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I. What Is the Legal History of the Standards for the Use or Disposal of Sewage Sludge?

In section 405 of the CWA, Congress, for the first time, set forth a comprehensive program designed to reduce potential health and environmental risks and maximize the beneficial use of sewage sludge. As amended, section 405(d) of the CWA requires EPA to establish numerical limits and management practices that protect public health and the environment from the reasonably anticipated adverse effects of chemical and microbial pollutants in sewage sludge. Section 405(e) prohibits any person from disposing of sewage sludge from publicly owned treatment works (POTWs) or other treatment works treating domestic sewage except in compliance with regulations promulgated under section 405.

Section 405(d) calls for two rounds of sewage sludge regulations and sets deadlines for promulgation. In the first round, EPA was required to establish numerical limits and management practices for those toxic pollutants that, based on "available information on their toxicity, persistence, concentration, mobility, or potential for exposure, may be present in sewage sludge in concentrations that may adversely affect public health or the environment." See CWA section 405(d)(2)(A). EPA was then required to undertake a second round of rulemaking, to address toxic pollutants not regulated in the first round "which may adversely affect public health or the environment." See CWA section 405(d)(2)(B).

EPA did not meet the section 405(d) timetable for promulgating the first round of regulations, and a citizen's suit was filed to require EPA to fulfill this mandate. See *Gearhart v. Reilly*, Civ. No. 89-6266-HO (D. Ore.). A consent decree was entered by the court in this case, establishing schedules for both rounds of sewage sludge rules. EPA promulgated the first rule ("Round One") on February 19, 1993 (40 CFR part 503, 58 FR 9248). The consent

decree required the Administrator to sign a notice proposing Round Two regulations no later than December 15, 1999, and to sign a notice taking final action on the proposal no later than December 15, 2001.

For the second round ("Round Two"), EPA identified 31 pollutants and pollutant categories not regulated in Round One that EPA was considering for regulation. In November 1995, EPA narrowed the original list of 31 pollutants to two pollutant groups for the second round rulemaking: polychlorinated dibenzo-p-dioxins/dibenzofurans (PCDDs/Fs) and dioxin-like coplanar polychlorinated biphenyls (PCBs) (USEPA, 1996).

On December 15, 1999, the Administrator signed a proposal to establish numerical limits for chlorinated dibenzo-p-dioxin, chlorinated dibenzofurans, and coplanar PCBs ("dioxins") in sewage sludge that is applied to the land and proposed not to regulate dioxins in sewage sludge that is disposed of in a surface disposal unit or fired in a sewage sludge incinerator. 64 FR 72045 (December 23, 1999). On December 21, 2001, the Administrator gave final notice of EPA's determination that numerical standards or management practices are not warranted for dioxins in sewage sludge that is disposed of at a surface disposal unit or a sewage sludge incinerator. 66 FR 66228 (December 21, 2001). The consent decree in *Gearhart v. Whitman* was amended to extend the deadline for final action on the land application Round Two rulemaking from the original date of December 15, 2001, to a new date of October 17, 2003.

On June 12, 2002, EPA published a Notice of Data Availability (NODA) containing new information relating to dioxins in land-applied sewage sludge and requested public comments. 67 FR 40554. On October 17, 2003, the Administrator signed a notice for publication in the **Federal Register** announcing EPA's decision that regulation of "dioxins" in land-applied sewage sludge was not needed to adequately protect human health and the environment. 68 FR 61084 (October 24, 2003).

Section 405(d)(2)(C) requires EPA to biennially review existing sewage sludge regulations for the purpose of identifying and regulating additional toxic pollutants in sewage sludge to adequately protect human health and the environment from the reasonably anticipated effects of such pollutants. The Agency commissioned the NRC to independently review the technical basis of the chemical and microbial

regulations governing land application to help address the human health concerns raised by the public and to fulfill the requirement for periodic reassessment of the Standards for Use or Disposal of Sewage Sludge. The NRC study took place between January 2001 and June 2002. In July 2002, the NRC published a report entitled, "Biosolids Applied to Land: Advancing Standards and Practices" in response to EPA's request. The NRC identified a need to update the scientific basis of part 503 and provided approximately 60 recommendations.

EPA entered into an agreement with the parties in *Gearhart v. Whitman*, to publish a notice in the **Federal Register** describing how the Agency intends to respond to the NRC report recommendations and to seek public comment on its planned response. EPA also agreed to review publicly available information to identify additional toxic pollutants in sewage sludge and to publish a notice and seek public comment on the results of the review. Fulfilling these commitments, EPA published a notice in the **Federal Register** on April 9, 2003 (68 FR 17379). EPA also agreed to publish its final response to the NRC recommendations and the final results of its review under section 405(d)(2)(C). Today's Notice fulfills this agreement.

II. What Requirements Are Included in the Standards for the Use or Disposal of Sewage Sludge (40 CFR Part 503)?

CWA section 405(d)(2)(A) required the first round of regulation to be based on "available information on [the] toxicity, persistence, concentration, mobility, or potential for exposure" of toxic pollutants in sewage sludge. EPA published the Round One standards (40 CFR part 503) on February 19, 1993, establishing requirements for the final use or disposal of sewage sludge when it is: (1) Applied to the land for a beneficial purpose, including in home gardens, (2) placed in a surface disposal site, including sewage sludge-only landfills, or (3) incinerated.

For land application, EPA set numerical limits for nine metals in sewage sludge, established operational standards (described later in this notice) to reduce or eliminate pathogens in sewage sludge and to reduce vector attraction, and required management practices to restrict the application rate and placement of sewage sludge on the land. For surface disposal in sewage sludge-only units, part 503 includes numerical limits for three metals in sewage sludge, requirements for the placement and management of a surface disposal site, and operational standards