a modified version of United States Environmental Protection Agency (US EPA) Method 537. To maintain consistency with other PFAS investigations in the State of Wisconsin, the Department is requesting that the complete Method 537 be used for all drinking water samples, while the modified Method 537 can be employed for sampling of other media.

Tyco Response: Drinking water using US EPA Method 537 can be analyzed for a list of up to 14 PFAS compounds. This method will be used for analysis of PFAS in drinking water samples and all 14 PFAS compounds will be reported. A modified version of US EPA Method 537 will be used to analyze for and report this 14-compound list for environmental media samples. The "After Sample Collection" section of the LTPWSP has been updated to reflect this modification.

Comment 4: The Department recommends that each potable well sampled as part of the Sampling Plan be assigned a Wisconsin Unique Well Number (WUWN). This will aid in locating and tracking well sample results.

Tyco Response: Tyco agrees that assigning a WUWN to each well may aid in locating and tracking well sample results; however, Tyco believes that assignment of such information to a private well should be completed by a representative of a state agency.

If you have any questions regarding these comment responses, please let me know.

Sincerely,

Arcadis U.S., Inc.



Michael Bedard
Associate Vice President

Copies:

Roxanne Chronert – WDNR

Richard Mator – Tyco

Tyco Fire Products LP

REVISED LONG-TERM POTABLE WELL SAMPLING PLAN

Tyco Fire Technology Center, 2700 Industrial
Parkway, Marinette, Wisconsin 54143

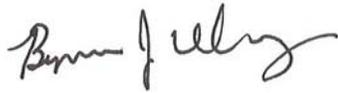
BRRTS# 02-38-580694

April 2018





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REVISED LONG-TERM POTABLE WELL SAMPLING PLAN

Tyco Fire Technology Center,
2700 Industrial Parkway,
Marinette, Wisconsin 54143
BRRTS# 02-38-580694

Prepared for:

Tyco Fire Products LP
2700 Industrial Parkway South
Marinette, Wisconsin 54143

Prepared by:

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Our Ref.:

WI001605

Date:

April 20, 2018

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INTRODUCTION

Sampling Plan (sampling plan) for the Ansul Fire Technology Center (FTC) located at 2700 Industrial Parkway in Marinette, Wisconsin (the Site). Tyco and Arcadis are conducting Site investigation and monitoring activities under the oversight of the Wisconsin Department of Natural Resources (WDNR).

Aqueous film-forming foams (AFFF) manufactured by Tyco and/or others have been used at the Site as part of R&D, quality and firefighting training activities. Per- and polyfluoroalkyl substances (PFAS) such as perfluorooctanoic acid (PFOA) and/or perfluorooctanesulfonic acid (PFOS) have been present in various of these foams. PFAS has been detected in groundwater at the Site and in off-Site potable wells. Tyco has and continues to conduct potable water sampling near the Site to assess the extent of PFAS in groundwater.

The U.S. Environmental Protection Agency (USEPA) classifies PFAS as a category of "emerging contaminants". In May 2016, the USEPA issued a drinking water Lifetime Health Advisory Level (HAL) for two PFAS, specifically the combined values of PFOA and PFOS, of 70 nanograms per liter (ng/L, or parts per trillion [ppt]).

POTABLE WELL SAMPLING SUMMARY

An initial potable well sampling event was conducted from December 2017 through March 2018. During this event, Arcadis sampled 137 potable wells located generally to the east and southeast of the Site. A summary of the sampling event and the results from the event is included in the following bulleted list:

- Potable wells sampled: 137
 - Potable wells with results above the HAL: 11
 - Potable wells with results between the laboratory analysis method detection limit (MDL) and HAL: 29
 - Potable wells with results below the MDL (non-detect): 97

Bottled water has been offered by Tyco to users of the approximately 140 private wells that have been sampled. Additionally, there are seven properties where Point of Entry Treatment (POET) systems have been installed to treat the drinking water. Arcadis has collected POET system samples to confirm the effectiveness of PFAS compound removal and ensure the POET systems are functioning as designed.

LONG-TERM SAMPLING PLAN

Potable Wells

The proposed sampling plan includes:

- Potable wells with results above the HAL: A quarterly sampling program to determine the temporal variability of PFAS concentrations;

REVISED LONG-TERM POTABLE WELL SAMPLING PLAN

- Potable wells with results between the MDL and HAL: A quarterly sampling program to confirm the presence and evaluate temporal variability in PFAS concentrations; and,
- Potable wells with results below the MDL: An additional sample will be collected in spring 2018 to confirm the absence of PFAS. The potential need for additional sampling of these wells will be assessed after review of the spring 2018 sampling results.

The sampling plan will be updated, as necessary, as new data is received.

POET System

POET system performance monitoring samples will be collected at the inlet, mid-carbon and outlet locations according to the following schedule:

- Initial Sampling – Upon system installation and start-up;
- Week 1 – After one (1) week of system operation;
- Week 2 – After two (2) weeks of system operation;
- Week 3 – After three (3) weeks of system operation;
- Week 4 (Month 1) – After four (4) weeks or one (1) month of system operation;
- Month 2 (Week 8) – After two (2) months or eight (8) weeks of system operation;
- Month 3 (Week 12) – After three (3) months or twelve (12) weeks of system operation;
- Month 6 – After six (6) months of system operation, continuing every six months thereafter.

