MARK E. MARTIN

Attorney at Law, LLC

P.O. Box 1486
Oneonta, Alabama 35121

Telephone
(205) 516-9350
mmartin@markemartin.com

September 19, 2015

Ms. Robin Higgs
Site Manager
3M Company
PO Box 2206
Decatur AL 35609-2206

Mr. Bill Brinkley
BFI Waste Systems of Alabama, LLC
4704 Commercial Dr.
Huntsville, AL 35816

3M Company
c/o The Corporation Company
2000 Interstate Park Drive, Suite 204
Montgomery, AL 36109

BFI Waste Systems of Alabama, LLC
c/o CT Corporation System
2 North Jackson St., Suite 605
Montgomery, AL 36104

Mr. Ray Hardin
General Manager
Decatur Utilities
P.O. 2232
Decatur, AL 35609

Hon. Don Kyle
Mayor
City of Decatur, Alabama
402 Lee Street NE
Decatur, AL 35601

VIA CERTIFIED MAIL – RETURN RECEIPT REQUESTED

Re: Notice of Intent to Sue Under Section 7002(a)(l)(B) of the Resource Conservation and Recovery Act, 42 U.S.C. § 6972(a)(l)(B).

Pursuant to section 7002(a)(l)(B) of the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. § 6972(a)(l)(B), the Tennessee Riverkeeper, Inc., puts each of the Responsible Parties listed above, as well as the U.S. Environmental Protection Agency ("EPA") and the Alabama Department of Environmental Management ("ADEM"), on notice of its intent to sue for abatement of an imminent and substantial endangerment to health and the environment in connection with contamination caused by disposal of solid or hazardous waste containing perfluorooctanoic acid (PFOA), perfluorooctane sulfonate (PFOS), and related chemicals, at several locations in or near Decatur, Alabama. We intend to seek injunctive relief to remedy the ongoing releases of these toxic chemicals into the groundwater and into the Tennessee River (Wheeler Reservoir) and its tributaries, which have resulted in contaminated groundwater in several locations, contaminated water supplies, and contamination of surface water, fish, and sediments.

1. RESPONSIBLE PARTIES

Section 7002(a)(l)(B) of RCRA, 42 U.S.C. § 6972(a)(l)(B), allows affected citizens to bring suit against:

> any person, ... including any past or present generator, past or present transporter, or past or present owner or operator of a treatment, storage or disposal facility, who has contributed or who is contributing, to the past or present handling, storage, treatment, transportation, or disposal of any solid or hazardous waste which may present an imminent and substantial endangerment to health or the environment.

The following Responsible Parties are responsible for the imminent and substantial endangerment:

a. The 3M Company

The 3M Company is the present owner of disposal facilities located at 1400 State Docks Road in Decatur, Alabama, which are releasing PFOA, PFOS, and related chemicals into groundwater and surface water through which the chemicals are discharged into the Tennessee River (Wheeler Reservoir) and its tributaries. 3M manufactured or used these and other chemicals at its facility and disposed of hazardous and solid waste containing these chemicals in a landfill and a sludge incorporation area on its property and on adjacent property.

3M discharged wastewater containing PFOA, PFOS, and related chemicals from its on-site wastewater treatment plant into Bakers Creek, a tributary to the Tennessee River, and from 1978 to 1998, 3M incorporated sludge from the on-site wastewater treatment plant by means of subsurface injection in an on-site area designated as the sludge incorporation area. In addition, 3M discharged wastewater containing PFOA, PFOS, and related chemicals to the Decatur Utilities Dry Creek Wastewater Treatment Plant ("WWTP") (see below).

