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VIA Electronic Mail

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**Re: Southern Environmental Law Center Comments Regarding Lear
Corporation, NPDES Permit NC0002305**

Dear Mr. Dowden:

The Southern Environmental Law Center submits this letter on behalf of Cape Fear River Watch regarding Lear Corporation, NPDES Permit NC0002305 (“Lear”), in Duplin County, North Carolina. We understand that on November 28, 2022, Lear submitted a National Pollutant Discharge Elimination System (“NPDES”) permit renewal application¹ and that the North Carolina Department of Environmental Quality (“the Department”) will soon begin drafting a renewal permit for the company. As described in more detail below, Lear discharges per- and polyfluoroalkyl substances (“PFAS”) and the Department must control these toxic discharges in its next NPDES permit.

The U.S. Environmental Protection Agency (“EPA”) has made clear that state permitting agencies have “existing authorit[y]” to control PFAS through NPDES permits and should be doing so “to the fullest extent available under state and local law.”² The Department followed the law embodied in EPA’s guidance when it issued a recent NPDES permit to The Chemours Company, FC (“Chemours”) that imposed technology-based limits for certain PFAS compounds.³ But Chemours is not the only source of PFAS pollution in North Carolina. The Department cannot continue to focus its enforcement efforts solely on Chemours and treat other industries that release toxic pollution into our waterways with leniency. Lear, like Chemours, discharges high concentrations of PFAS and is not authorized to do so. The Department must use its existing authority to control Lear’s pollution and prevent it from continuing to release harmful

¹ Steven Middlebrook, Lear Corporation, Wastewater Treatment Permit Renewal Application – Lear Corp., Permit No. NC0002305 (Nov. 28, 2022) [hereinafter “Lear’s NPDES Permit Application”], Attachment 1.

² Memorandum from Radhika Fox, Assistant Administrator, U.S. Env’t Prot. Agency, *Addressing PFAS Discharges in NPDES Permits and Through the Pretreatment Program and Monitoring Programs* (December 5, 2022) (emphasis added) [hereinafter “EPA’s PFAS NPDES Guidance”], Attachment 2.

³ N.C. Dep’t of Env’t Quality, NPDES Permit NC0090042 (Sept. 15, 2022), <https://perma.cc/WQV7-L8C4>; N.C. Dep’t of Env’t Quality, Fact Sheet NPDES Permit No. NC0090042 (Sept. 15, 2022), at 11–12, <https://perma.cc/EP5R-32A7>.

chemicals into the Northeast Cape Fear River. Failure to do so is unlawful and prolongs North Carolinians' exposure to toxic chemical pollution.

I. Lear discharges PFAS, a class of chemicals known to cause harm to human health and the environment.

In 2019, the Department instructed Lear to collect samples and determine if the company's wastewater contains PFAS. The results of that sampling confirm that Lear discharges PFAS at concentrations as high as 1,863 parts per trillion ("ppt").⁴ The Department is aware of Lear's PFAS pollution and has even informed EPA about the PFAS in Lear's discharge.⁵

PFAS are a group of man-made chemicals manufactured and used broadly by industry since the 1940s.⁶ PFAS pose a significant threat to human health at extremely low concentrations. Two of the most studied PFAS—perfluorooctanoic acid ("PFOA") and perfluorooctane sulfonate ("PFOS")—are bioaccumulative and highly persistent in humans.⁷ PFOA and PFOS have been shown to cause developmental effects to fetuses and infants, kidney and testicular cancer, liver malfunction, hypothyroidism, high cholesterol, ulcerative colitis, obesity, decreased immune response to vaccines, reduced hormone levels, delayed puberty, and lower birth weight and size.⁸ Because of its impacts on the immune system, PFAS can also exacerbate the effects of Covid-19.⁹ Studies show that exposure to mixtures of different PFAS can worsen these health effects.¹⁰ Given these harms, EPA in June 2022 established interim updated lifetime health advisories for PFOA and PFOS in drinking water of 0.004 ppt and 0.02 ppt, respectively.¹¹

⁴ 2019 Industrial 1,4-dioxane & PFAS Sampling Results, N.C. Dep't of Env't Quality 8 (2020) [hereinafter "2019 Industrial PFAS Sampling"], Attachment 3.

⁵ See U.S. Env't Prot. Agency, Effluent Guidelines Program Plan 15 (January 2023), at 6-8, 8-2, Attachment 4 (explaining the Department provided data from a textile mill in North Carolina to the EPA and listing "2019 PFAS Investigation Order Results for Lear Corporation Textile Mill in Wilmington, North Carolina (NPDES No. NC0002305)").

⁶ Lifetime Drinking Water Health Advisories for Four Perfluoroalkyl Substances, 87 Fed. Reg. 36,848, 36,849 (June 21, 2022); *Our Current Understanding of the Human Health and Environmental Risks of PFAS*, U.S. ENV'T PROT. AGENCY, <https://www.epa.gov/pfas/our-current-understanding-human-health-and-environmental-risks-pfas> (last visited Jan. 24, 2023).

⁷ 87 Fed. Reg. at 36,849; U.S. Env't Prot. Agency, Interim Drinking Water Health Advisory: Perfluorooctanoic Acid (PFOA) CASRN 335-67-1 (June 2022), at 3–4, available at <https://www.epa.gov/system/files/documents/2022-06/interim-pfoa-2022.pdf>; U.S. Env't Prot. Agency, Interim Drinking Water Health Advisory: Perfluorooctane Sulfonic Acid (PFOS) CASRN 1763-23-1 (June 2022), at 3–4, available at <https://www.epa.gov/system/files/documents/2022-06/interim-pfos-2022.pdf>.

⁸ Arlene Blum et al., *The Madrid Statement on Poly- and Perfluoroalkyl Substances (PFASs)*, 123 ENV'T. HEALTH PERSP. 5, A 107 (May 2015); U.S. Env't Prot. Agency, Drinking Water Health Advisories for PFAS: Fact Sheet for Communities, at 1–2 (June 2022), available at <https://www.epa.gov/system/files/documents/2022-06/drinking-water-ha-pfas-factsheet-communities.pdf>.

