

October 18, 2018

Via E-Mail & FedEx

Mr. Dave Neste
Hydrogeologist
Remediation & Redevelopment Program
Wisconsin Department of Natural Resources
625 E. County Road Y, Suite 700
Oshkosh, WI 54901

RE: Request for Site Information
Tyco Fire Products LP – Stanton St. Facility
1 Stanton St., Marinette, WI
BRRTS Activity No. 02-38-581955

Dear Mr. Neste:

Tyco Fire Products, LP (“Tyco”) received the Wisconsin Department of Natural Resources’ (“DNR”) Reported Contamination letter dated August 16, 2018. The letter included a Request for Site Information to be provided with 60 days.

Tyco is providing its response to the Request for Site Information.

Tyco appreciates DNR’s attention to this matter and looks forward to our continued cooperation.

Sincerely,



Richard Mator
Sr. EHS Manager – Environmental Remediation

Enclosure

WISCONSIN DEPARTMENT OF NATURAL RESOURCES

**RESPONSE OF TYCO FIRE PRODUCTS, LP TO
WISCONSIN DEPARTMENT OF NATURAL RESOURCES'
REQUEST FOR INFORMATION FOR TYCO FIRE PRODUCTS, LP FACILITY LOCATED AT 1 STANTON STREET,
MARINETTE, WI
UNDER SECTION WIS. STATS. 292.11(8); 292.31(1); 292.31(1)(D)(1)-(3)**

October 18, 2018

Tyco Fire Products, LP ("Tyco") prepared the following responses to the Wisconsin Department of Natural Resources ("WDNR") Information Request dated August 16, 2018 ("Information Request"). Tyco is providing its response to all requests within the Information Request related to the site located at 1 Stanton Street, Marinette, WI (the "Stanton Site").

The following responses correspond to the numbered requests in the Information Request (the Information Request language is set forth in italics). All responses were prepared with the assistance and advice of counsel and such discussions are covered by attorney/client and attorney work product privileges.

GENERAL OBJECTIONS

Tyco's objections are made without in any way waiving or intending to waive but, on the contrary, preserving and intending to preserve:

- (a) all questions and/or objections as to competency, relevancy, materiality, privilege, and admissibility as evidence for any purpose of the responses or subject matter thereof, in any subsequent proceeding involving Tyco;
- (b) the right to object on any ground to the use of these responses or the subject matter thereof in any subsequent proceeding involving Tyco; and
- (c) the right to object on any ground at any time to other requests or discovery procedures involving or relating to the subject of these responses.

Tyco has a corporate document retention program that limits the availability of older records and information. These responses are based on, and therefore necessarily limited by, the records and information still in existence, presently recollected, and thus far discovered in the course of preparing these responses. Tyco reserves the right to supplement and make any changes to these responses if it appears at any time that omissions or errors have been made or that more accurate information is available.

Tyco objects to each and every instruction and request to the extent that it seeks information that is not relevant or otherwise beyond that authorized by the Wisconsin hazardous waste laws.

Tyco objects to each and every instruction and request to the extent that it seeks information protected by the attorney/client privilege, the attorney work product doctrine, or any other applicable privilege or restriction, and Tyco has not included in this response copies of any such documents protected by such privileges, doctrines, or restrictions.

Tyco objects to each and every request to the extent that such requests are overly broad and unduly burdensome.

Tyco objects to this Information Request to the extent it lacks any definitions for the terminology utilized in the requests, such that Tyco is unable to determine what information is being sought by WDNR. Nothing in this response or in any subsequent or previous response to the Information Request shall be considered or deemed to be a waiver of these objections.

The following responses correspond to the numbered requests in the Information Request (the Information Request language is set forth in italics). All responses were prepared with the assistance and advice of counsel and such discussions are covered by attorney/client and attorney work product privileges.