From time to time, 3M disposed of solid and hazardous waste, including wastewater treatment plant sludge containing PFOA, PFOS, and related chemicals, at off-site landfills, including the City of Decatur-Morgan County Landfill, which is currently operating as the Morgan County Landfill (see below), the Morris Farms Landfill, which is currently owned and operated by BFI Waste Systems of America, LLC, and the Bert Jeffries Landfill (sometimes called the Browns Ferry Road Site), now owned by 3M.

b. BFI Waste Systems of America, LLC

BFI Waste Systems of America, LLC, owns and operates the A.J. Morris Landfill (Morris Farms Landfill), located on County Road 418, in Hillsboro, Alabama, currently known as the BFI Hillsboro Landfill. The Morris Farms Landfill has accepted sludge contaminated with PFOA, PFOS, and related chemicals, from 3M. These chemicals are present in the landfill and result in groundwater contamination and the generation of contaminated leachate. Leachate from the

landfill containing these chemicals is discharged to the Decatur Utilities Dry Creek WWTP (see below).

c. City of Decatur, Alabama

The City of Decatur, Alabama, owns the City of Decatur-Morgan County Sanitary Landfill. From approximately 1961, the majority of the 3M Decatur facility industrial wastes were deposited in this landfill. In addition, 3M's onsite WWTP sludge was disposed of at the landfill for many years. As a result, PFOA, PFOS, and related chemicals are present in the Morgan County Landfill resulting in groundwater contamination and the generation of contaminated leachate. The Morgan County Landfill leachate is sent to Decatur Utility's Dry Creek WWTP for treatment. The Dry Creek WWTP, in turn, discharges its treated effluent to the Tennessee River, upstream of the 3M Decatur facility.

d. Municipal Utilities Board of Decatur, Morgan County, Alabama ("Decatur Utilities")

Decatur Utilities owns and operates the Dry Creek WWTP. The Dry Creek WWTP has received wastewater containing PFOA, PFOS, and related chemicals from 3M and other industrial facilities for several years. Decatur Utilities also receives sanitary wastewater from 3M and continues to receive landfill leachate contaminated with PFOA, PFOS, and related chemicals. The WWTP does not adequately remove these chemicals from the waste stream and, as a result, discharges harmful amounts of these chemicals to the river. The WWTP also disposes of its sludge, contaminated with these chemicals, to the Decatur-Morgan County Sanitary Landfill. From 1996 to 2008, sludge (biosolids) from the Dry Creek WWTP were applied as a soil amendment on agricultural fields in Lawrence, Morgan, and Limestone counties in Alabama. The sludge contained PFOA, PFOS, and related chemicals, as a result of the industrial wastewaters that were treated at the Dry Creek WWTP, and these chemicals have contaminated soil, groundwater, and surface water at and near these agricultural fields.

Each of these Responsible Parties are jointly and severally liable for contributing to the endangerment to public health and the environment. Years after becoming aware of the continuing hazards posed by PFOA, PFOS, and related chemicals, none of the Responsible Parties has taken the actions necessary to successfully abate the ongoing endangerment.

2. IMMINENT AND SUBSTANTIAL ENDANGERMENT

a. Human Health Risks Caused by Exposure to PFOA, PFOS, and Related Chemicals

The human health risks caused by exposure to low levels of PFOA, PFOS, and related chemicals include cancer, immunotoxicity, thyroid disease, ulcerative colitis, and high cholesterol. The stable carbon-fluorine bonds that make PFOA and PFOS such pervasive industrial and consumer products also result in their persistence. There is no known environmental breakdown mechanism for these chemicals. As a result of the chemicals' stability and pervasive use, the concentrations of these chemicals have rapidly increased in the soil, water, and air, and in biological systems, including humans and animals. They are readily absorbed into biota and have a tendency to accumulate with repeated exposure. Fish, in particular, accumulate these

chemicals. PFOS crosses the placenta in humans, accumulates in amniotic fluid, and has been detected in umbilical cord blood.

