

Through a voluntary Environmental Management System (EMS), being developed for biosolids by the National Biosolids Partnership (NBP), EPA continues to provide the public with educational information, based on the best science, about the recycling and disposal of biosolids. EPA strongly supports the ongoing efforts of the NBP to develop the EMS and to provide correct and timely information and community-friendly practices that could be followed via its new communications system. The EMS program supports local agencies to find ways to meet and go beyond what is required in state and federal regulations. About 45 municipalities are now pilot-testing their biosolids EMS programs based upon a blueprint developed by the NBP. Several of these municipalities will be ready to undergo an independent third party audit of the EMS program later this year (2003). Municipalities involved in the voluntary EMS program are reporting benefits they have achieved. They report that their participation in the EMS program has resulted in more efficient operation, reduced odors in biosolids, less intrusive transport of the biosolids to land application sites, better communication, and meaningful involvement of the public. The Agency plans to continue supporting NBP activities and working with municipalities on expanding the use of EMS programs in biosolids management. Two NBP Web site address that present relevant biosolids information are <http://www.biosolids.org> and <http://biosolids.policy.net/emsguide/manual/goodpractmanual.html>.

The EPA's Pathogen Equivalency Committee was discussed in the Pathogens subsection. The PEC is instrumental in the development and evaluation of regulatory-related initiatives. EPA will continue to support and evaluate the activities of the PEC.

**State Regulations:** 40 CFR part 503 sets minimum standards for the use or disposal of sewage sludge. State requirements may be more restrictive or administered in a manner different from the Federal regulation. In all cases, users and disposers of biosolids must comply with the most restrictive portions of both the Federal and State rules. In most cases, the part 503 rule is self-implementing; users must comply with part 503 rule, even if they have not been issued a permit covering sewage sludge use or disposal. EPA or States can take enforcement actions directly against persons who violate part 503 requirements. In situations where States and others are addressing such issues,

EPA plans to use those opportunities to further evaluate and develop the tools to improve the assessment and management of sewage sludge.

#### Planned Biosolids Management Activities

The priority activities for biosolids presented in this response were evaluated in the larger context of other Agency priorities. The purpose of listing planned activities is to illustrate the Agency's future direction based on current information. Given the activities spelled out in this response, EPA's goal over the next two years is to complete studies and other activities, follow external research, and review available information. The Agency's longer-term goal is to assess results from completed and ongoing activities to determine further research needs. Implementation of various activities will be considered by the relevant EPA Offices and Regions in future priority setting activities.

#### IX. How Did EPA Conduct the Review of Part 503 Regulations Under the CWA Section 405(d)(2)(C)?

Section 405(d)(2)(C) of the Clean Water Act requires that EPA review the sewage sludge regulations "for the purpose of identifying additional toxic pollutants and promulgating regulations for such pollutants consistent with the requirements" of section 405(d). EPA has promulgated regulations in 40 CFR part 503 setting numeric standards for certain toxic pollutants in sludge, requirements for pathogen and vector attraction reduction, and operational standards for emissions from sewage sludge incinerators.

As explained in section IV above, EPA commissioned the NRC study of existing sewage sludge land application regulations for the purpose of strengthening the scientific basis of its review under section 405(d)(2)(C). In an agreement with the parties in *Gearhardt v. Whitman*, EPA agreed to publish a notice seeking public comment on its proposed response to the NRC recommendations and the results of its 405(d)(2)(C) review. In conducting this review, EPA committed to review and evaluate publicly available information, such as sampling data, scientific studies, and other analysis and information taken from a wide range of national and international public and private sources.

In fulfilling this commitment, EPA has performed a comprehensive assessment of the availability of data on chemicals that have been detected in or in some way linked to sewage sludge. EPA reviewed Rounds One and Two screening histories; collected and

conducted a preliminary review of publicly available information on chemical toxicity, environmental properties such as mobility and persistence, and concentration; identified chemical pollutants for which appropriate analytical methods and human health benchmarks are available; and made preliminary determinations regarding sufficiency of information for risk-based screening analyses. The results of this review are available in the docket (USEPA, 2003e).

At this time, EPA has not identified any additional toxic pollutants that warrant regulation in sewage sludge. The next step in identifying toxic pollutants that may warrant regulation is to conduct a screening analysis of those chemicals for which adequate data and analytical methods are available and for which there is evidence that they may occur in sewage sludge. EPA plans to complete this screening analysis by January 2004. In addition, EPA is continuing to seek additional information to fill data gaps for those chemicals for which adequate data for the screening analysis is not yet available and would welcome any relevant data from commenters.

The Agency began its review under section 405(d)(2)(C) by first reviewing the complete list of pollutants that were considered in developing the Round One rule and Round Two proposal. For Round One, EPA conducted a National Sewage Sludge Survey (NSSS) in 1988–1989, which included an analysis of 411 pollutants. These 411 pollutants included, among others, every organic chemical including pesticide, dibenzofuran, dioxin and PCB analytes for which EPA had gas chromatography and mass spectrometry (GC/MS) standards (58 FR 9268–9269). Of the original 411 pollutants, EPA promulgated numeric standards in Round One for 10 pollutants (metals) in land-applied sewage sludge, three pollutants (metals) in sewage sludge placed in surface disposal units, seven pollutants in sewage sludge fired in sewage sludge incinerators (SSIs), and an operational standard for total hydrocarbons (or alternatively carbon monoxide) emitted from SSIs.

These same 411 pollutants were the starting point in 1995 for identifying pollutants for developing a Round Two regulation. EPA conducted a preliminary screening analysis which resulted in an identification of 31 pollutants for potential regulation in Round Two. These 31 pollutants were the subject of a comprehensive hazard identification study, which narrowed the list to dioxin, dibenzofurans and