⁹ See Lauren Brown, *Insight: PFAS, Covid-19, and Immune Response—Connecting the Dots*, BLOOMBERG LAW (July 13, 2020, 4:00 AM), <https://news.bloomberglaw.com/environment-and-energy/insight-pfas-covid-19-and-immune-response-connecting-the-dots?context=article-related>.

¹⁰ Emma V. Preston et al., *Prenatal Exposure to Per- and Polyfluoroalkyl Substances and Maternal and Neonatal Thyroid Function in the Project Viva Cohort: A Mixtures Approach*, 139 ENV'T INT'L 1 (2020), <https://perma.cc/DJK3-87SN>.

¹¹ 87 Fed. Reg. at 36,848–49.

Other PFAS are similarly harmful.¹² In June 2022, EPA set a final lifetime health advisory for GenX in drinking water of 10 ppt.¹³ Numerous states have acknowledged the dangers of other PFAS compounds and proposed or finalized drinking water standards for various PFAS at 20 ppt and lower.¹⁴

PFAS are also harmful to wildlife and the environment. The chemicals have been shown to cause damaging effects in fish,¹⁵ amphibians,¹⁶ reptiles,¹⁷ mollusks,¹⁸ and other aquatic invertebrates¹⁹—resulting in developmental and reproductive impacts, behavioral changes, adverse effects to livers, disruption to endocrine systems, and weakened immune systems.²⁰ Moreover, PFAS are extremely resistant to breaking down in the environment, can travel long

¹² U.S. Dep’t of Health and Human Servs., Toxicological Profile for Perfluoroalkyls (May 2021), available at <https://perma.cc/AHF7-RLQD>; see also U.S. Env’t Prot. Agency, Technical Fact Sheet: Drinking Water Health Advisories for Four PFAS (PFOA, PFOS, GenX chemicals, and PFBS) (June 2022), <https://perma.cc/95H2-P988>.

¹³ 87 Fed. Reg. at 36,848–49.

¹⁴ See *Per- and Polyfluoroalkyl Substances (PFAS)*, INTEGRAL CORP., <https://www.integral-corp.com/pfas/> (last visited Jan. 24, 2023).

¹⁵ Chen et al., *Perfluorobutanesulfonate Exposure Causes Durable and Transgenerational Dysbiosis of Gut Microbiota in Marine Medaka*, 5 ENV’T SCI. & TECH LETTERS 731–38 (2018); Chen et al., *Accumulation of Perfluorobutane Sulfonate (PFBS) and Impairment of Visual Function in the Eyes of Marine Medaka After a LifeCycle Exposure*, 201 AQUATIC TOXICOLOGY 1–10 (2018); Du et al., *Chronic Effects of Water-Borne PFOS Exposure on Growth, Survival and Hepatotoxicity in Zebrafish: A Partial Life-Cycle Test*, 74 CHEMOSPHERE 723–29 (2009); Hagenaaars et al., *Structure–Activity Relationship Assessment of Four Perfluorinated Chemicals Using a Prolonged Zebrafish Early Life Stage Test*, 82 CHEMOSPHERE 764–72 (2011); Huang et al., *Toxicity, Uptake Kinetics and Behavior Assessment in Zebrafish Embryos Following Exposure to Perfluorooctanesulphonicacid (PFOS)*, 98 AQUATIC TOXICOLOGY 139–47 (2010); Jantzen et al., *PFOS, PFNA, and PFOA Sub-Lethal Exposure to Embryonic Zebrafish Have Different Toxicity Profiles in terms of Morphometrics, Behavior and Gene Expression*, 175 AQUATIC TOXICOLOGY 160–70 (2016); Liu et al., *The Thyroid-Disrupting Effects of Long-Term Perfluorononanoate Exposure on Zebrafish (Danio rerio)*, 20 ECOTOXICOLOGY 47–55 (2011); Chen et al., *Multigenerational Disruption of the Thyroid Endocrine System in Marine Medaka after a Life-Cycle Exposure to Perfluorobutanesulfonate*, 52 ENV’T SCI. & TECH. 4432–39 (2018); Rotondo et al., *Environmental Doses of Perfluorooctanoic Acid Change the Expression of Genes in Target Tissues of Common Carp*, 37 ENV’T TOXICOLOGY & CHEM. 942–48 (2018).

¹⁶ Ankley et al., *Partial Life-Cycle Toxicity and Bioconcentration Modeling of Perfluorooctanesulfonate in the Northern Leopard Frog (Rana pipiens)*, 23 ENV’T TOXICOLOGY & CHEM. 2745 (2004); Cheng et al., *Thyroid Disruption Effects of Environmental Level Perfluorooctane Sulfonates (PFOS) in Xenopus Laevis*, 20 ECOTOXICOLOGY 2069–78 (2011); Lou et al., *Effects of Perfluorooctanesulfonate and Perfluorobutanesulfonate on the Growth and Sexual Development of Xenopus Laevis*, 22 ECOTOXICOLOGY 1133–44 (2013).

¹⁷ Guillette et al., *Blood Concentrations of Per- and Polyfluoroalkyl Substances Are Associated with Autoimmune-like Effects in American Alligators From Wilmington, North Carolina*, FRONTIER TOXICOLOGY 4:1010185 (Oct. 20, 2022), available at <https://www.frontiersin.org/articles/10.3389/ftox.2022.1010185/full>.

¹⁸ Liu et al., *Oxidative Toxicity of Perfluorinated Chemicals in Green Mussel and Bioaccumulation Factor Dependent Quantitative Structure-Activity Relationship*, 33 ENV’T TOXICOLOGY & CHEM. 2323–32 (2014); Liu et al., *Immunotoxicity in Green Mussels under Perfluoroalkyl Substance (PFAS) Exposure: Reversible Response and Response Model Development*, 37 ENV’T TOXICOLOGY & CHEM. 1138–45 (2018).