The association of exposure to these chemicals and certain cancers has been reported by the C8 Health Project, an independent Science Panel charged with reviewing the evidence linking PFOA, PFOS, and related chemicals to the risk of disease based on health research carried out by the Science Panel in the Mid-Ohio Valley population exposed to these chemicals as a result of releases from an E. I. du Pont de Nemours and Company chemical plant, as well as other published scientific research.[1] The C8 Science Panel specifically listed kidney cancer and testicular cancer as having a "probable link" to PFOA exposure. Epidemiological studies of workers exposed to PFOA support the association between PFOA exposure and both kidney and testicular cancer and also suggest associations with prostate and ovarian cancer and non-Hodgkin lymphoma.[2] Rodent studies also support the link with cancer.[3] The majority of an EPA Science Advisory Board expert committee recommended in 2006 that PFOA be considered "likely to be carcinogenic to humans."[4]

Additionally, the C8 Science Panel has found a probable link between exposure to PFOA, PFOS, and related compounds, and the following human diseases: pregnancy-induced hypertension, ulcerative colitis, and high cholesterol. Furthermore, in recent years, immunotoxicity of PFOA, PFOS, and related compounds, has been demonstrated in a wide variety of species and models, including humans. For instance, a study of ninety-nine Norwegian children at age three found that maternal serum PFOA concentrations were associated with decreased vaccine responses, especially toward rubella vaccine, and increased frequencies of common cold and gastroenteritis. The combined human and experimental evidence is in strong support of adverse effects on immune functions at current exposure levels.[5]

The U.S. EPA in 2009 published provisional drinking water health advisories for PFOA and PFOS, which are currently under review. The advisory for PFOA is 0.4 µg/L (0.4 ppb), and for PFOS is 0.2 µg/L (0.2 ppb). This health advisory is based on evidence that was available before 2008, and, according to recent studies, may be more than 100-fold too high.[6]

---

[1] Barry V, Winquist A and Steenland K. Perfluorooctanoic acid (PFOA) exposures and incident cancers among adults living near a chemical plant. Environ Health Perspect 2013; 121: 1313–1318.
[2] Grandjean P and Clapp R. NEW SOLUTIONS: A Journal of Environmental and Occupational Health Policy 2015, Vol. 25(2) 147–163.
[3] *Id*.
[4] EPA Science Advisory Board. SAB review of EPA's draft risk assessment of potential human health effects associated with PFOA and its salts. Report to the EPA Administrator. Washington, DC: U.S. Environmental Protection Agency, 2006.
[5] Grandjean P and Clapp R. NEW SOLUTIONS: A Journal of Environmental and Occupational Health Policy 2015, Vol. 25(2) 147–163.
[6] *Id*.

b. Monitoring Results and PFOA and PFOS Contamination

Tennessee River

EPA and ADEM have identified the facilities discussed above as sources of PFOA and PFOS contamination in the Tennessee River, including surface water, porewater, sediments, and fish. The primary source is the 3M facility, itself, with high levels of PFOA and PFOS in groundwater migrating into the Tennessee River.

Based on the contamination in the Tennessee River, ADEM has placed Wheeler Reservoir from 5 miles upstream of Elk River/US Highway 31 to the dam on the state's impaired waters list for PFOS contamination impairing swimming and fish & wildlife uses.[7] The Alabama Department of Public Health has issued a fish consumption advisory for portions of Wheeler Reservoir and its tributaries based on contamination of fish with PFOS, including: Baker's Creek embayment at Wheeler Reservoir (Morgan County), Wheeler Reservoir mid station, main river channel, Tennessee River Mile 296 (Limestone County); Wheeler Reservoir, Tennessee River Miles 303 to 296, area south of the main river channel (Morgan County).[8]

Concentrations of PFOA as high as 4,980 ppb and PFOS as high as 3,890 ppb have been found in groundwater on the 3M site along the south bank of the Tennessee River. Porewater from the bottom of the river bed near the 3M site, which is groundwater discharging into the river, showed average concentrations of PFOA from 0.0977 to 70.4 ppb. Sediment concentrations in the river have been found as high as an average of 24.1 ppb PFOA, and surface water concentrations as high as an average of 0.420 ppb PFOA at one monitoring site. PFOS concentrations for single samples collected in the lower, middle and upper reaches of the confluence area where Bakers Creek flows into the Tennessee River were 0.450, 0.691 and 0.0237 ppb, respectively. The PFOS concentrations in the surface water transect samples were as high as 0.138 ppb at the southernmost point along Transect 4 (closest location to Bakers Creek mouth at RM 301).

