

2. The Agency's Response to the Regulatory Category

How EPA Plans To Address NRC Regulatory Recommendations

Ongoing Regulatory Activities

New Standards: As previously mentioned in Section II above, EPA vacated the numeric standards for molybdenum in sewage sludge as a result of litigation. EPA has conducted a literature search of new environmental properties information for molybdenum in land-applied biosolids. Following review of this new information, EPA will determine its applicability as the basis for re-proposing molybdenum standards for land-applied sewage sludge. EPA is planning to complete this review in 2003.

EPA also has information indicating that virtually no biosolids products are sold or given away in bags or other containers unless they comply with the pollutant concentrations for the nine metals currently regulated and the pathogen and vector attraction reduction requirements, which allows these products to be classified as exceptional quality (EQ) as described in the EPA guidance (USEPA, 1994). EPA plans to evaluate the data during the current year to determine whether to amend part 503 to eliminate the non-EQ Table 4 alternative for selling and distributing biosolids products that are sold or given away in bags or other containers weighing less than one metric ton.

Standardized Management Practices: Part 503 is designed to protect public health through compliance not only with numerical criteria for pollutants found in biosolids, but also with operational standards for pathogen and vector attraction reduction. These operational standards are performance based, based on operational goals for specified reduction, to enable elimination of pathogens and vector attraction reductions in sewage sludge through various engineering designs, processes and equipment. EPA believes that such means are appropriate for achieving environmental performance while encouraging efficient, cost-effective, and innovative systems and approaches.

The establishment of national standard treatment design criteria may not result in application of the most efficient site-specific practices for protecting public health. The additional management practices recommended by the NRC are linked to site-specific, or local-level, conditions. Examples include topography, soil characteristics, climate, population density, land-use,

depth to groundwater, and proximity to surface waters. States and local jurisdictions will have better knowledge of local conditions, and are in a better position to establish additional management practices to augment the protectiveness of the part 503 Standards. However, EPA also plans to evaluate such practices to determine if additional requirements or improvements in the Part 503 Rule are warranted.

Regulations from Other Nations: EPA generally considers relevant and available information and protocols from other nations to augment and inform its decisions. When standards are available, such as the Canadian standards for sewage sludge, these have provided the Agency with valuable new perspectives and insights into the scientific, technical, and societal basis for the development and implementation of sewage sludge regulations. However, there are fundamental scientific and programmatic differences between certain international sewage sludge standards and EPA's standards for the use or disposal of sewage sludge in 40 CFR part 503.

The Part 503 Standards are based on information for pollutants found in sewage sludge, and are risk-based as directed by section 405(d) of the Clean Water Act. As such, the Part 503 Standards consist of numerical limits with adequate margins of safety to protect public health and the environment. The Part 503 numerical standards are based on a conservative set of exposure pathway and risk assessment assumptions.

In contrast, international sewage sludge standards are based on differing legal frameworks. Therefore, sewage sludge regulation promulgated by some other countries may not be comparable to EPA's authority or standards under section 405 of the CWA. However, numerous other countries have supported the quantitative risk assessment approach and have often adopted Part 503 limits for regulating biosolids.

Planned Regulatory Activities

Studies: As part of its field studies in 2004, EPA is planning to evaluate certain Class B disinfection processes including the natural attenuation of pathogens that occurs while the sludge is on or in the soil for the site restriction periods stated in the current regulations (40 CFR 503.32(b)(5)). Treatment processes that are expected to be evaluated include anaerobic digestion and lime addition. Site restrictions to be studied include limitations on how soon

agricultural activities can occur after biosolids application. In determining the efficacy of current management practices, ways to improve them may also be identified. This research will be initiated in 2003.

H. Biosolids Management

4. Summary of Biosolids Management NRC Recommendations

The NRC recommended that the Agency increase the resources devoted to its biosolids program and expand biosolids management activities. Specific recommendations were made to increase funding to States to implement programs, fund, support, and officially sanction EPA's Pathogen Equivalency Committee (PEC) as part of the EPA biosolids program, and strike a balance between expending resources on new site-specific data collection and expending resources to model and assess risk using existing information.

The NRC also recommended biosolids management activities in the following areas: expand and strengthen the oversight program, track allegations and sentinel events of adverse health effects from exposure to land-applied biosolids, and conduct studies to determine whether the management practices specified in Part 503 achieve their intended effect.

Furthermore, the NRC recommended that the Agency develop a procedural framework to implement human health investigations and to verify that (1) treatment technologies for pathogen control are effective (quality control), (2) chemical standards are met (compliance audits), and (3) unanticipated hazards are identified.

2. The Agency's Response to the Biosolids Management Category

How EPA Plans To Address NRC Biosolids Management Recommendations

Biosolids Management Activities

Overview: At EPA Headquarters, the biosolids regulatory staff within the Office of Water has been increased recently. The new staff positions will be devoted to regulatory development, Part 503 updates, and implementation activities. There is also an enforcement or compliance presence in each of the EPA Regional Offices for following up on phone calls and complaints received from the public, and initiating Agency enforcement actions, as appropriate.

States have their own oversight programs, some of which are quite comprehensive. There are a total of about 150 full time equivalent State employees assigned to their respective biosolids programs. Five States have