In addition, other parameters may be monitored as needed for system performance assessment purposes.

SAMPLE PROCEDURE

The sections that follow provide an overview of the potable well and POET system sample procedures.

Prior to Sample Collection

Arcadis staff will coordinate a sample date and time with each well's contact person. Upon arrival, Arcadis will provide introductions and let the resident/property owner know the purpose is to collect a potable well sample for PFAS analysis in accordance with previous correspondence provided to them regarding the sampling. Arcadis will request information from the property owner regarding the water system at each property. Information that will be recorded includes presence of water softeners, sediment traps, filters, etc., and the location of these items.

Additional activities to be performed and procedures to be followed by the sampling team prior to potable well sample collection include:

- Don a new set of nitrile gloves immediately prior to sampling.

REVISED LONG-TERM POTABLE WELL SAMPLING PLAN

- Do not use gloved hands to subsequently handle papers, pens, clothes, etc., before collecting samples.
- Use the 2-250 mL HDPE bottles that are supplied by the laboratory for each sample location.
- Samples bottle caps must remain on the bottle until immediately prior to sample collection, and the bottle must be sealed immediately after sample collection.

During Sample Collection

Potable water outfalls and taps are likely to vary. If possible, the team will avoid sampling from any taps fitted with Teflon tape or other PFAS-containing materials. Stainless steel and polyvinyl chloride materials are acceptable. The sampling team will collect unfiltered samples from a tap or port, as follows:

- Initiate flow from the water source and allow the system to flush for at least 3 minutes.
- Collect the sample into the HDPE bottle until the sample bottle is full (leaving slight headspace in the bottle is acceptable).
- Tightly screw on the polypropylene or HDPE cap.

After Sample Collection

Upon collection, the sample bottles will be placed in a sealed Ziploc® bag. Sample collection information will be recorded including the sample identification (ID) and time of sampling on the sample bottle label, in the field notes, and on the chain-of-custody (COC) form. The COC form will be explicitly marked for expedited analysis with a standard turnaround time (approximately 3 weeks). Samples will be placed in durable coolers, with enough ice to keep the sample temperature between 0 and 4°C until delivered to the laboratory. Only “wet” ice will be used, with no use of “blue ice” or similar cold storage packets. PFAS sample coolers will be shipped via FedEx Priority Overnight delivery to:

Sample Receiving
TestAmerica Sacramento
880 Riverside Parkway
West Sacramento, California 95605-1500

Samples will be analyzed for all 14 PFAS compounds that are reportable using U.S. EPA Method 537.1.

All disposable sampling materials will be treated as single use, and disposed appropriately after sampling at each location. Samples from each residence will be kept in their own dedicated cooler with the appropriate quality assurance samples.

Quality Assurance/Quality Control

Avoiding cross-contamination from PFAS-containing materials during this sampling will be of utmost importance given the very low detection limits for the analyses that will be conducted for these compounds. As such, materials with the potential to contain PFAS will not be used during the sampling (including PTFE pipe tape, pipe thread pastes that contain PTFE, PTFE sample tubing, food wrappers, water resistant/proof clothing, waterproof field books, etc.)

REVISED LONG-TERM POTABLE WELL SAMPLING PLAN

Sample information, including sample ID and date/time collected, will be recorded on the provided bottle labels and attached to the sample bottles immediately after sealing the bottles. This information also will be recorded on the COC form provided by the laboratory, in a Potable Water Supply Sample Log, and in the sampling team's field notes. A signed copy of the COC form will be provided to the laboratory whenever a sample cooler is delivered to the laboratory. A copy of each COC form will be kept with the field notes and sample logs.

After receipt from the laboratory, Arcadis will conduct a preliminary data quality review (Level 2 data validation). The sample results will be communicated to well owners/users after completion of the preliminary data quality review, as outlined in the "Project Communication" section below. After completion of the preliminary data quality review, Arcadis will conduct a more comprehensive validation of the data (Level 4 data validation). The timeframe for the Level 4 validation may vary based on the amount of time required for the laboratory to send additional Quality Assurance/Quality Control information to Arcadis, and the number of samples under review. The anticipated timeframe for completion of Level 4 validation is approximately 8 weeks after sample collection, assuming timely delivery of results from the laboratory. If any changes to the reported sampling results become necessary after completion of the Level 4 validation, the well owners/users and WDNR will be notified of those changes.

PROJECT COMMUNICATION

Results letters will be provided to the applicable well owners/users and WDNR within ten business days of Arcadis receiving results from the laboratory. If the combined PFOA/PFOS values at a well were below the HAL for past sampling events, but are above the HAL for future sampling events, then a phone call will be placed to the well owner/user within two days of completing the preliminary data quality review for the laboratory results for that sample.

Tyco will also provide WDNR with periodic sampling result updates as wells are sampled, approximately every one to three weeks depending on the number of wells sampled in any time period.

CLOSING

Tyco continues to work directly with residents, community leaders and other federal, state and local agencies on this important sampling work, and will continue to keep the community informed of these activities.

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