RESPONSE

REQUEST NO. 1 *Describe the use and manufacture of PFAS or PFAS-containing materials at the Facility from the receipt of the material to the final use, sale or disposal of PFAS or PFAS-containing materials. Include in that the description the information on all entities responsible for its manufacture and use; the years involved in its manufacture and use; what it was used to manufacture; whether any product containing PFAS was used or tested at the Facility; the areas of the facility where it was manufactured and used; and whether it was emitted from any air emission sources.*

RESPONSE:

Background. Fire-fighting foam¹ consists of a number of materials that are blended together to make what is referred to as a foam concentrate or foam agent. One of the materials in the blend is a surfactant, and for certain formulations, that surfactant contains a small percentage of perfluorinated compounds (fluorosurfactant)². Note that not all foams contain fluorosurfactants, but for the purposes of this response, references to foam concentrate or foam agent are specific to those foams that do contain fluorosurfactants.

Historically, certain foam concentrates contained fluorosurfactants consisting of compounds with eight (8) carbon chain lengths (referred to as "C8" compounds). The 3M Company was the manufacturer of one particular fluorosurfactant that is believed to have been a C8 product, and due to the manufacturing process it used, those fluorosurfactants could also contain perfluorooctane sulfonate ("PFOS"). The 3M Company reportedly phased out the production of those fluorosurfactants in 2002.

¹ There are a variety of fire-fighting foams, one of which is commonly referred to as AFFF, aqueous film-forming foam.

² Certain foams may also contain fluoropolymers.

The formulas for the other process used to manufacture C8 fluorosurfactants (telomer-based) did not produce PFOS, but those compounds could contain or form perfluorooctanoic acid ("PFOA"). In cooperation with U.S. EPA, the manufacturers of the C8 fluorosurfactants worked to develop shorter chain length C6 products. These shorter chain C6 substances cannot form PFOA, however, due to the potential for impurities in the raw materials, PFOA or precursors could be present in the product as an impurity at trace levels.

As a note, perfluorinated compounds, is a broad term that can encompass PFOA and PFOS and other substances, and are also referred to as PFAS, which stands for per- and polyfluoroalkyl substances.

Historical Information for the Stanton Facility. Based on information obtained to date, it appears that The Ansul Company (now known as Tyco Fire Products, LP) may have first begun distributing fire-fighting foam manufactured by The 3M Company in approximately 1964. It is believed that Ansul received the 3M foam at the Stanton facility in 55-gallon drums and it may have been repackaged into one, three and five-gallon containers. It is also believed that containers may have been supplied directly to the customer through a warehouse or distribution facility. Tyco has not located any information to date reflecting that it had any role in blending or reformulating of the 3M foam. Distribution of the 3M foam is believed to have continued into the 1970s.

There was a fire training field at the Stanton Site that was located approximately where the current parking lot is present. (See Attachment 1 for an aerial photo showing the location of the former field). Use of this facility is believed to have been discontinued when the Fire Training Center ("FTC") at Pierce Avenue in Marinette (now 2700 Industrial Parkway) began operations, which is believed to be in or around 1961. Based on information obtained to date, testing of foam concentrate may have begun in or around 1962 and is believed to have started at the FTC. Tyco has not located any information to date indicating that foam testing was conducted at the fire training field at the Stanton Site.

In approximately 1973, Ansul partnered with a chemical manufacturer to develop foam agents using telomer-based fluorosurfactants (which would not have contained PFOS). This product was introduced between 1973-1975 and it is believed in that timeframe that blending operations started at the Stanton Site. Also around this time, Ansul would have terminated its distribution of the 3M foams. Ansul (now Tyco) subsequently began purchasing fluorosurfactants from other manufacturers. All blending using these materials and packaging of the resulting foam concentrate is believed to have occurred in Building 18 at the Stanton Site. (See Attachment 2 for a site diagram showing the Stanton Site and location of Building 18).

One of the suppliers of fluorosurfactants used by Tyco was Chemguard. Those fluorosurfactants were manufactured by ChemDesign, which is an independent entity whose manufacturing operations are located on the Stanton Site. In 2011, Tyco acquired Chemguard and in 2016, Tyco began sourcing fluorosurfactants directly from ChemDesign.

