July 8, 2003

Water Docket
Attention Docket ID No. OW-2003-0006
U.S. Environmental Protection Agency
Mailcode: 4101T
1200 Pennsylvania Ave., NW.
Washington, DC 20460

RE: Standards for the Use or Disposal of Sewage Sludge; Agency Response to the National Research Council Report on Biosolids Applied to Land and the Results of EPA's Review of Existing Sewage Sludge Regulations (68 *FR* 17379-17395)

Dear Water Docket:

The Water Environment Federation (WEF) respectfully submits the following comments on the above referenced *Federal Register* notice. Founded in 1928, WEF is a not-for-profit technical and educational organization with members from varied disciplines who work toward the WEF vision of preservation and enhancement of the global water environment. The WEF network includes more than 100,000 water quality professionals from 79 Member Associations in 31 countries. The Federation has been involved in activities related to the appropriate management and use or disposal of municipal sewage solids since its inception in 1928.

Members from WEF's Residuals and Biosolids Committee, Government Affairs Committee, and Public Education Committee developed the following comments. These individuals are from both the private and public sector with experience in the management and beneficial use of biosolids.

General Comments

WEF believes biosolids land application is a safe practice when applied in accordance to the Part 503 requirements and encourages EPA's efforts to confirm that current practices are environmentally sound and protect human health. WEF supports EPA's continued commitment to reducing the public's uncertainty related to human health impacts while acknowledging that "there is no documented scientific evidence to indicate that the Part 503 rule has failed to protect human health," as stated in the NRC July 2002 biosolids report.

WEF supports EPA's three main objectives "for attaining a better understanding of biosolids and reducing the potential for, or reducing the uncertainty related to, human health impact." In general, WEF believes that EPA has developed a thorough and sensible strategy to address concerns raised in the NRC report while optimizing the agency's limited funding. It is critical that EPA direct its limited resources to areas that will result in the greatest environmental benefit, such as increased oversight of ongoing operations to determine regulatory compliance, confirmation of safety and public health, and strengthening public confidence. WEF endorses EPA's commitment to manage biosolids in full compliance with the Part 503 rule and EPA's commitment to support the National Biosolids Partnership's Environmental Management System program.

There are four key elements to the Agency's strategy that WEF believes will ultimately determine EPA's ability to address public concerns:

- *Focus on Priorities* – The document reflects a strong emphasis on pathogens and odors, which are areas of primary concern to the public. WEF agrees that EPA should support further study on pathogen issues in biosolids, animal manures and other similar by-products. EPA should also support additional research on odor associated with biosolids processing, utilization, and management of biosolids at the treatment plant to minimize odors during subsequent processing or land application. Some promising early research has been accomplished in these areas and needs to be continued so as not to lose momentum and progress made to date.

- *Context and Risk Communication* – To some, the existence of detailed studies and risk assessments of biosolids imply that they are dangerous; to others, "exposure equals risk." To address these erroneous reactions, EPA needs to follow through on its commitment to improve risk communication. One way for EPA to accomplish this goal may be to provide a context for the information that will aid people's understanding. For example, EPA should consider presenting biosolids information as a comparison between biosolids and other materials used in a similar manner, like manures or chemical fertilizers, which are more familiar to the public.

- *Cooperation, Collaboration and Inclusion* – The proposed strategy emphasizes teaming with other agencies, which should improve perceived credibility and optimize the use of USEPA resources, and the inclusion of stakeholders. The Pennsylvania study, which was referenced several times in the report, is a model of this cooperative, inclusive approach and should serve as a model for other initiatives noted in this strategy.

- *Responsiveness* – EPA notes that they are investigating cooperative efforts with health agencies such as the Centers for Disease Control (CDC) to respond to and investigate complaints of health effects related to biosolids use. WEF strongly encourages the development of dialogue between EPA, CDC, and other relevant agencies on cooperatively tracking incident reports

and investigating whether adverse human health outcomes can be associated with biosolids exposure. The development of this type of response team is critical and should be a top priority; especially since human health complaints have mostly been related to pathogens and odors (see *Focus on Priorities* above). Considering the complexity of the issue and resource limitations, EPA has made a good effort to respond to complaints, however, WEF recommends that another agency like CDC play a significant role, and even take the lead in this effort because of current perceptions regarding EPA responsiveness on health complaints.

The strategy identifies proposed short-term and long-term priority actions. Under item 4 of the long-term goals, EPA indicates that its approach includes "promoting policy and procedural guidance for ensuring and maximizing the quality of information disseminated". WEF recommends that this be included as a short-term goal to make sure that information disseminated by EPA adheres to a basic standard of quality. EPA also included "review available data, track ongoing studies by researchers outside of EPA, and identify information" as short-term actions. WEF is available as an information resource to assist EPA in this task and is willing to provide any applicable WEF data or information.