¹⁹ Houde et al., *Endocrine-Disruption Potential of Perfluoroethylcyclohexane Sulfonate (PFECBS) in Chronically Exposed Daphnia Magna*, 218 ENV’T POLLUTION 950–56 (2016); Liang et al., *Effects of Perfluorooctane Sulfonate on Immobilization, Heartbeat, Reproductive and Biochemical Performance of Daphnia Magna*, 168 CHEMOSPHERE 1613–18 (2017); Ji et al., *Oxicity of Perfluorooctane Sulfonic Acid and Perfluorooctanoic Acid on Freshwater Macroinvertebrates (Daphnia Magna and Moina Macrocopa) and Fish (Oryzias Latipes)*, 27 ENV’T TOXICOLOGY & CHEM. 2159 (2008); MacDonald et al., *Toxicity of Perfluorooctane Sulfonic Acid and Perfluorooctanoic Acid to Chironomus Tentans*, 23 ENV’T TOXICOLOGY & CHEM. 2116 (2004).

²⁰ See *supra* notes 15–19.

distances, and bio-accumulate in organisms.²¹ PFAS have been found in fish tissue, and consequently, the primarily low-income and minority communities that rely on subsistence fishing have been found to have elevated PFAS levels in their blood.²² Due to these harms, EPA has published draft recommended freshwater aquatic life criteria for PFOA and PFOS.²³

Sampling in 2019 confirmed that Lear's wastewater contains incredibly high levels of PFAS. Over three months, Lear's total PFAS concentrations ranged from 802 ppt to 1,863 ppt.²⁴ PFOA and PFOS were detected at levels as high as 30.2 ppt and 29.4 ppt, respectively.²⁵ These concentrations are thousands of times higher than what EPA considers safe. Lear's wastewater contains other PFAS compounds, including perfluorobutanoic acid ("PFBA"), perfluorobutanesulfonic acid ("PFBS"), perfluorodecanoic acid ("PFDA"), perfluoroheptanoic acid ("PFHpA"), perfluorohexanesulfonic acid ("PFHxS"), perfluorohexanoic acid ("PFHxA"), perfluorononanoic acid ("PFNA"), and perfluoropentanoic acid ("PFPeA").²⁶

Unfortunately, once released, Lear's pollution remains in the Northeast Cape Fear River. On September 2, 2022, Cape Fear River Watch sampled a couple of miles downstream from Lear's outfall and the sampling confirmed the presence PFAS at a total concentration of 71.7 ppt.²⁷ The sampling showed the presence of at least ten types of PFAS compounds, including PFOA and PFOS. PFOA was detected at 9.9 ppt (2,475 times the health advisory level), and PFOS was detected at 13.6 ppt (680 times the health advisory level).²⁸ Other PFAS detected include perfluorobutanoic acid ("PFBA"), perfluoropentanoic acid ("PFPeA"), perfluorohexanoic acid ("PFHxA"), perfluoroheptanoic acid ("PFHpA"), perfluorononanoic acid ("PFNA"), perfluorodecanoic acid ("PFDA"), n-methyl perfluorooctanesulfonamidoacetic acid ("NMeFOSAA"), and perfluorooctanesulfonamide ("PFOSA").²⁹

Even though Lear's most recent effluent sampling was in 2019, it is nearly certain that Lear's PFAS pollution continues today. Lear's industrial processes include the manufacturing of lace and warp knit fabric and the production of motor vehicle seating and interior trim.³⁰ Lear's renewal application describes its business as "[w]arp knitting and weaving of synthetic fibers for

²¹ *What are PFAS?*, Agency for Toxic Substances and Disease Registry, <https://www.atsdr.cdc.gov/pfas/health-effects/overview.html> (last visited Jan. 24, 2023); see also *Our Current Understanding of the Human Health and Environmental Risks of PFAS*, *supra* note 66.

²² Patricia A. Fair et al., *Perfluoralkyl Substances (PFASs) in Edible Fish Species from Charleston Harbor and Tributaries, South Carolina, United States: Exposure and Risk Assessment*, 171 ENV'T RES. 266 (April 2019); Chloe Johnson, *Industrial chemicals in Charleston Harbor taint fish – and those who eat them*, POST & COURIER (June 4, 2022), https://www.postandcourier.com/environment/industrial-chemicals-in-charleston-harbor-taint-fish-and-those-who-eat-them/article_b2b14506-bc19-11ec-83e5-7f2a8322d624.html; Nadia Barbo, et al., *Locally Caught Freshwater Fish Across the United States Are Likely a Significant Source of Exposure to PFOS and Other Perfluorinated Compounds*, 220 ENV'T RSCH. 115165 (2023), <https://www.sciencedirect.com/science/article/pii/S0013935122024926>.

²³ Draft Recommended Aquatic Life Ambient Water Quality Criteria for Perfluorooctanoic Acid (PFOA) and Perfluorooctane Sulfonic Acid (PFOS), 85 Fed. Reg. 26,199, 26,200 (May 3, 2022).

²⁴ 2019 Industrial PFAS Sampling, *supra* note 4 at 8.

²⁵ *Id.*

²⁶ *Id.*

²⁷ Cyclopure, Water Test Kit Pro Results Report, Kit#1371 (Sept. 20, 2022), Attachment 5.

²⁸ *Id.* at 1.