Chemguard also had a specialty chemical business, and in 2016, Tyco moved that operation to the Stanton Site. For those operations, fluorosurfactants and perfluorinated products sourced from ChemDesign and/or other suppliers are blended and/or repackaged, and those activities occur in Building 18.

Current Operations. The Stanton Site continues to blend and package foam concentrate and specialty chemicals and both of these processes continue to take place in Building 18 at the Stanton

Site. (See Attachment 3 for a diagram of Building 18 at the Stanton Site). ChemDesign also continues its manufacturing operations at the Stanton Site.

All raw materials and additives used in the foam concentrate and specialty chemical products are sourced from third parties, and all of Tyco's blending and packaging operations occur within Building 18 and the Building 18 tank farm.

Foam Concentrate: Fluorosurfactants used in the foam concentrate are sourced from various suppliers and primarily arrive in 265 gallon intermediate bulk containers ("IBCs" or "totes"). In the blending room in Building 18, a lance is placed in the tote of fluorsurfactant to pump material into the blending tanks. Other raw materials and water are similarly pumped into the tanks and materials are blended with an agitator in the tank for a time period ranging from 8-24 hours.

Once the blend is complete, foam concentrate is then pumped from the blend tanks into the filling station area, where containers ranging in size from 1.5 gallons to 320 gallons are filled. Containers of 55 gallons or less are palletized and wrapped prior to loading onto a trailer; totes are loaded directly onto a trailer.

Specialty Chemicals: Fluorosurfactants and other perfluorinated products are sourced from various suppliers and arrive in totes and 55 gallon drums. In the specialty products blending area in Building 18, products are repackaged or blended by pumping materials with a lance directly into final product containers. There is also a 1000 gallon tank with a filling machine that is used for preparation of larger volume of blends. Final product containers primarily range from 5 gallons to 55 gallons containers.

Samples are taken of raw materials and blended materials for both the foam concentrate and specialty chemicals products and tested in the quality control lab located in Building 71 at the Stanton Site. Those samples range from 5 mL to 1 liter in size and tests are performed prior to any blending as well as after the final product is formulated.

Based on Tyco's reasonable and good faith searches conducted to date for responsive information, and based on the physical properties of the materials used, Tyco is not aware of emissions of perfluorinated compounds from air emission sources resulting from its blending and filling operations.

REQUEST NO. 2 *Describe, using generic and trade names, the materials containing PFAS that were transported to or from, disposed of, stored, produced, used, handled, managed, or processed at or related to the Facility. The description should include the physical form (solid, liquid, gas) of any materials and the type of container used to transport, store, produce, use, handle, manage, or process the PFAS.*

RESPONSE: As discussed in Response to Request No. 1, for a limited period of time decades ago, Tyco distributed foam concentrates containing perfluorinated materials that were manufactured by The 3M Company. Due to the manufacturing process 3M used, those fluorosurfactants could also contain PFOS. It is believed that Ansul received the 3M foam at the Stanton facility in 55-gallon drums and it may have been repackaged into one, three and five-gallon containers. The 3M Company foam was in liquid form.

In the 1970s, Tyco changed over to foam agents using telomer-based C8 fluorosurfactants whose formula Tyco understands would not have produced PFOS, but those compounds could contain or form PFOA. In cooperation with U.S. EPA, the manufacturers of the C8 fluorosurfactants worked to

develop shorter chain length C6 products. These shorter chain C6 substances cannot form PFOA, however, due to the potential for impurities in the raw materials, PFOA or precursors could be present in the product as an impurity at trace levels. The C8 and C6 fluorosurfactants obtained from suppliers for the Stanton Site would have primarily been and currently are provided in 265 gallon totes. These materials are also primarily in solid form at room temperature. Due to the ubiquitous and persistent nature of perfluorinated compounds, as well as the limits of detection, it also cannot be ruled out that other perfluorinated compounds could be present from time to time in trace quantities in individual product batches.