PFOS was detected in every fish specimen collected in the Tennessee River and Bakers Creek near the 3M plant in the November 2012 sampling event. The median filet tissue PFOS concentrations ranged from 25.7 ppb in Reach 03 (backwater area at RM 307.5), upstream of the plant, to 435 ppb in Reach 05 (Mouth of Bakers Creek). Concentrations as high as 103 ppb were found in bass below the Joe Wheeler Dam, nearly 40 miles downstream of the plant at Shoal Creek. Median catfish filet tissue PFOS concentrations ranged from 1.50 ppb in Reach 01 (RM 320) to 283 ppb in Reach 05 (Mouth of Bakers Creek). PFOA was detected at up to 6.06 ppb in fish in Bakers Creek cove and up to 4.01 ppb down river at Mallard Creek.

At least 5 public water supplies using water from the Tennessee River downstream of the 3M plant have shown contamination with PFOA:

- PFOA was detected in all of the finished water samples collected from the West Morgan/East Lawrence Water Treatment Plant ("WTP"), about 15 miles downstream of the 3M plant, with concentrations ranging from 0.0442 to 0.155 ppb. In 2013, the Agency for Toxic Substances and Disease Registry ("ATSDR") found an association between

[7] ADEM. 2014 Alabama §303(d) List.
[8] Alabama Dept. Public Health. Fish Consumption Advisories 2015.

elevated levels of PFOA in the blood serum of tested local residents and the use of drinking water from the West Morgan/East Lawrence Water Authority.

- PFOA was detected in all three of the finished water samples collected over 6 months from the Muscle Shoals WTP, about 45 miles downstream, with concentrations ranging from 0.0272 to 0.0426 ppb.
- PFOA was detected in all three of the finished water samples collected from the Florence Municipal Water Supply, approximately 45 miles downstream of the 3M facility, with concentrations ranging from 0.0254 to 0.0433 ppb.
- PFOA was detected in all three finished water samples collected over 6 months from the Tennessee Valley Authority research station WTP, approximately 45 miles downstream, with concentrations ranging from 0.0302 to 0.0394 ppb.
- PFOA was detected in two of the three finished water samples collected over 6 months from the Sheffield WTP (approximately 45 miles downstream) with concentrations of 0.0293 to 0.0419 ppb.

The Decatur Utilities Dry Creek WWTP is also an ongoing significant source of PFOA, PFOS, and related chemicals as a result of their disposal. It discharges to the Tennessee River approximately 2 miles upstream of the 3M facility. Sampling in 2005-06 found that the effluent from the WWTP contained as much as 17.4 ppb PFOA and 2.85 ppb PFOS, and the sludge contained as much as 1,875 ppb PFOA and 2,110 ppb PFOS. Recent quarterly sampling shows lower levels in the effluent, however the discharge of harmful levels of these chemicals is still ongoing.

In addition, the biosolids that Decatur Utilities spread on agricultural fields in Lawrence, Morgan, and Limestone counties is causing ongoing contamination of soil and groundwater with PFOA, PFOS, and related chemicals. Sampling conducted by EPA in 2007 and 2009 of soils at agricultural sites that received biosolids found PFOS levels as high as 1,409 ppb and PFOA levels as high as 2,531 ppb. In February 2009 EPA sampled a number of private water wells (potable and non-potable) near the fields that received biosolids from Decatur Utilities. Sampling results from twelve non-potable private water wells associated with these fields showed PFOA concentrations up to 6.41 ppb and PFOS up to 0.15 ppb. Water from drinking water wells at two residences had PFOA levels of 0.6 ppb and 2.2 ppb, and another private drinking water well had a PFOS level of 0.365 ppb. Others showed levels of PFOA and PFOS, but those levels were below EPA's Provisional Health Advisory values.

