Attachment 4a

NEW HAMPSHIRE DEPARTMENT OF Environmental Services

NH DIVISION OF Public Health Services
Improving health, preventing disease, reducing costs for all

Southern New Hampshire PFOA Investigation: Public Meeting in Merrimack, NH

March 23, 2016

NEW HAMPSHIRE DEPARTMENT OF Environmental Services

Saint-Gobain APFO Use and Air Permit History in Merrimack

- 2005 – Following emissions testing in Merrimack, NHDES determined that the potential existed to exceed ambient air limits for APFO
- 2006 – Administrative Order by Consent requiring the phase-out of APFO use at facility
- 2007 – Substantial reductions achieved
- Current emissions of APFO reported by Saint-Gobain to be at or near zero

Attachment 4b

quinn emanuel trial lawyers | new york
51 Madison Avenue, 22nd Floor, New York, New York 10010-1601 | TEL (212) 849-7000 FAX (212) 849-7100

To DES from St. Gobain

April 12, 2016

CONFIDENTIAL – PROPRIETARY INFORMATION
VIA E-MAIL AND FEDERAL EXPRESS
Mitchell D. Locker, P.G.
Groundwater Recharge Program
New Hampshire Department of Environmental Services
Telephone: (603) 271-2858
Email: Mitchell.Locker@des.nh.gov

Re: Saint-Gobain Performance Plastics Production of Information Requested (SGPPL0050000001-SGPPL0050000024)

Dear Mitchell:

On behalf of Gwénaël Busnel of Saint-Gobain Performance Plastics, we are enclosing two documents containing information that we understand you requested during your visit to the Company's facility in Merrimack. Please note that these materials contain confidential, proprietary business information the disclosure of which would cause competitive business harm. Accordingly, we request that you treat these materials, including this letter, in a confidential manner. In addition, the attached materials that appear in a slide format have been redacted and excerpted without annotations for your ease of review and while still providing the information that we understand to be of interest. Please also note that on the twelfth slide, which refers to APFOs, there had been an incorrect reference to the year 2013, which the Company has corrected here to refer to 2014 ("No APFO after 2014"). Please let me know if you have any questions.

Sincerely,

/s/ Mark S. Cheffo
Mark S. Cheffo

Attachments

cc: Gwénaël Busnel
Edward Canning

Attachment 4c

transmission system maintenance location is between Mallard Point Road and Buck Meadow Lane. This work is expected to take one day to complete.

Perfluorooctanoic Acid (PFOA) Information Update

1. **Presentation and Discussion by the New Hampshire Department of Environmental Services Regarding Historical Perspective of Air Quality Testing at St. Gobain / Chemfab Site**
   Submitted by NHDES Asst. Commissioner Clark Freise, Air Permit Programs Mgr. Cathy Beahm and Sr. Compliance Assessment Engineer Edward F. Peduto, Jr.
   Town Council to be presented with historical details of air quality testing at the Saint-Gobain / Chemfab site.

Councilor Mahon stated his memo to the Council explained the rationale for gathering the information around air quality issues involved in the discharges from the Saint-Gobain property in prior years. He questioned the responsibilities of the New Hampshire Department of Environmental Services (NHDES) in this regard, and spoke of an agreement the NHDES entered into with Saint-Gobain in the 2004 or 2006 timeframe relative to the reduction of the use of PFOAs, and what has transpired since.

Mr. Clark Freise, Assistant Commissioner, NHDES, stated PFOA as APFO, which is its salt version, has been used at the Saint-Gobain facility dating back to at least 2001. Chemfab operated towers since at least 1988, and they probably used APFO at that time. However, that is not known for sure. In 2001, Saint-Gobain Performance Plastics installed 9 additional towers, effectively doubling the capacity of the facility. At that point, it is known they were using APFO.