Due to customer specifications and requirements, there are many variations of foam concentrate products that have contained different combinations of C6 and/or C8 fluorosurfactants. In general, those foam concentrates contain a small fraction of fluorosurfactants. The foam concentrates are blended in blend tanks that range in size from approximately 1,600-14,500 gallons capacity. After blending is complete, the foam concentrate is packaged into a range of container sizes, including 1.5 gallon, 5 gallon, 30 gallon, 55 gallon, 260 gallon and 320 gallon containers. On an infrequent basis, tanker trucks have also been used for finished product. The foam concentrate is in liquid form.

After the acquisition of Chemguard in 2011, and the direct supply of fluorosurfactants from ChemDesign to the Stanton Site beginning in 2016, Tyco started obtaining from other suppliers the perfluorinated raw materials to be used by ChemDesign to manufacture fluorosurfactants. These materials are contained in 265 gallon totes and are primarily in solid form.

With the specialty chemicals business starting in 2016, in addition to the above mentioned fluorosurfactants, the Stanton Site also started receiving perfluorinated materials from additional suppliers. These are primarily provided in 265 gallon totes and 55 gallon drums and are primarily in solid form at room temperature. Finally, samples are collected of the various materials and blended products for quality testing and these container sizes range from 5 mls to 1 L.

With respect to perfluorinated materials and wastewater that are sent off-site, these materials are primarily contained in 55 gallon drums and 265 gallon totes. There is also an approximately 14,800 gallon wastewater tank in the Building 18 tank farm that, when emptied, is pumped into a tanker truck.

REQUEST NO. 3 *Describe the transportation to or from, production, disposal off, storage, use, handling, management and processing of PFAS-containing material related to the Facility. Include in each description where and in what process at the Facility the transportation to or from, disposal, storage, use, handling, management, and processing of PFAS-containing material occurred at the Facility. E.g., the material was disposed of in landfill, drained to soil, sewer drain, etc. If the point of transportation to or from, production of, disposal of, storage, use, handling, management, or processing of PFAS-containing material changed over time, please provide dates of such changes and what changes were made.*

Tyco's responses to other requests within this Information Request address production, storage, use, handling, management, and processing of potential PFC-containing material related to the Stanton Site. This response addresses the transportation and disposal of potential PFC-containing waste related to the Stanton Site. Based on a review of available records and information, primarily from 2010 to present, Tyco has a reasonable and good faith belief that the majority of the potential PFC-containing waste generated at the Stanton Site is wastewater generated from Building 18. This wastewater is

currently transported off-site by Covanta (formerly Chief Industrial Services and Advanced Waste Services) to the designated facility in Kimberly, WI. Covanta then treats the wastewater and it is sent to the Kimberly, WI Publicly Owned Treatment Works (“POTW”). Smaller amounts of wastewater have historically been sent to Covanta’s Winneconne, WI, Oshkosh, WI, and the Former Ripon, WI locations for treatment and metering into the local POTWs. Between 2010 and present, approximately 270,000 gallons of wastewater from Building 18 has been transported and treated off-site.

Material from the sumps located in Building 18 is from time to time combined with the wastewater and disposed of as noted above. Based on a review of available records and information, material from the sumps with higher solids content that is not sent off with the wastewater is primarily transported off-site by Heritage Transport to the Heritage Environmental Services designated facility in Indianapolis, IN. The material is primarily managed by solidification and then landfilled. Between 2010 and present, approximately 17,000 pounds of material from the Building 18 sumps have been transported and disposed of off-site.

On occasion, Tyco sends off-specification/out-of-date or unused foam product off-site for disposal. Based on a review of available records and information, between 2010 and present, approximately 150 gallons of off-specification/out-of-date or unused foam material has been transported by Heritage Transport to the Heritage Environmental Services designated facility in Indianapolis, IN and primarily disposed of through fuel blending for use in incineration. In addition, approximately 3,550 gallons of this material was transported by Covanta Environmental Solutions to Veolia ES Technical Solutions in Sauget, IL and primarily disposed of by incineration.