Groundwater and Surface Water Contamination and Contaminated Leachate at Landfills

The Decatur-Morgan County Sanitary Landfill has contaminated groundwater with PFOS and related chemicals. Downgradient monitoring wells have shown PFOS concentrations as high as 14.8 ppb. Morgan County Landfill leachate is trucked to the Decatur Utilities Dry Creek WWTP. Recent leachate samples showed 148 ppb PFOA and 175 ppb PFOS. As the result of inadequate treatment, the contaminated leachate contributes to the ongoing discharges of PFOA, PFOS and related chemicals from the Dry Creek WWTP to the Tennessee River.

The BFI Morris Farm Landfill has contaminated groundwater and surface water with PFOS and related chemicals. Downgradient monitoring wells have shown PFOS concentrations as high as

22.5 ppb. Contaminated groundwater discharges into Dry Creek which flows into the Tennessee River at the Mallard Creek embayment. BFI Morris Farms Landfill leachate is also trucked to the Decatur Utilities Dry Creek WWTP. Recent leachate samples showed 137 ppb PFOA and 93.9 ppb PFOS. As a result of inadequate treatment, the contaminated leachate contributes to the ongoing discharges of PFOA, PFOS and related chemicals from the Dry Creek WWTP to the Tennessee River.

The Bert Jeffries Landfill (also known as the Browns Ferry Road Site) has contaminated groundwater and surface water with PFOA, PFOS, and related chemicals. PFOA concentrations in groundwater at the landfill were as high as 19.4 ppb in 2013 testing, and PFOS was as high as 25.1 ppb. Off-site surface water contamination was as high as 0.163 ppb PFOA and 1.54 ppb PFOS in 2012-13. The contaminated surface water flows to the Tennessee River at the Mallard Creek embayment.

3. INTENT TO SUE

We intend to file suit in ninety days in the U.S. District Court for the Northern District of Alabama and will seek abatement of the imminent and substantial endangerment through a court order. While we are aware that the 3M Company is conducting an environmental assessment pursuant to a voluntary Memorandum of Understanding with the EPA under the Toxic Substances Control Act, and that other Responsible Parties are subject to certain ADEM monitoring requirements for PFOA, PFOS, and related chemicals, these activities are not sufficient to abate the imminent and substantial endangerment.

First, the assessment and selection of long-term remedial actions must include new studies on the health effects of exposure to PFOA, PFOS, and related chemicals, which show serious health effects among exposed populations at levels similar to those found in the Decatur area. Second, the primary Responsible Party, 3M, is not doing enough to prevent these chemicals from migrating into the Tennessee River at its plant site, including the former sludge incorporation area. More also needs to be done to deal with groundwater and surface water contamination at the off-site landfills and biosolids disposal sites. The contaminated leachate from the two landfills with leachate collection systems needs to be treated to remove PFOA, PFOS, and related chemicals, before being discharged to the Decatur Utilities WWTP, and the Decatur Utilities WWTP needs to effectively treat its wastewater in order to remove PFOA, PFOS, and related chemicals before discharge to the Tennessee River. Furthermore, 3M should be held responsible for the remedial actions necessary at these off-site facilities. In addition, an assessment should be performed for removal of contaminated sediments from the Tennessee River, which will be an ongoing source of contamination of surface water and fish.

If you would like to discuss this matter, please contact us as soon as possible, as we intend to file suit as soon as the statutory notice period expires. My contact information is in the letterhead. Co-counsel Gary Davis of Davis & Whitlock, PC, may be contacted at 828-622-0044.

Sincerely,

/S/

Mark Martin

cc: Gina McCarthy, Administrator
U.S. Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460

Heather McTeer Toney, Regional Administrator
U.S. EPA, Region 4
Sam Nunn Atlanta Federal Center
61 Forsyth Street, SW
Atlanta, GA 30303-8960

Mr. Phillip Davis, Chief
ADEM Land Division
Post Office Box 301463
Montgomery, Alabama 36130-1463

Gary A. Davis
Davis & Whitlock, PC
21 Battery Park Ave.
Asheville, NC 28801