²⁹ *Id.*

³⁰ Lear's NPDES Permit Application, *supra* note 1 at 2–3.

the automotive industry. Dyeing, finishing, and flame lamination of knitted and woven synthetic fabrics.”³¹ Industries that work with synthetic fibers are a suspected point source category for PFAS.³² EPA notes that this category:

includes a broad range of sectors, raw materials, and unit operations that may manufacture or use PFAS...some [organic chemicals, plastics, and synthetic fiber] facilities use PFAS feedstocks as polymerization or processing aids or in the production of...products.³³

Given these characteristics, EPA has found that this industry category is likely to generate wastewater containing long-chain and short-chain PFAS including those that are well-studied and known to be harmful to humans.³⁴ Similarly, textile manufacturers like Lear have been found to use PFAS to enhance products’ resistance to water, oil, and heat.³⁵ Depending on the type of fabric production, PFAS can be added to the fibers themselves or sprayed onto the finished fabric to enhance performance and durability.³⁶ As a result, EPA has determined that PFAS “are present in wastewater discharges” from textile companies.³⁷

Because Lear falls into the category of industries known to be associated with PFAS and because prior sampling confirms the presence of PFAS in Lear’s wastewater and downstream of Lear’s outfall, it’s practically certain that the company continues to release the toxic chemicals into the Northeast Cape Fear River today.

II. Lear’s pollution threatens the Northeast Cape Fear River and those who use it.

Duplin County, where Lear discharges, is a rural area that has “long relied on an agricultural economy.”³⁸ The communities downstream of Lear’s discharge are predominantly low-income, and between 73 and 80 percent of community members have less than a high-school education.³⁹ While the racial demographics of Duplin County residents vary, downstream of Lear’s discharge, the community is comprised predominantly of people of color.⁴⁰ Many of these residents turn to the River for its abundance of fish and recreational opportunities.

Indeed, Lear discharges into a portion of the Northeast Cape Fear River that is popular for fishing, kayaking, and other recreational activities. Ecologically, the Northeast Cape Fear River is an important waterbody for many species. For example, the river downstream of Lear’s

³¹ *Id.* at 3.

³² U.S. Env’t Prot. Agency, Multi-Industry Per- and Polyfluoroalkyl Substances (PFAS) Study -2021 Preliminary Report 5-1 (Sept. 2021), available at https://www.epa.gov/system/files/documents/2021-09/multi-industry-pfas-study_preliminary-2021-report_508_2021.09.08.pdf [hereinafter “EPA PFAS Industry Preliminary Report”].

³³ *Id.* at 5-2.

³⁴ *Id.* at 5-8 to 5-9.

³⁵ *Id.* at 8-3 to 8-4.

³⁶ EPA PFAS Industry Preliminary Report, *supra* note 32 at 8-1 to 8-2.

³⁷ *Id.* at 8-4.

³⁸ The Julius L. Chambers Center for Civil Rights, Environmental Justice: Duplin County, NC (2018), available at <https://ncejn.files.wordpress.com/2018/10/duplin-ej-report-final.pdf>.

³⁹ U.S. Env’t Prot. Agency, EJScreen, EPA’s Environmental Justice Screening and Mapping Tool (Version 2.1), <https://ejscreen.epa.gov/mapper/> (last visited Feb. 10, 2023).

⁴⁰ *Id.*

discharge serves as protected critical habitat for the endangered Atlantic sturgeon.⁴¹ Additionally, expert agencies dedicated to ecological conservation have deemed this portion of the Northeast Cape Fear River as one of the highest priority conservation areas in the Southeast.⁴² This portion of the river also provides abundant habitat for largemouth bass, sunfish, and American shad, and as a result, is a popular fishing destination.⁴³ Many community members in Duplin County and surrounding areas subsistence fish in this portion of the river—meaning they rely on an abundance of healthy fish as a source of food. A recent study shows that those who subsistence fish in the Cape Fear River basin tend to be low-income, people of color, or individuals suffering from food insecurity.⁴⁴

As described above, PFAS do not breakdown once released into the environment and they will bioaccumulate in both the soil and organisms exposed to the chemicals, including fish. A recent study has documented fish with detectable levels of PFAS in all 48 continental states.⁴⁵ The results of this study confirm that PFOS—a particularly harmful PFAS compound—was one of the most prominent PFAS found in fish.⁴⁶ At the local level, scientists studying striped bass in the lower Cape Fear River detected PFAS, including PFOS, PFNA, and PFDA, in more than 98 percent of fish sampled.⁴⁷ The Department itself is currently studying PFAS present in multiple other fish species across the lower Cape Fear River, including those commonly fished for subsistence like catfish, largemouth bass, striped bass, and American shad.⁴⁸ With the data known thus far, researchers ultimately conclude that “[w]idespread PFAS contamination of freshwater fish in surface waters in the U.S. is likely a significant source of exposure to PFOS and potentially other perfluorinated compounds for all persons who consume freshwater fish, but especially for high frequency freshwater fish consumers.”⁴⁹

⁴¹ 82 Fed. Reg. 39,160 (2017); 50 C.F.R. § 226.225(g) (listing critical habitat for Atlantic sturgeon); *see also Atlantic Sturgeon Critical Habitat Map and GIS Data*, NAT’L OCEANIC AND ATMOSPHERIC ADMIN., <https://www.fisheries.noaa.gov/resource/map/atlantic-sturgeon-critical-habitat-map-and-gis-data> (last visited Feb. 7, 2023).

⁴² *See The Southeast Conservation Blueprint*, SOUTHEAST CONSERVATION ADAPTATION STRATEGY, <https://secassoutheast.org/blueprint> (last visited Feb. 7, 2023); Southeast Conservation Blueprint Version 2022, SOUTHEAST CONSERVATION ADAPTATION STRATEGY (2022), *available at* <https://fws.maps.arcgis.com/apps/mapviewer/index.html?webmap=29b8cf1e52f34b73b9bc2d336d1d8323>.

⁴³ N.C. Wildlife Res. Comm’n, *Fishing Opps in the Coastal Region of NC*, https://www.ncwildlife.org/Fishing/Where-to-Fish/Fishing_Opps_in_the_Coastal_Region_of_NC#:~:text=The%20Cape%20Fear%20River%20provides,between%201%C2%BD%20to%203%20pounds (last visited Feb. 6, 2023).

⁴⁴ Elizabeth Shaprio-Garza, et al., *Subsistence Fish Consumption on the Lower Cape Fear River*, Duke Univ. Superfund Rsch. and Oakland Univ. 21–22 (2022), *available at* https://sites.nicholas.duke.edu/superfundcec/files/2022/10/Subsistence-Fish-Consumption-on-the-lower-Cape-Fear-River_report.pdf.