Tyco has also on occasion disposed of clean up material from Building 18. Based on a review of available records and information, such material has been transported off-site by Heritage Transport to the Heritage Environmental Services designated facility in Indianapolis, IN and disposed of through incineration. Tyco also uses spill kits on occasion for minor spills inside Building 18 and such used spill kits are picked up and transported by ITU Absorbtech (“ITU”). ITU then cleans the materials and returns them to Tyco for reuse.

Waste material generated from quality testing of products from the lab at the Stanton Site has also been disposed. Based on a review of available records and information, such material was generally transported off-site by Heritage Transport to the Heritage Environmental Services designated facility in Indianapolis, IN and disposed of through fuel blending. Between 2010 and present, approximately 13 five-gallon pails of lab waste material has been transported and disposed of off-site. Some small quantities of samples, and residues from glassware washing, and historically, for a short period of time, some metered portions of wastewater from Building 18, have been disposed with wastewater that is sent to the City of Marinette, WI POTW.

Based on a review of available records and information, totes that previously contained PFC material have been transported by Covanta and disposed of at the Veolia site in Menominee Falls, WI. Other used totes and drums are transported to Kitzinger Cooperage in St. Francis, WI for reconditioning.

REQUEST NO. 4 *Estimate the amounts of PFAS-containing materials that were transported to or from, disposed of, stored, produced, handled, managed, or processed at or related to the Facility.*

RESPONSE: The Stanton Site manages a broad variety of materials that contain perfluorinated chemicals, including raw materials, intermediate materials and finished products. Some of these materials are received at the Stanton Site and then sent directly to ChemDesign for processing. ChemDesign then sends the processed materials back to the Stanton Site and those materials are used to formulate and/or repackage the materials into finished products. Additionally, materials are received from other suppliers and are repackaged, or are reformulated and repackaged. In addition, the Stanton Site at times receives product returns or has off-specification material that is reprocessed and repackaged. For this reason, it is extremely difficult to provide a characterization with any certainty of the amount of perfluorinated materials managed and processed at the Stanton Site. In addition, because the materials may contain anywhere from 12 percent to 100 percent perfluorinated material it would be difficult to quantify the amount of perfluorinated materials managed by the Stanton Site.

REQUEST NO. 5 *Identify which part of JCI/Tyco's operations, including storage, involving PFAS or PFAS-containing materials, generated waste, including but not limited to wastes resulting from spills of liquid materials and wastes generated by cleaning and maintenance of equipment, inventory cleanout, off-specification determined wastes, and machinery. Include locations where the waste was generated and stored and an estimation of the volume or mass of the waste generated and stored.*

RESPONSE: In general, the operations that primarily generate waste involving perfluorinated materials are rinsing of equipment and totes in Building 18, incidental spills of materials in Building 18, and cleaning of equipment prior to maintenance in Building 18 or the Building 18 tank farm. Wastewater from these operations is primarily captured in the trenches and sumps within Building 18 and pumped into the wastewater tank in the Building 18 tank farm or into totes that are stored in Building 18 or on the paved storage area on the west side of Building 18. (Note per Response to Request No. 7 that some of the rinseate is returned to the blending process). Totes that are destined for disposal and/or reuse are stored in Building 59 or in the Building 18 storage area, or may be stored on a trailer. Solid materials (e.g. adsorbent pads from spill cleanup) are collected in 55 gallon drums and stored in Building 18 or the Building 18 storage area.

The Stanton Site also generates a small volume of waste from samples of final products that are tested in the quality control lab and rinsewater from cleaning of glassware.

At times, the site may have perfluorinated product that is off-specification or outdated, or retain samples that are scheduled for disposal. Off-specification material is typically reformulated and re-blended into final product, but occasionally it cannot be re-blended and is transferred to the wastewater tank or totes. Since 2016, some off-specification and outdated material has been or is stored in Building 59.