APFO is regulated by NHDES as an air toxic pollutant, which means they measure how much goes into the air, and at the fence line there is a limit of what can be put into the air by concentration. In 2001 when Saint-Gobain obtained their permit for the expanded operations, they applied using information from testing that was done at their New York facility, which showed no detected level of APFO coming out of the chimneys.

In 2004, more modern methodologies were invented and they retested. At that point they did detect that APFO was coming out of the smokestacks. They reported that to NHDES, and in 2005 following some follow-on emissions testing in Merrimack at the plant, it was determined that there was a potential if all of the chimneys were run at the same time that they would exceed the ambient air limits that are set for PFOA APFO.

In 2006, an Administrative Order by Consent (AOC) was signed requiring the phase-out of APFO use at the facility. During the phase-out period, Saint-Gobain was limited to an APFO dispersion content of 75 parts per million (ppm), which was a reduction by at least a factor of 2, and they also made commitments to reduce the total amount they were using. The last APFO containing dispersion was used December 2014.

In 2007 reports from Saint-Gobain, they were able to show that substantial reductions had been achieved in line with their commitments. May 2nd or 3rd of this year a new stack test was conducted. The results were received around July 21st, and showed there are still very low levels of PFOA coming out of the stack. The NHDES went to the suppliers of all of the chemicals that they use (they provided their proprietary information), all of which have provided written statements that none of the chemicals

contain any PFOA any longer, which means there is a residue left in the Saint-Gobain plant, and that is where the PFOA is coming from. Saint-Gobain has gone through and stripped out one line, put in all new stacks, sandblasted all of the internal ductwork, and last week air tests were conducted on that stack. Those results will be available in 2-3 weeks. If it is found it is just the residue that is in the ducting that is providing this low level APFO PFOA, they will go through and strip the rest of the facilities down.

Councilor Mahon questioned if the stack test was conducted by the NHDES. Assistant Commissioner Freise responded in 2004, Saint-Gobain did the testing at their New York facility, and identified that they were now seeing it through advanced technology. In 2005, air testing was conducted at the Merrimack facility. That is when they found, through calculation, that they could exceed the ambient air limits. The NHDES either hires a firm or requires the company to hire a firm approved by NHDES to conduct the testing. In the instance of the testing conducted this year, Saint-Gobain hired the firm and NHDES did the Statement of Work and was present for the testing.

Chairman Harrington commented what was being discussed was C8. Being used now is C6. She questioned if that is analyzed. Assistant Commissioner Freise responded C6 was part of the air tests that were done. The lab that is used, ALS Global, has created a test for C6, the C6 that they use. That has been tested in the water samples in the area (random sample), and to date, that has not been seen. The C6s that are used now are designed to break down in the environment, and part of the proprietary information is exactly what that break point is and exactly how it is designed. They do know what the break point for the C6 that is used in Merrimack is. In tests which are for the whole C6 unit, not the breakdown, that has not been detected. It appears to be breaking down as designed.

Chairman Harrington asked for clarification if the most recent testing included C6, and was informed it did not. Assistant Commissioner Freise reiterated ALS Global invented the test for the one C6. It is brand new. Chairman Harrington noted concern has been expressed that at some point in the future there may be additional information available to indicate there should have been concern with C6.

Assistant Commissioner Freise commented with the small amount of research they have been able to find on the C6s, they understand they do not have nearly the half-life in the body, and are less toxic than the C8s. The risk to the human being is how long it stays in your body and how toxic it is while there. If both of those are significantly lower the multiplier is much lower; instead of hanging in for 3.8 years as PFOA does, it apparently hangs in for a couple of days. There are a series of C6s and the ones they have been able to find any data on, they are apparently less toxic too.

Chairman Harrington spoke of the sampling of blood tests the Department of Health & Human Services (DHHS) will be conducting, and questioned if the number of letters sent out and the type of response received was known. Assistant Commissioner Freise stated his belief letters were intended to be sent to 200 households, randomly selected with a goal of getting 200 individuals to participate. They worked with the NHDES and the bottled water list, which is being used as a standard in the State. The DHHS worked with the NHDES through its GIS system to get a good random distribution throughout (Merrimack and Bedford). He stated his belief the letters have been sent out, but the households have not been selected as of yet based on responses.