In the case of biosolids, EPA has not been effective in coordinating and reviewing the data that is routinely submitted by Publicly Owned Treatment Works (POTWs) and other affected parties to the regions. WEF believes that this data needs to be coordinated better by EPA in order to base any of its enforcement actions and priorities. EPA should allow electronic submission of biosolids quality data from POTWs and other affected parties. Electronic submission of biosolids data would alleviate the need for regional staff to reenter this data, maintain accuracy by the submitter, and allow EPA to compile, analyze, and document this information in a timely fashion. Electronic submission of data would also facilitate continued and increased usage of an existing data management tool, the Biosolids Data Management System (BDMS), and help make it into a more complete database.

EPA's Eight Categories

A. Survey

WEF endorses the effort to survey new chemical categories, such as odorants, surfactants and pharmaceuticals, to provide a basis for subsequent risk assessment efforts, as well as the targeted survey approach. For some parameters (emerging pathogens, for example), analytical methods are not well developed. To perform a survey on the scale of the National Sewage Sludge Survey would be costly and perhaps not the best use of limited funds. WEF acknowledges EPA's position that a less comprehensive, more targeted survey that builds on the lessons learned from prior surveys will minimize the expenditure of limited resources. If EPA believes that funding will limit the number of pollutants surveyed, WEF recommends that stakeholder input be obtained to help finalize the list.

EPA should focus limited resources on research that addresses the constituents of most concern to the public. It is important to insure that the public is confident that EPA is responding to their concerns and focusing on issues that confirm the safety of biosolids products. To address the most pressing public concerns, odorants and other emissions and pathogens should be focus areas. With respect to both emerging pathogens and odors, data currently under development by the Water Environment Research Foundation (WERF) will likely be of use, and more research is needed in both areas.

EPA should also consider assessing concentrations/emissions in other land applied products such as manures and chemical fertilizers to provide some comparison and context for biosolids information when presented to the public. This would be particularly helpful given that biosolids are land applied to only one percent of agricultural acreage in the U.S. Including other materials such as manures and other fertilizers may not necessarily increase survey costs. The U.S. Department of Agriculture has a comprehensive pathogen assessment underway, and collaboration with USDA would reduce costs to EPA and provide the public with a greater understanding of land applied amendments.

B. Exposure

The NRC made recommendations on how current exposure information and updated conceptual exposure models can be used to update and strengthen the scientific basis of chemical and technology-based pathogen standards. This category also includes recommendations to evaluate exposure for the "reasonable maximum exposure (RME) individual".

In the strategy, EPA states that understanding human exposure is key for risk assessments supporting the Part 503 Rule and that the Agency plans to use a risk assessment framework to evaluate the priorities for reassessing or updating the underlying components (including exposure assumptions) of previously conducted risk assessments. EPA will use this information to determine if new exposure and risk calculations may be warranted for pollutants not previously assessed. WEF supports the reassessment of exposure and risk calculations for previously evaluated pollutants if new data or practices indicate that past assessments may no longer protect human health or if there are continued concerns raised by the public.

WEF supports EPA's approach to exposure research, especially the Pennsylvania study referenced. WEF supports EPA's ongoing exposure research in partnership with USDA and the State of Pennsylvania that will evaluate a number of issues related to land application of biosolids, including occurrence of pathogens, chemicals, and bioaerosols. WEF also supports the Agency's research on microorganisms and chemicals at animal manure application sites and composting sites. Any additional research should also include the formation of an Information Sharing Group of various stakeholders to insure the final product answers questions that are key to the public. Stakeholder input has been a critical component of the Pennsylvania study. EPA may want to note the stakeholder element of the project as part of its strategy, in addition to the technical

aspects already noted. A stakeholder group will involve the public in the research, ultimately enhancing its acceptability.

C. Risk Assessment

WEF endorses the approach EPA proposed, most specifically the reassessment of previously evaluated pollutants (in light of new data and approaches), the assessment of new pollutants based upon state-of-the-art approaches, the inclusion of stakeholders in the risk assessment process, and collaboration with USDA and others. The two-step process outlined by EPA that will ultimately result in a prioritized list for risk assessment activities is logical and should result in maximum value to the public.

D. Methods Development

WEF agrees that standardized protocols for the measurement of pathogens, odorants, and emerging chemicals must be performed. At present, it seems that it may be a long time before basic methods for the analyses of some pathogens are available, let alone developed to the point that reproducible, practical methods are accessible to most laboratories. To address potential concerns in the area of pathogen analysis, WEF agrees with the NRC's recommendation that there should be concurrent emphasis on confirming the appropriateness of existing indicator organisms or identifying new ones (clostridium, for example). The Federation encourages EPA to involve WEF and other clean water professionals in the process to make sure the required methods for measurement can be reasonably achieved.