The site also operates a groundwater collection and treatment system, and reject water from the reverse osmosis process, which may contain perfluorinated compounds, is stored in a tank in Building 14, the Groundwater Treatment Building. Additionally, the Stanton site has four temporary 10,000 gallon tanks which were installed in 2016 that store groundwater that is pumped out of the ground as part of the seasonally-operated groundwater pump down program.

Please see the response to Request 6 for waste generation information related to a tank failure in or around 2013.

Historically, the Stanton Site has removed and disposed of certain tanks in the tank farm area. Based on recollection of site personnel, it is believed these tanks would have been rinsed prior to removal and the wastewater collected in the wastewater tank or a tote.

REQUEST NO. 6 *Identify releases of PFAS of PFAS-containing materials and describe the methods used to clean up the releases including but not limited to:*

- a. The types of materials spilled,*
- b. The media onto or into which the spill occurred,*
- c. The materials used to clean up those spills,*
- d. The methods used to clean up those spills, and*
- e. Where the materials used to clean up those spills were disposed of.*

RESPONSE: In or around 2013, there was a tank failure of a blend tank located in the tank farm that resulted in the release of blended product into the containment dike. A maintenance employee removed an agitator from an opening on the side of the blend tank that contained product at a level above the level of the opening in the tank, which resulted in the release. Personnel at the site immediately activated the sump pumps within the dike area and the material was then pumped out of the dike and contained in the wastewater tank that is also in the tank farm. Site personnel also immediately began emptying the contents of the tank by pumping product out of the bottom of the tank into totes. The tank contained approximately 12,000 gallons of product and it was estimated that between 3,000-6,000 gallons were released into the dike containment. Due to the initial pressure of the release, personnel noted there was some overspray outside of the containment. Employees also recalled that, at this time, there was a small leak in the dike, but all material escaping from the dike was promptly cleaned and disposed of in the wastewater tank or in totes. The Maintenance Department later repaired the dike with grout.

A forklift also recently punctured a tote that was stored outside Building 18. The tote was moved to a contained area and placed on its side following the puncture. Personnel also recall that the material inside the tote was in solid form. Personnel did not recall material being released from the tote.

Personnel also recall other minor leaks at times from the agitator seals in the tanks (in the tank farm) that were captured in the containment dike and pumped into the wastewater tank. Inside Building 18, there have been various leaks and spills from equipment used in the blending and filling processes such as hoses and piping; however, those items were repaired and material related to those leaks was captured in the trenches and sump within the building and pumped to the wastewater tank. Historically, at times, small amounts of material would be seen foaming on the ground. In these instances, employees would vacuum the material up and pump it into the sump and then into totes.

REQUEST NO. 7 *Describe the cleaning and maintenance of equipment and machinery involved in PFAS operations, including but not limited to:*

- a. The types of materials used to clean and maintain this equipment/machinery,*
- b. The monthly or annual quantity of each such material used,*

- c. *The disposition of those materials used in cleaning equipment, and*
- d. *Where the materials are/were disposed of.*

RESPONSE:

Cleaning. There are cleaning and maintenance procedures for both the specialty chemical and the foam blending activities. Both processes use water to clean equipment and surfaces. The equipment used for the specialty chemicals in general is cleaned after each product change. The rinsewater is collected in totes separately or combined with rinsewater from the foam blending operations.

With respect to the foam processes, both the blending area and the filling area have trenches on the floor that drain to a sump and materials collected in the sump from cleaning or otherwise are pumped into the wastewater tank or totes. The blend tanks and related equipment are not typically cleaned out. That equipment is rinsed as needed, but the rinsewater is typically deposited directly into the blended product. There is a reservoir in the foam packaging area that pumps product from the blend tanks into containers and that reservoir is cleaned on a regular basis. The reservoir is cleaned by pumping water into the reservoir with a hose and the rinsewater from the reservoir is collected in a tote or the sump and primarily pumped into the wastewater tank. Historically, drums of materials were also rinsed using water and the rinsewater was pumped directly into the blend.