Chairman Harrington noted there was concern expressed by individuals who rent that if notice was sent to the owner of an apartment complex for example, the 40 some odd residents may not be aware.

Assistant Commissioner Freise remarked he had not heard that concern expressed previously. However, noted that is a situation that they ran into in the Town of Litchfield where the homeowner is not as responsive as those residing in the property in wanting to get bottled water. He reiterated the desire is to obtain a random sampling through the system, and there is the need for a family. If that random nature is filled in with a family, whether they reside in an apartment or a house is irrelevant. Councilor Koenig requested confirmation the DHHS is utilizing the bottled water list of NHDES, but is not sending the letter to people receiving bottled water, they are sending those letters to people that are on MVD water. Assistant Commissioner Freise stated the DHHS had wanted the list because it contains good contact information, by individual. They are doing the random sample, but where they had them and they overlap with the list they are using that because of the contact information, which would address the apartment issue. Councilor Koenig stated the letter should be going out to residents that are on MVD water not people that are on wells, and receiving bottled water. Assistant Commissioner Freise noted the NHDES gets a lot of people who have sent in information expressing concern. That contact information is available and is shared with DHHS.

Councilor Koenig questioned if air quality sampling occurred between 2006 and 2016. Assistant Commissioner Freise responded it did not. Councilor Koenig asked for clarification for ten years while they were phasing it out there was no testing. Assistant Commissioner Freise stated there was testing in 2007.

Edward F. Peduto, Jr., Senior Compliance Assessment Engineer stated that was the confirmatory test that they did after NHDES issued the Administrative Concept Order where they were restricted to 75 ppm. After that they were required to test to demonstrate that they were in compliance with the ambient air limits for APFO. Since then, no tests were completed until May 2, 2016. During that time they were phasing down from the 75 ppm, and the raw material manufacturers, through a Consent Agreement with the Environmental Protection Agency (EPA), went through and modified the materials over an 8 year period with total phase down to occur by 2015. By 2010 they pretty much reduced the amount of AFPO on those materials by about 90%. Entering the first half of the next decade (2010-2015) they were at about 15 ppm. The phase out from the industry that actually manufacturers it was targeted for 2015.

Councilor Koenig remarked in 2004, 2005, or 2006 you had an agreement to reduce, and questioned if there was a time when the NHDES stated that could no longer be used.

When asked, Cathy Beahm, Air Permit Programs Manager, stated the air standards, the ambient air limit, was demonstrated to be in compliance in 2007 based on a certain concentration of APFO in the product at that time. That standard has stayed the same for air. Since then they have reduced the concentration of APFO in their raw materials, but they were already, at that point, in compliance with the ambient air limits. They were continuing to reduce, but it wasn't necessary to show compliance with ambient air limit.

Councilor Koenig commented that still leaves 8 or 9 years of having no idea of what was going on as no testing was being done. Assistant Commissioner Freise responded they didn't directly test the air, but Saint-Gobain, at the end of every year, for any controlled chemical, have to state how much they put out. They did give annual reports. It was measured in 2007, they said they had come down, that could be seen, and then each year they reported, and they showed a very consistent trend of using less and less of the material, which would end up with how much was emitted. In 2007, they got within the

ambient air limits, but under the AOC, they continued to bring it down, and then also in line their suppliers, with their commitment to the EPA, were bringing it down in the materials. They were both using a material that had less of it in it, and they were committed to using less, which they followed through on.

Chairman Harrington commented an assumption was being made based upon the products being used. Ms. Beahm stated they reported actual usage and material balance information/concentrations.

