Perfluorinated Compounds (PFOA and PFOS) in Region 4

Issue Short Name: Perfluorinated Compounds (PFOA and PFOS) in Region 4

Issue Short Description: Perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS) are two perfluorinated compounds (PFCs) which have been of concern in drinking water supplies in Region 4. They are classified as emerging contaminants because they are unregulated, but are being detected in increasing numbers of community water systems and in other pathways.

Background: Region 4 has had involvement in PFC sites for years. In May 2016, EPA OW issued a final drinking water Health Advisory (HA) for PFOA and PFOS combined of 0.070 ppb for long term exposure. This new HA replaced a sub chronic Provisional Health Advisory issued in 2009 for PFOA at 0.4 ppb and PFOS at 0.2 ppb. In 2009, concerns about releases to the Decatur, AL WWTP from local PFC industries impacting biosolids which were spread on 5,000 acres in three counties, spurred the development of the preliminary HA for acute exposure. Region 4 and ADEM did field reconnaissance near the biosolids fields and identified private water supply wells which were subsequently sampled for PFCs. Later reconnaissance by 3M and other PFC industries located additional wells. Where PFOA and PFOS concentrations were above the PHAs then in effect, the well were connected to the municipal water at no charge by local industries. The Agency for Toxic Substances and Disease Registry (ATSDR), at EPA's request in 2010, sampled serum of people living near biosolids fields for PFCs to determine if there was any exposure. ATSDR concluded that serum PFCs were elevated and that the exposure pathway was municipal water from West Morgan-East Lawrence community water system.

There were also PFC concerns related to the land application system at Loopers Bend were 40 MGD of liquid from the Dalton Utilities WWTP was applied. The carpet industry is known to use large quantities of PFC and their discharges constitute a large proportion of the WWTP effluent. Over 100 private wells were sampled within a mile of Loopers Bend and homes with wells above the PHA were connected to the municipal water by Dalton Utilities. There were also known impacts beyond private wells in Dalton and Decatur. Sampling downstream on community water system intakes on the Tennessee River in Decatur and the Coosa Basin in Georgia showed detection of PFCs. The SDWA Unregulated Contaminant Monitoring Rule 3 (UCMR 3) required sampling in community water systems for a suite of PFCs including PFOA and PFOS between 2013 and 2015. As the UCMR 3 data was being released, OW finalized the HA for PFOA and PFOS. The list of known impacted systems in Region 4 expanded to two in North Carolina (Greensboro and Moore County – Pinehurst) , three in Florida (Emerald Coast Utility Authority in Pensacola, Stuart, Zephyrhills) , two in Georgia (Rome and Chatsworth), and seven in Alabama (West Morgan-East Lawrence, V.A.W., Gadsden, Rainbow City, Southside, West Lawrence Coop, and Northeast Alabama). Region 4 has been working in conjunction with respective state water programs to address elevated PFOA and PFOS concentrations in these systems. Systems have taken contaminated wells off-line or purchased and blended water where needed to keep distribution levels below the HA. ATSDR conducted follow-up serum and urine sampling at Decatur in early 2016 and results are expected to be published soon.

EPA's Message to the Public or Press: EPA required testing of Community Water Systems (over 10,000 people) has resulted in the identification of impacted water systems. State environmental agencies are working to address systems identified above the 2016 HA threshold (PFOA and PFOS combined above 0.070 ppb).

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