⁴⁵ Barbo, *supra* note 22 at 1.

⁴⁶ *Id.*

⁴⁷ T.C. Guillette, et al., *Elevated Levels of per- and polyfluoroalkyl substances in Cape Fear River Striped Bass (*Morone saxatilis*) are Associated with Biomarkers of Altered Immune and Liver Function*, 136 *Env’t Int’l* 105358 (Feb. 2020), *available at* https://www.researchgate.net/publication/339091901_Elevated_levels_of_per_and_polyfluoroalkyl_substances_in_Cape_Fear_River_Striped_Bass_Morone_saxatilis_are_associated_with_biomarkers_of_altered_immune_and_liver_function.

⁴⁸ Frannie Nilsen, *Summer 2022 Water and Fish Collection Event*, N.C. Dep’t of Env’t Quality (Aug. 1, 2022), <https://deq.nc.gov/media/30793/download?attachment>.

⁴⁹ Barbo, *supra* note 22 at 9.

Given what we know about the chemical properties of PFAS and their long-lasting impact on the environment and species that come in contact with them, Lear’s pollution likely poses a very real threat to North Carolinians who recreate and fish in the Northeast Cape Fear River. Additionally, the Northeast Cape Fear River flows into the mainstem of the Cape Fear River and Lear’s pollution thus contributes to the overburden the Cape Fear River already faces from PFAS concentrations.

III. Lear’s current permit does not authorize the company to discharge PFAS, and each time the company releases the toxic chemicals, it is violating the law.

Lear is not authorized to release PFAS into the Northeast Cape Fear River because the company did not disclose its PFAS discharges in its NPDES permit application,⁵⁰ and the Department did not consider the PFAS pollution when it issued Lear’s prior NPDES permits.⁵¹

The Clean Water Act prohibits the discharge of any pollutant, including PFAS, without a NPDES permit.⁵² The discharge of a specific pollutant (or group of pollutants) cannot be permitted if it is not disclosed in a NPDES permit application. For decades, EPA has stressed the need for disclosure of pollutants during the permitting process:

[D]ischargers have a duty to be aware of any significant pollutant levels in their discharge. [...] Most important, [the disclosure requirements] provide the information which the permit writers need to determine what pollutants are likely to be discharged in significant amounts and to set appropriate permit limits. [...] [P]ermit writers need to know what pollutants are present in an effluent to determine appropriate permit limits in the absence of applicable effluent guidelines.⁵³

In December 2022, EPA confirmed that these disclosure requirements apply to PFAS stating that “no permit may be issued to the owner or operator of a facility unless the owner or operator submits a complete permit application” providing all information “that the permitting authority may reasonably require to assess the discharges of the facility” including information regarding PFAS.⁵⁴ Disclosure is considered adequate under the Clean Water Act when the applicant provides enough information for a permitting agency to “be[] able to judge whether the discharge of a particular pollutant constitutes a significant threat to the environment.”⁵⁵ To meet this burden, an applicant must include all relevant information, including the concentration,

⁵⁰ See Norman Johnson, Application for Renewal of: NPDES Permit Number NC0002305 Guildford Mills, Inc. (Aug. 3, 2016) (not acknowledging, listing, or otherwise disclosing the presence of PFAS in the wastewater from the industrial plant).

⁵¹ See N.C. Dep’t of Env’t Quality, NPDES Permit No. NC0002305 (Oct. 1, 2018).

⁵² 33 U.S.C. § 1311(a).

⁵³ Consolidated Permit Application Forms for EPA Programs, 45 Fed. Reg. 33,526–31 (May 19, 1980).

⁵⁴ EPA’s PFAS NPDES Guidance, *supra* note 2 at 2.

⁵⁵ *Piney Run Pres. Ass’n v. Cty. Comm’rs of Carroll Cty., Maryland*, 268 F.3d 255, 268 (4th Cir. 2001) (“Because the permitting scheme is dependent on the permitting authority being able to judge whether the discharge of a particular pollutant constitutes a significant threat to the environment, discharges not within the reasonable contemplation of the permitting authority during the permit application process, whether spills or otherwise, do not come within the protection of the permit shield.”).

volume, and frequency of the discharge.⁵⁶ The Clean Water Act places the burden of disclosure on the permit applicant because they are in the best position to know what is in their discharge.⁵⁷

Importantly, if a NPDES permit applicant does not adequately disclose its release of a pollutant, the applicant does not have approval to discharge the pollutant.⁵⁸ The EPA Environmental Appeals Board’s decision in *In re: Ketchikan Pulp Company* emphasized this result,⁵⁹ and that decision has been adopted by the Fourth Circuit. For example, in *Piney Run Pres. Ass’n v. Cty. Comm’rs of Carroll Cty., Maryland*, the Fourth Circuit stated:

The *Ketchikan* decision therefore made clear that a permit holder is in compliance with the [Clean Water Act] even if it discharges pollutants that are not listed in its permit, as long as it only discharges pollutants that have been adequately disclosed to the permitting authority. [...] **To the extent that a permit holder discharges a pollutant that it did not disclose, it violates the NPDES permit and the [Clean Water Act].**⁶⁰

The Department has already acknowledged that disclosure of toxic PFAS is required by the Clean Water Act and state water quality laws. In its enforcement action against Chemours for the company’s discharge of PFAS into the Cape Fear River, the agency stated:

Part of the permit applicant’s burden in this regard is to disclose all relevant information, such as the presence of known constituents in a discharge that pose a potential risk to human health. The permit applicant is required to disclose “all known toxic components that can be reasonably expected to be in the discharge, including *but not limited to* those contained in a priority pollutant analysis.” 15A N.C.A.C. 2H .0105(j) (emphasis added). [...] These disclosure obligations are critical, in part, because they define the scope of the Clean Water Act’s “permit shield.” While compliance with the express terms of an NPDES permit generally “shields” the permittee from liability for violations of 33 U.S.C. § 1311, the permit does not shield the permittee from liability where the pollutant being discharged was not within the “reasonable contemplation” of the permitting agency when it issued the permit due to nondisclosure by the permittee.⁶¹

⁵⁶ See *In re Ketchikan Pulp Co.*, 7 E.A.D. 605 (EPA) (1998) (“In explaining the provisions of 40 C.F.R. § 122.53(d)(7)(iii), which required dischargers to submit quantitative data relating to certain conventional and nonconventional pollutants that dischargers know or have reason to believe are present in their effluent, the [EPA] stated: ‘permit writers need to know what pollutants are present in an effluent to determine appropriate limits in the absence of effluent guidelines.’”).