E. Pathogens

In the strategy, EPA indicated that the Agency is considering studies to better understand measurement, control, and fate of pathogens during the production and land application of biosolids. The strategy also describes several programs focused on developing a better understanding of pathogens. WEF supports ongoing research programs focused on pathogen issues and EPA's continued use of the Pathogen Equivalency Committee. WEF also encourages EPA to continue collaborating with USDA, which is grappling with similar pathogen concerns in land applied manures, and to review and evaluate relative WERF programs.

F. Human Health Studies

The NRC recommended that EPA conduct a variety of investigations including epidemiological studies of exposed populations. In its response, EPA indicated that the Agency does not plan to conduct epidemiological studies because they are complex, time consuming, and require substantial funding. It is unfortunate, though understandable, that a comprehensive epidemiological study along the lines of the 1985 EPA study cannot be performed. Depending upon how they are developed, targeted human health investigations, which may provide the basis for future epidemiological studies, should help address public concerns.

In developing the approach to any human health studies, continued work with CDC is recommended and, if possible, it may be preferable for the CDC to take the lead in this effort. This recommendation stems from the perception that EPA has not adequately addressed previous health complaints, and that the Agency is vested in the beneficial use of biosolids and thus cannot provide objective insight. Regardless of who leads such efforts, timely, methodical and thorough responses to complaints regarding biosolids will be critical to gaining public confidence.

EPA also indicates that it is investigating the possibility of developing a process for timely notification, recording, and tracking of incident reports in collaboration with the CDC. As stated before, WEF strongly supports EPA's efforts to work with CDC to identify mechanisms for recording and tracking biosolids related incidents.

G. Regulatory Activities

The NRC recommended that EPA revise or develop regulatory criteria for biosolids in a timely fashion and identify additional regulatory mechanisms to better protect human health and the environment from exposure to land applied biosolids. A number of associated recommendations were included, such as the development of molybdenum standards. Several additional risk management practices were also recommended.

WEF supports the following positions and initiatives outlined by EPA:

- EPA will review the molybdenum standard (to be completed in 2003),
- EPA will evaluate 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 containers weighing less than one metric ton,
- EPA believes the current operational standards are appropriate for achieving environmental performance while encouraging efficient, cost-effective, and innovative systems approaches,
- EPA indicates that the additional practices recommended by the NRC are linked to site-specific or local level conditions (topography, soil characteristics etc.) and that State and local jurisdictions will have better knowledge and are better positioned to establish additional management practices.

H. Biosolids Management

WEF supports the use of multiple approaches and groups proposed by EPA to insure that POTWs have the tools available to promote and go beyond compliance with biosolids regulations. WEF also agrees with the NRC recommendation that EPA increase its resources devoted to the biosolids program and expand biosolids program activities.

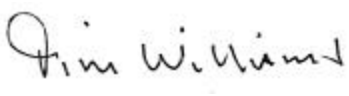
The commitment to improved risk communication as EPA embarks on the ambitious program set forth in this strategy is also encouraged, since a lack of understanding regarding the actual risks associated with biosolids use remains a key obstacle to its acceptance. EPA must improve its ability to communicate with the general public,

elected officials, and other key groups. WEF believes that these groups must be better informed about improved biosolids quality and know where and how biosolids are being recycled and overseen. EPA needs to inform stakeholders of the real causes of alleged problems from the use of biosolids and to inform these groups of the benefits of recycling biosolids and other by-products, especially in relation to manures and chemical fertilizers, both of which are used in far greater quantities than biosolids.

EPA should continue its support for the Environmental Management System for biosolids under development by the National Biosolids Partnership. The NBP has been aggressively promoting excellence in biosolids management practices from within the biosolids community through the development of the EMS. The EMS is a creative and progressive program intended to help assure compliance and go beyond regulatory compliance, serve as a tool to enhance facility performance, and address concerns in local communities such as odors and noise. WEF believes that the NBP's EMS program will also allow regulatory agencies to better target their enforcement and compliance efforts.

WEF looks forward to other opportunities to comment on EPA initiatives regarding the regulation of biosolids. If you have any questions regarding these comments, please contact Sharon Thomas, Manager of Regulatory Affairs, at 703-684-2423.

Sincerely,



Tim Williams
Managing Director
Government and Public Affairs
Water Environment Federation
601 Wythe Street
Alexandria, VA 22314