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PUBLIC NOTICE

ENVIRONMENTAL PROTECTION

CONTAMINATED SITE REMEDIATION AND REDEVELOPMENT

Notice of Establishment of Interim Remediation Standards

Take notice that, in accordance with the Interim Remediation Standards at N.J.A.C. 7:26D-6, the New Jersey Department of Environmental Protection (Department) is establishing interim residential and nonresidential soil remediation standards for the ingestion-dermal exposure pathway for perfluorononanoic acid (PFNA), perfluorooctanoic acid (PFOA), perfluorooctane sulfonate (PFOS), and hexafluoropropylene oxide dimer acid and its ammonium salt (also known as GenX) listed in Table 1. The Department is also establishing interim soil and soil leachate remediation standards for the migration to ground water exposure pathway for PFNA, PFOA, and PFOS listed in Table 2. The Remediation Standards at N.J.A.C. 7:26D-6.2 enable the Department to establish interim soil and soil leachate standards for constituents that are not listed at N.J.A.C. 7:26D Appendix 1. The Department amended the Remediation Standards, N.J.A.C. 7:26D, in 2021 to allow for the provision of interim remediation standards. This provision enables the Department to respond to environmental threats on a timely basis, while at the same time notifying the regulated community as to the applicable standards. The interim remediation standards are rounded to two significant figures for soil and soil leachate, in accordance with N.J.A.C. 7:26D Appendix 1.

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Table 1 – Interim Soil Remediation Standards for the Ingestion-Dermal Exposure Pathway

Contaminant	CAS No.	Soil Remediation Standard Ingestion-Dermal Residential (mg/kg)	Soil Remediation Standard Ingestion-Dermal Nonresidential (mg/kg)
PFNA	375-95-1	0.047	0.67
PFOA	335-67-1	0.13	1.8
PFOS	1763-23-1	0.11	1.6
GenX	13252-13-6 & 62037-80-3	0.23	3.9

Table 2 – Interim Soil and Soil Leachate Remediation Standards for the Migration to Ground Water Exposure Pathway

Contaminant	CAS No.	Soil Remediation Standard Migration to Ground Water (mg/kg)	Soil Leachate Remediation Standard Migration to Ground Water (µg/L)
PFNA	375-95-1	Area of Concern/Site-specific	0.26
PFOA	335-67-1	Area of Concern/Site-specific	0.28
PFOS	1763-23-1	Area of Concern/Site-specific	0.26

PFNA, PFOA, PFOS, and GenX are members of the family of synthetic chemicals known as per- and polyfluoroalkyl substances (PFAS). PFNA, PFOA, PFOS, and GenX have been used and discharged for decades in industrial processes, certain types of firefighting foams, and consumer products. These substances have been detected in New Jersey in soil and ground water, including domestic potable wells, as well as in other environmental media (for example, surface water, sediment, air). Additional investigation of the extent of environmental

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contamination by PFNA, PFOA, PFOS, and GenX is ongoing. The nature of these chemicals, including their toxicity, bioaccumulation, and potential health effects, indicates the need for interim remediation standards, so that PFNA, PFOA, PFOS, and GenX that are present in soil can be investigated and remediated to protect public health. Specifically, the presence of PFNA, PFOA, PFOS, and GenX in soil and soil leachate is of great concern because PFNA, PFOA, PFOS, and GenX cause multiple types of toxicity at low doses in laboratory animals and are reported to be associated with numerous health endpoints in occupationally exposed workers. Additional information regarding these toxicological effects can be found in the Department's proposal and adoption of Maximum Contaminant Levels (MCLs) for Perfluorononanoic Acid and 1,2,3-Trichloropropane; Private Well Testing for Arsenic, Gross Alpha Particle Activity, and Certain Synthetic Organic Compounds (49 N.J.R. 2361(a); 50 N.J.R. 1939(a)), and the proposal of Ground Water Quality Standards and Maximum Contaminant Levels (MCLs) for Perfluorooctanoic Acid (PFOA) and Perfluorooctanesulfonic Acid (PFOS) (51 N.J.R. 437(a)).

The Department obtained the oral toxicity information used to generate the interim remediation standards for soil and soil leachate for PFNA, PFOA, and PFOS from the New Jersey Drinking Water Quality Institute. This same toxicity information forms the basis for New Jersey's drinking water health-based Maximum Contaminant Levels and Ground Water Quality Standards for PFNA, PFOA, and PFOS adopted by the Department at N.J.A.C. 7:10 and 7:9C. Additional information on the oral toxicity information can be found in the *Health-Based Maximum Contaminant Level Support Documents* for PFNA, PFOA, and PFOS located at <https://www.nj.gov/dep/pfas/standards.html>. The Department obtained the oral toxicity information used to generate the interim soil remediation standards for the ingestion-dermal

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exposure pathway for GenX from the United States Environmental Protection Agency's Office of Water.

The Department and regulated community use soil leachate remediation standards for the migration to ground water exposure pathway in conjunction with soil tested using the synthetic precipitation leaching procedure (SPLP). The SPLP procedure measures the leachability of the contaminant, and the Department and regulated community use subsequent calculations to develop an area of concern or site-specific interim soil remediation standard for the migration to ground water exposure pathway.

The Department provides reporting limits for PFNA, PFOA, PFOS, and GenX derived from empirical data provided by multiple laboratories certified by the State of New Jersey for analysis of these PFAS compounds. Such laboratories are certified by the Department's Office of Quality Assurance in compliance with the Regulations Governing the Certification of Laboratories and Environmental Measurements, N.J.A.C. 7:18. A reporting limit is the lowest concentration that an instrument can detect with reasonable confidence and that can be reliably achieved by laboratories during routine laboratory operating conditions within the acceptable limits specified in the given analytical method (that is, the lowest quantifiable concentration). See the Technical Requirements for Site Remediation at N.J.A.C. 7:26E-1.8, Definitions, for the regulatory definition of "reporting limit."

The analytical PFAS detection methods for non-potable water and soil have sufficient analytical sensitivity such that the listed soil or soil leachate remediation standard for a contaminant will be above the laboratory-specific reporting limit. Site- or Area of Concern-Specific soil health-based criteria derived for the migration to ground water exposure pathway

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may be below reporting limits, resulting in the derived soil remediation standards defaulting to the reporting limit.

This notice will serve to inform the public of the establishment of the interim soil and soil leachate remediation standards for PFNA, PFOA, PFOS, and GenX in the “Table of Interim Soil Remediation Standards for the Ingestion-Dermal Exposure Pathway,” the “Table of Interim Soil Remediation Standards for the Migration to Ground Water Exposure Pathway,” and the “Table of Interim Soil Leachate Remediation Standards for the Migration to Ground Water Exposure Pathway” found at https://nj.gov/dep/srp/guidance/rs/interim_soil_ia_rl_rs.html. The interim remediation standards apply to the concentration of PFNA, PFOA, PFOS, and GenX in soil and soil leachate at all sites undergoing remediation in the State. At those sites where these PFAS are detected in soil or soil leachate, the Department requires that these contaminants be remediated so that there is no longer a potential exposure at concentrations that exceed the interim remediation standard. The Department will replace the interim remediation standards for soil and soil leachate with promulgated standards as soon as reasonably possible through rulemaking, in accordance with the Administrative Procedure Act, N.J.S.A. 52:14B-1 et seq.