⁵⁷ *S. Appalachian Mountain Stewards v. A & G Coal Corp.*, 758 F.3d 560, 566 (4th Cir. 2014).

(“The statute and regulations purposefully place the burden of disclosure on the permit applicant.”).

⁵⁸ See *In re Ketchikan Pulp Co.*, 7 E.A.D. 605; *Piney Run*, 268 F.3d. at 268; *S. Appalachian Mountain Stewards*, 758 F.3d at 567.

⁵⁹ See *In re Ketchikan Pulp Co.*, 7 E.A.D. 605.

⁶⁰ *Piney Run*, 268 F.3d. at 268 (emphasis added).

⁶¹ Amended Complaint, *N.C. Dept. of Environmental Quality v. Chemours*, 17 CVS 580, 6–7 (N.C. Super. 2018) (citing 33 U.S.C. § 1342(k); *Piney Run*, 268 F.3d at 265), <https://perma.cc/ZT3U-7QJB>.

Other states have reached similar conclusions. For example, the Tennessee Department of Environment and Conservation has made clear in at least one NPDES permit that undisclosed discharges of PFAS are unpermitted:

The facility's application did not report any forms of PFAS as chemicals that there was the potential to discharge. *The permittee has no permit shield for the discharge of PFAS compounds because no such chemicals were disclosed in the permit application or otherwise...*⁶²

The Department should treat Lear in the same manner as it did Chemours (and in the same manner that EPA and Fourth Circuit precedent mandate). Lear discharges PFAS and the company did not disclose that its wastewater contains the toxic chemicals. Because Lear failed to disclose this critical information, each and every release of PFAS into the Northeast Cape Fear River is a violation of the Clean Water Act subject to enforcement by the Department or a citizen suit brought pursuant to 33 U.S.C. § 1365.

IV. The Department must address Lear's PFAS pollution in its renewal permit.

Lear's current NPDES permit expires on April 30, 2023,⁶³ and the Department has received a NPDES renewal application from the company.⁶⁴ That permit renewal application, once again, does not disclose the presence of PFAS in Lear's wastewater.⁶⁵ The Department must take the following actions to control PFAS in Lear's upcoming permit.

a. The Department must require Lear to update its application to disclose PFAS.

Lear must disclose any discharge of PFAS before the agency moves forward with drafting a NPDES permit. As discussed above, the Department cannot authorize the discharge of a pollutant not disclosed during the permit application process. In line with EPA's directives, the Department should require Lear to analyze its effluent using draft method 1633 and disclose any PFAS found through this sampling.⁶⁶ Requiring sampling and disclosure before the Department releases a draft permit will ensure that the Department has all of the information that it needs to properly control Lear's PFAS pollution in the upcoming NPDES permit. The Department must require disclosure to ensure Lear knows of its obligations with respect to PFAS and is aware of the potential liability if it fails to do so.

⁶² TDEC, NPDES Permit NO. TN0002330 (2020), Holliston Holdings, LLC, Addendum to Rationale, <https://perma.cc/4RKY-PKFG> (emphasis added).

⁶³ N.C. Dep't of Env't Quality, NPDES Permit No. NC0002305, *supra* note 51 at 1.

⁶⁴ *See* Lear's NPDES Permit Application, *supra* note 1.

⁶⁵ *See generally id.*

⁶⁶ EPA recommends the use these methods for NPDES permits. *See* EPA's PFAS NPDES Guidance, *supra* note 2 at 2 (recommending monitoring be conducted under draft method 1633 in the absence of a final published analytical method for PFAS); *see also* Memorandum from Radhika Fox, U.S. Env't Prot. Agency to Water Division Directors EPA Regions 1-10, Addressing PFAS Discharges in EPA-Issued NPDES Permits and Expectations Where EPA in the Pretreatment Control Authority (Apr. 28, 2022), <https://perma.cc/5NMB-ME3L>.

We understand that the Department has asked Lear to answer a questionnaire regarding PFAS,⁶⁷ but this form cannot replace the need for full disclosure. In its information request, the Department asks Lear to provide any PFAS analytical results, *if such sampling has already been collected*.⁶⁸ This process—of only requiring information if it has already been collected—misses the point of disclosure (to ensure the agency has full and complete information regarding discharges) and creates the reverse incentive for Lear (and other industries) to abstain from conducting PFAS sampling in the first place, as industries will likely want to avoid identifying themselves as PFAS sources and/or permits with controls for the compounds. Additionally, this process—at best—will result in Lear turning over the same 2019 sampling that the Department already has, thereby aiding neither the Department nor the public in their understanding of Lear’s pollution.⁶⁹

The Department cannot rely on a supplemental form and must instead require Lear to conduct sampling to confirm the concentration and frequency of its PFAS pollution so that the agency can ensure the Northeast Cape Fear River is protected. This information must be incorporated into the permit application itself because the public relies on the information submitted in the publicly available application in order to participate in the permitting process.⁷⁰

b. The Department must impose effluent limits to control Lear’s PFAS pollution.