Councilor Koenig stated eventually it showed up in our water supply, and we don't know when it started showing up in the water supply. It obviously took a while, and something was happening during that duration. Assistant Commissioner Freise stated they believe Chemfab was using it. They don't know for a fact, but believe they were using AFPO, and it was at a much higher concentration than what they went down to in 2006/2007. He stated his suspicion the PFOA that is being found in the drinking water now was emitted in the '80s, '90s, '00s and '10s. It is an accumulation of all of that.

Councilor Mahon questioned what responsibility the NHDES had at that point for monitoring what Chemfab was emitting. Assistant Commissioner Freise responded it is an air toxic. They do have to report how much they are using. The tests of the time showed no emission because they couldn't detect it. Once there was detection and they knew it was actually coming out, is when the AOC was put in place, and they started bringing it down. Ms. Beahm noted the concentrations in the raw materials is parts per million (ppm), and the concentration being discovered in the water is parts per trillion (ppt). Yes they were emitting it at a period of time that was not measurable. When it became measurable they dealt with it and brought it into standards for ambient air limits, but now have discovered that it is getting into the water, and they are working on that part of it.

Councilor Boyd questioned if it is a fair assumption that from 2007-2016 the NHDES relied upon the information provided by Chemfab/Saint-Gobain, but did not physically validate the information that was being communicated. Assistant Commissioner Freise responded they checked the information Saint-Gobain provided, which was how much they used. They did not go up and actually measure it at the stack because in 2007 when they reported less use and NHDES measured at the stack, they matched. The NHDES did not year-after-year, when they reported less, go up to make sure it was 1/3 less coming out of the stack. He added that is how they regulate contaminants around the State.

Councilor Boyd spoke of the comments made that they don't do a lot of air sampling; use water sampling as a surrogate. He questioned what information could be gleaned from sampling water that might not be through air sampling, and what the value is of using water as a surrogate as opposed to sampling at the source. Assistant Commissioner Freise stated it is surrogate in this area. The reason they are doing that is because that is where the health risk is. Everything they have seen; the amount that is emitted out of the stacks, the inhalation, is not the risk factor, it is the ingestion of the water. They have concentrated their efforts on testing the water because that is where the risk is and that is where the direct contact is.

Councilor Boyd questioned were he to stick his head over one of the chimneys while it was emitting toxics into the air and he were to breathe that in the potential of him developing something as a consequence of doing that would be far less as opposed to drinking water that would be absorbing what was being emitted out of the smoke stack. Assistant Commissioner Freise responded "yes".

Vice Chairman Rothhaus questioned when the NHDES began testing the water. The response was there are two runs of testing; one a few years ago (2014) called the Unregulated Contaminate Monitoring Rules (UCMR). Of the samples that were taken in the Merrimack area most tested no-detect. One tested around 32. When they retested it, it came back as no-detect. At that point they really could only detect at about 20-25 ppt. At that time the only advice they had was called the Divisional Health Advisory, and it said that 400 ppt is the worry line. Saint-Gobain, because of what was occurring at their other facilities in New York and Vermont, tested their water. They came back at 30 ppt from the MVD water. The difference is the NHDES was reading the same news out of New York and Vermont, and had started plans to go out and do their own testing to see what they would find. They had the team ready to go once they got their results. Although far below the provisional health advisory they have learned a lot in the past few years, and testing can now detect very consistently down to 2 or 3 ppt.

Vice Chairman Rothhaus questioned if there is the potential this will continue to increase as everything percolates down through to the well source. Assistant Commissioner Freise stated the hope is that it will not. This has been consistently cut out of everyone's process stream since the agreement with the EPA (2005-2008). Everybody has been getting less and less of it into their process stream, and a number of companies have been putting controls on. TCI, Amherst, put secondary treatment on their stacks, and that clearly is having a bigger impact. Between having the total levels come down, people being more and more careful, the amount that has been getting into the air has been coming down. It should be that we see this eventually start to just remediate from natural wear and tear on the chemicals. This stuff doesn't tend to stick in the soils it tends to go through fairly efficiently. If it came out 5 years ago, with regular rain, it is down in the water table. If it was out a year ago, it is probably down in the water table. Since they haven't been using the materials in the last year or so, he believes what was going to get down there is down there. Some of this has been out there for 30+ years and it should be breaking down.