The floors in the specialty chemical and foam filling area are also washed down on a regular basis. That rinsewater is captured in the floor trenches and the sump in Building 18 and is primarily pumped into the wastewater tank.

Maintenance. Currently, there is no predetermined or set schedule for the maintenance of the specialty chemical or foam equipment. Equipment is repaired and maintained on an as needed basis. The tank farm had concrete pads under each tank when constructed, and diking and a full concrete floor were added in late 1980s. Recollection of personnel was that concrete was resealed every 7-10 years. More recently, maintenance was performed on the containment in the tank farm area in 2010. The containment area/dike was coated at that time. Berms were also installed at all entrances to Building 18 at the Stanton Site in the 2009 to 2010 time-frame. Over the years, various tanks were relined and a concrete floor was poured on top of the original floor in the filling area of Building 18. This floor was recoated in the mid-2000s. There has also been comprehensive relining of the storm water drains and piping at the Stanton Site. Over the years, repairs have been completed on the various blending and filling equipment including the piping and tanks.

REQUEST NO. 8 *Was there ever a spill, leak, release or discharge of PFAS into any subsurface disposal system or floor drain inside or under the buildings within the Facility or that may have migrated from the Facility? If so, identify:*

- a. *Where the disposal system or floor drains were located,*
- b. *Whether the disposal system or floor drains were connected to pipes,*
- c. *Where such pipes were located and emptied,*

d. *Whether such pipes ever leaked or in any way released the substances into the environment.*

RESPONSE: Based on Tyco's reasonable and good faith searches conducted to date for responsive information, to the best of Tyco's knowledge, except as noted and generally described in response to Request No. 5, 6, and 7, Tyco has not located other information showing that there has been a material spill, leak, release or discharge of PFCs into any subsurface disposal system or floor drain inside or under the buildings within the Stanton Site or that may have migrated from the Stanton Site.

REQUEST NO. 9 *Identify all entities who transported reject water from the Groundwater Collection and Treatment System (GWCTS) and the location(s) where reject water was disposed. Provide information regarding dates and volumes of reject water sent off-site for disposal.*

RESPONSE: Based on a review of available records, Tyco has identified seven entities that have transported reject water from the Groundwater Collection and Treatment System ("GWCTS") since its start up in 2011. Tyco notes that Covanta was formerly Chief Industrial Services and Advanced Waste Carriers. The entities are as follows: (1) Advanced Waste Carriers; (2) Covanta; (3) Heritage Transport; (4) SET Environmental Incorporated; (5) Veolia ES Technical Solutions; (6) Vickery Transportation; and (7) Ziron Environmental.

Such reject water was transported to the following designated facilities: (1) Covanta Treatment, Winneconne, WI for solidification and then sent to a Waste Management landfill; (2) Heritage Environmental Services, Indianapolis, IN for solidification and disposal; and (3) Vickery Environmental, Vickery, OH for deepwell injection.

In each year between 2012 and 2017, Tyco sent approximately between 700,000 and 1.1 million gallons of reject water off-site for disposal. Filter cake from the GWCTS is also disposed of off-site at the Menominee City landfill.

REQUEST NO. 10 *Was there ever an application of PFAS or PFAS-containing material, including Aqueous Film-Forming Foams (AFFF) and Alcohol Resistant-AFFF to the ground for fire training purposes or to extinguish a fire? If so, identify:*

- a. *Where the fire or fire training occurred,*
- b. *When the fire occurred,*
- c. *The range of dates when fire training occurred, estimate the volume of PFAS or PFAS-containing materials were applied to the ground.*

RESPONSE: As described in Response to Request No. 1, there was a fire training field at the Stanton Site that was located approximately where the current parking lot is present. Use of this facility is believed to have been discontinued when the FTC at Pierce Avenue in Marinette (now 2700 Industrial Parkway) began operations, which is believed to be in or around 1961. Based on information obtained to date, testing of foam concentrate may have begun in or around 1962 and is believed to have started at the FTC. Tyco has not located any information to date indicating that foam testing was conducted at the fire training field at the Stanton Site.