EPA’s PFAS NPDES Guidance instructs state agencies on how to address PFAS through existing NPDES authorities.⁷¹ Federal and state law, as well as EPA’s guidance make clear that the Department must analyze effluent limits to control Lear’s PFAS pollution. Indeed, the Department has already controlled PFAS in Chemours’ NPDES permit, displaying the agency’s understanding of its responsibilities under the Clean Water Act and signaling that the agency has the tools, authority, and knowledge of how to handle PFAS discharges through the NPDES permitting scheme. Lear should be treated no differently.

The Clean Water Act requires permitting agencies to, at the very least, incorporate, technology-based effluent limitations on the discharge of pollutants.⁷² When EPA has not issued a national effluent limitation guideline for a particular industry,⁷³ permitting agencies must implement technology-based effluent limits on a case-by-case basis using their “best professional

⁶⁷ Letter from Douglas Dowden, N.C. Dep’t of Env’t Quality, to Steven Middlebrook, Lear Corporation (Jan. 27, 2023) [hereinafter “More Information Request”], Attachment 6.

⁶⁸ *Id.*

⁶⁹ Indeed, we have seen this play out across the state. The Department has asked multiple facilities to provide PFAS data and each entity has simply turned over the 2019 sampling the Department has previously instructed them to collect and already had the results of. *See, e.g.*, Letter from Elijah Williams, City of Greensboro, to Gary Perlmutter, N.C. Dep’t of Env’t Quality (Jan. 27, 2022) (responding to the Department’s request for information regarding PFAS and 1,4-dioxane sampling and only attaching the 2019 PFAS sampling the department already had access to); City of Sanford, Permit Renewal Application No. NC0024147 (Mar. 22, 2022), at Tab H (providing the Department with the 2019 and 2020 PFAS sampling already mandated by the Department).

⁷⁰ *See* 15A N.C. Admin. Code 2H.0109, 2H.0115.

⁷¹ EPA’s PFAS NPDES Guidance, *supra* note 2.

⁷² 40 C.F.R. § 125.3(a) (“Technology-based treatment requirements under section 301(b) of the Act represent the *minimum* level of control that *must* be imposed in a permit...” (emphasis added)); *see also* 33 U.S.C. § 1311; *see also* EPA’s PFAS NPDES Guidance, *supra* note 2 at 2.

⁷³ 33 U.S.C. § 1314(b).

judgment.”⁷⁴ EPA has confirmed that technology-based limits are the “minimum level of control that must be imposed in NPDES permits” and that they should be calculated for PFAS.⁷⁵

Effective treatment technologies for PFAS are available. Granular activated carbon is a cost-effective and efficient technology that can reduce PFAS concentrations to virtually nondetectable levels. A granular activated carbon treatment system at the Chemours’ facility, for example, has reduced PFAS concentrations as high as 345,000 ppt from a creek contaminated by groundwater beneath the facility to nearly nondetectable concentrations.⁷⁶ The Department must treat Lear the same way that it treated Chemours. The Department must consider the feasibility of using granular activated carbon or similar technologies to control Lear’s PFAS pollution.

If technology-based limits are not enough to ensure compliance with water quality standards, the Department must include water quality-based effluent limits in the permit.⁷⁷ If the Department finds there is a “reasonable potential” that water quality standards will be exceeded, it must include water quality-based effluent limits in the permit.⁷⁸ This obligation “may not be waived,” and requires the agency to incorporate a permit limit protective of water quality standards regardless of “treatability” or analytical method detection levels.⁷⁹ Additional monitoring or data collection requirements “may not be substituted” for permit limits.⁸⁰

North Carolina’s toxic substances standard protects the public from the harmful effects of toxic chemicals, like PFAS.⁸¹ For instance, the toxic substances standard mandates that the concentration of cancer-causing chemicals shall not result in “unacceptable health risks,” defined as “more than one case of cancer per one million people exposed.”⁸² As the Department itself has recognized, PFAS meet the definition of “toxic substance” and the Department should therefore analyze whether Lear’s discharge will violate this water quality standard.⁸³ EPA’s health advisories for PFAS and countless toxicity studies indicate that the chemicals pose unacceptable health risks at extremely low levels. The Department must assess effluent limits in

⁷⁴ 40 C.F.R. § 125.3; *see also* 33 U.S.C. § 1342(a)(1)(B); 15A N.C. Admin. Code 2B.0406.

⁷⁵ EPA’s PFAS NPDES Guidance, *supra* note 2 at 3.

⁷⁶ *See* Parsons, Engineering Report – Old Outfall 002 GAC Pilot Study Results (Sept. 2019), *available at* <https://www.chemours.com/ja/-/media/files/corporate/12e-old-outfall-2-gac-pilot-report-2019-09-30.pdf?rev=6e1242091aa846f888afa895eff80e2e&hash=040CAA7522E3D64B9E5445ED6F96B0FB>; *see also* Chemours Outfall 003, NPDES No. NC0089915 Discharge Monitoring Reports (2020–2022), *available at* <https://perma.cc/8YND-XT5M>.

⁷⁷ 40 C.F.R. § 122.44(d)(1)(i); *see also* 33 U.S.C. § 1311(b)(1)(C); 15A N.C. Admin. Code 2H.0112(c) (stating that Department must “reasonably ensure compliance with applicable water quality standards and regulations”); EPA’s PFAS NPDES Guidance, *supra* note 2 at 3–4.

⁷⁸ 40 CFR § 122.44(d)(1)(i), *see also* 33 U.S.C. § 1311(b)(1)(C); (1)(i); 15A N.C. Admin. Code 2H.0112(c) (stating that the Department must “reasonably ensure compliance with applicable water quality standards and regulations.”); EPA, CENTRAL TENETS OF THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMITTING PROGRAM 3 (2020), *available at* <https://www.epa.gov/npdes/central-tenets-npdes-permitting-program> (emphasis in original) [hereinafter “Central Tenets of NPDES Permitting Program”].

⁷⁹ Central Tenets of NPDES Permitting Program, *supra* note 78 at 3.

⁸⁰ *Id.*

⁸¹ 15A N.C. Admin. Code 2B.0208.

⁸² *Id.* at 2B.0208(a)(2)(B).