Councilor Boyd used the scenario of the recent drought and a heavy winter where the groundwater would refresh itself, and questioned if there is any belief that number might increase/decrease as a result of the aquifers recharging. He also questioned if the expectation would be dramatic or subtle changes. Assistant Commissioner Freise commented they have had philosophical discussions about this because they don't know. The belief is they really won't see much of a swing at all. When measuring in ppt, the actual amount of contaminant down there is relatively low and is already diluted by a large mass of water. They have been looking at results from MVD and others, and have not seen huge swings.

There was one issue where one lab consistently showed significantly lower numbers (30-40% lower). They worked with the EPA and found that there was an interpretation of the 537 test done and certified by the EPA that some people were reading that you should do something and others were reading you shouldn't. It is that PFOA comes in two isomers; one is linear and one is branched. The instructions were mute as to whether or not you should add them together whereas for other chemicals it says you must add them together. The one lab read that as you shouldn't and were only reporting linear. The EPA really didn't expect to see any branched PFOA in nature. When they were asked for samples to use as a laboratory standard it was only linear, which is how the situation was found out. They have now changed the instructions based on what was discovered. Now the results are right on top of each

other. NHDES set performance evaluation standards so they know exactly how much of everything is in there. All three labs they use came back within a few ppt of each other.

As we have gone through this drought, they have not seen sudden spiking concentrations because there is less water and the same PFOA. The belief is when we do recharge we won't see it suddenly drop away to nothing either.

Councilor Mahon questioned if they would have been able to detect it at the time even if they knew what Chemfab was doing, and was told back in the '80s they couldn't have tested at the levels that would have detected this. In 2005 when they brought in their test results was the first time anybody had ever seen it come out of the stack. Assistant Commissioner Freise stated PFOA costs them money; not a cheap chemical to build or get. It serves a purpose in their process, and their belief was they were recycling it. At very low levels, it was going up the stacks, and technology of the time couldn't detect it.

Chairman Harrington commented NHDES jumped on this situation immediately and has been responsive to requests of the Council. She thanked the representatives that came before the Council to provide additional information. Assistant Commissioner Freise spoke of ongoing work to get construction contracts in place. Digging started earlier in the day in Manchester, and they hope to get Litchfield building quickly. A number of the houses that have been identified as being on private wells in Merrimack have been put on MVD water. A few more were spotted in some of the recent results and MVD immediately added them to the list. They have the commitment in place to bring in the temporary treatment next summer, and have paid for the design work for permanent treatment (wells 4 and 5). That will only provide about half the capacity of those two wells back for next summer, but it is ½ million gal./day. If they agree to do permanent treatment the design would be done. The goal is to get ½ million gal./day of filtered water next summer, and then have full capacity in place two summers from now.

Chairman Harrington noted the MVD has approved the building of the booster with Pennichuck, which will be done before winter.

Comments from the Press and Public - None

Recognitions, Resignations and Retirements - None

Appointments

1. **Annual Review with the Town Center Committee**
   Submitted by Town Center Committee Chairman Nelson Disco
   Per Town of Merrimack Charter Section 6-6, at least annually, there should be an annual review with the Town Center Committee. This agenda item is to highlight the committee's significant actions, current projects, anticipated actions, and to raise any concerns the Council should know or could act on.

Nelson Disco, Chairman, Town Center Committee, remarked in 2009, the charge of the Town Center Committee (Committee) was to implement the results of an iTRaC study that had been previously done under the auspices of the Town Council. The Committee was tasked to work with Town officials,