⁸³ Amended Complaint, *North Carolina v. The Chemours Company, FC, LLC*, *supra* note 61 at ¶ 152 (explaining that PFAS “meet the definition of ‘toxic substance’ set forth in 15A N.C.A.C. 2B .0202”).

Lear's permit based on EPA's health advisories and other available toxicity information for the chemicals.

V. The Department must also address other pollution in Lear's renewal permit.

While Lear's PFAS pollution is of utmost concern, there are other items that the Department must address as it prepares Lear's renewal permit. First, prior sampling has confirmed that Lear also discharges 1,4-dioxane, a likely human carcinogen.⁸⁴ 1,4-dioxane is a clear, man-made chemical that is a byproduct of many industrial processes.⁸⁵ The chemical is toxic to humans,⁸⁶ causing liver and kidney damage.⁸⁷ Like PFAS, 1,4-dioxane is highly miscible in water and does not break down once released into the environment. In 2019, Lear sampled its effluent and reported concentrations of 1,4-dioxane ranging between 12 parts per billion ("ppb") and 29 ppb.⁸⁸ Despite knowing that it released the toxic chemical into the Northeast Cape Fear River, Lear did not disclose its 1,4-dioxane pollution in the company's most recent permit application. As with PFAS, the Department must require disclosure of 1,4-dioxane, evaluate applicable control technology, and then assess whether Lear's pollution has the reasonable potential to cause or contribute to an exceedance of water quality standards.⁸⁹ If so, the Department must impose effluent limits.⁹⁰

Second, Lear has routinely violated the terms of its permit. In 2022 alone, Lear exceeded its whole effluent toxicity limit at least four times.⁹¹ In the same year, Lear exceeded its fecal coliform limit at least three times.⁹² Lear also violated its permit condition prohibiting more than a trace amount of foam from being released from its outfall.⁹³ This violation is particularly egregious as the company failed to self-report the prohibited discharge (as required by law),⁹⁴ and the violation was only brought to the Department's attention after Cape Fear River Watch

⁸⁴ 2019 Industrial PFAS Sampling, *supra* note 4 at 8.

⁸⁵ *Technical Fact Sheet – 1,4-Dioxane*, EPA 1-2 (2017), https://www.epa.gov/sites/production/files/2014-03/documents/ffrro_factsheet_contaminant_14-dioxane_january2014_final.pdf.

⁸⁶ *Id.* at 1.

⁸⁷ *Id.*; EPA, *Integrated Risk Information System, Chemical Assessment Summary: 1,4,-dioxane 2* (Aug. 11, 2010), https://cfpub.epa.gov/ncea/iris/iris_documents/documents/subst/0326_summary.pdf.

⁸⁸ 2019 Industrial PFAS Sampling, *supra* note 4 at 8.

⁸⁹ See 40 C.F.R. § 122.44(d)(1)(i); 15A N.C. Admin. Code 2H.0112(c) (stating that Department must "reasonably ensure compliance with applicable water quality standards and regulations").

⁹⁰ 40 C.F.R. §§ 125.3(a) ("Technology-based treatment requirements under section 301(b) of the Act represent the *minimum* level of control that *must* be imposed in a permit..." (emphasis added)); 122.44(d)(1)(i); see also 33 U.S.C. § 1311.

⁹¹ Letter from Cindy Moore, N.C. Dep't of Env't Quality, to Stephen Molino, Lear Corporation (Mar. 22, 2022) (NC NOV-2022-TX-0018); Letter from Cindy Moore, N.C. Dep't of Env't Quality, to Stephen Molino, Lear Corporation (Apr. 12, 2022) (NC NOV-2022-TX-0029); Letter from Cindy Moore, N.C. Dep't of Env't Quality, to Stephen Molino, Lear Corporation (June 20, 2022) (NC NOV-2022-TX-0046); Letter from Cindy Moore, N.C. Dep't of Env't Quality, to Stephen Molino, Lear Corporation (June 20, 2022) (NC NOV-2022-TX-0058).

⁹² Letter from Tom Tharrington, N.C. Dep't of Env't Quality, to Stephen Molino, Lear Corporation (Feb. 25, 2022) (NOV-2022-LV-0151); Letter from Tom Tharrington, N.C. Dep't of Env't Quality, to Stephen Molino, Lear Corporation (Aug. 5, 2022) (NOV-2022-LV-0527); Letter from Tom Tharrington, N.C. Dep't of Env't Quality, to Stephen Molino, Lear Corporation (Sept. 6, 2022) (NOV-2022-LV-0619).

⁹³ Letter from Morella Sanchez-King, N.C. Dep't of Env't Quality, to Stephen Molino, Lear Corporation (Jan. 17, 2023) (NOV-2023-PC-0006).

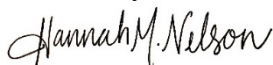
⁹⁴ 40 C.F.R. § 122.41(l).

discovered and reported the occurrence.⁹⁵ The Department must impose conditions in Lear's permit to ensure that these violations do not recur.

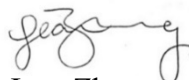
VI. Conclusion.

Lear currently and unlawfully releases incredibly high amounts of PFAS into the Northeast Cape Fear River. The Department must require that Lear disclose its PFAS and 1,4-dioxane pollution by providing sampling data that affords the Department the information it needs to protect the river and those that use it. The Department has made impressive steps to control the pollution at Chemours, but the work cannot end there. The Department must act now to prevent Lear from continuing to release toxic PFAS into the Northeast Cape Fear River and must incorporate limits and conditions necessary to protect the environment and surrounding communities in Lear's upcoming NPDES permit. Thank you for considering these comments. Please contact me at 919-967-1450 or hnelson@selcnc.org if you have any questions regarding this letter.


Sincerely,



Hannah M. Nelson



Jean Zhuang



Geoff Gisler

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⁹⁵ See Email from Kemp Burdette, Cape Fear River Water, to Morella Sanchez-King, N.C. Dep't of Env't Quality (Sept. 1, 2022).