Topic: Performance vs. Prescriptive Based Remediations

Description of the issue:
New Jersey's current regulatory approach to the remediation of contaminated sites utilizes the Technical Requirements for Site Remediation (TRSR) to prescribe how to assess, investigate and remediate a site. The regulated community believes that this approach is too prescriptive, especially during the preliminary assessment, site investigation and remedial investigation phases, which results in a lengthy process that adds to the cost of remediation. The regulated community also believes that this process may result in longer exposure to contamination and slows down the remediation and development of contaminated properties. As an alternative they would prefer a more performance-based process that allows for more flexibility in addressing contamination and potential exposure pathways. As originally envisioned, the concept of "performance vs. prescriptive" meant looking at different pathways or methods to reach the same endpoint. For instance, given a set of environmental standards, the focus would be on how to measure whether the standards are being met rather than what processes were followed to meet those standards. However, as this discussion evolved, the concept has also included consideration of site specific risk based standards based on both end use of the site and possible receptors in the area of the site.

DEP's Current Authority:
The Brownfield and Contaminated Site Remediation Act, N.J.S.A. 58:10B-2 states that the Department shall "adopt rules and regulations establishing criteria and minimum standards necessary for the submission, evaluation and approval of plans or results of preliminary assessments, site investigations, remedial investigations, and remedial action workplans, and for the implementation thereof". The Department has met this requirement through the adoption of regulations known as the Technical Requirements for Site Remediation, N.J.A.C. 7:26E. These regulations contain the requirements for remediating a contaminated site in New Jersey so that it is protective of public health and the environment. These regulations are applicable to the remediation of sites subject to several statutes such as the Spill Compensation and Control Act, N.J.S.A. 58:10-23a et seq., the Water Pollution Control Act, N.J.S.A. 58:10A-1 et seq., the New Jersey Underground Storage of Hazardous Substances Act, N.J.S.A. 58:10A-21 et seq., the Solid Waste Management Act, N.J.S.A. 13:1E-1 et seq., the Industrial Site Recovery Act N.J.S.A 13:1K-6 et seq., and the Brownfield and Contaminated Site Remediation Act, N.J.S.A. 58:10B-1 et seq.

In addition, the Brownfield and Contaminated Site Remediation Act at N.J.S.A. 58:10B-12 states that the Department "shall adopt minimum remediation standards for soil, groundwater, and surface water quality necessary for the remediation of contamination of real property". The Department has met this requirement for groundwater through the adoption of regulations known as the Ground Water Quality Standards, N.J.A.C 7:9-C and for surface water through the adoption of regulations known as the Surface Water Quality Standards N.J.A.C. 7:9-B. These standards are also currently contained in the Technical Requirements for Site Remediation at N.J.A.C. 7:26E-1.13. The Department is

planning to meet the requirement for soil through the proposed soil remediation standards.

As required in the Brownfield and Contaminated Site Remediation Act, the Department currently utilizes a risk management factor for carcinogens as one (1) excess cancer in 1,000,000 (1×10^{-6}). This factor is utilized in the development of all health based cleanup standards for the Site Remediation Program.

Background:
The Technical Requirements for Site Remediation were originally adopted in 1993 in order to provide the public with consistent, yet flexible remediation requirements. The remediation process generally includes a preliminary assessment to determine if there is a possibility of contamination at a site, a site investigation to confirm the presence of contamination at all areas of concern present at a site, a remedial investigation to delineate the extent of the contamination, and a remedial action to remediate the contamination so that the site does not pose a threat to public health and the environment. The TRSR were designed to allow the regulated community to proceed with assessment and investigation without the Department's oversight and, in certain situations, complete remediation without the Department's oversight (home heating oil tank remediations are often completed before reports are submitted for department oversight). There are, however, certain statutory provisions (particularly in the ISRA statute) that require Department approval before work can be initiated.

As the Department currently administers the TRSR, in instances where regulated entities are allowed to proceed with work without prior DEP approval, the Department still requires the regulated party to submit documentation that all TRSR rules were followed while doing the work, as well as provide evidence that the completed work meets with the applicable standards.

Stakeholder Comments:
The regulated community recommended that the Department use a performance based process for remediating contaminated sites in New Jersey. The remedial action could depend on the risks posed by contamination at a site taking into consideration such factors as the current or end use of the site, the receptors in the vicinity of the site and whether the ground water in the area is being used for drinking water purposes.

Members of the regulated community gave a presentation of performance based remediation models used by Pennsylvania and Massachusetts.

Pennsylvania's program is known as Act 2. The basis of this program is that cleanup plans should be based on the actual risk that contamination on a site may pose to public health and the environment, taking into account its current and future use. If the use of the site changes, the PADEP may re-open the case and require additional remediation. The program provides a choice of three remediation standards. The first is that a site may be remediated to background. The second is statewide health-based standards. These are "look up" tables keyed to end use of the site. The third is site specific standards. These

standards can be met by eliminating pathways (e.g. capping a contaminated site), or conducting a risk assessment of the site and developing a site specific numeric standard based on the assumptions that exist for the end use of the property. If the site is remediated to a site-specific standard, Act 2 requires that there is an acknowledgment in the deed indicating site-specific standards and post-remediation care plans for the site.

Pennsylvania's remediation program also includes specific risk based concepts. For example, ground water may be designated as a non-use aquifer. A person responsible for conducting the remediation or a municipality may petition the PADEP and demonstrate that the ground water is not being used, nor is it planned to be used for drinking water or agriculture. The process also requires public notice to the municipality and all water purveyors who operate within the area.

The environmental community voiced concern about this process. There was a suggestion that the New Jersey Clean Water Act would have to be amended since it currently states that all waters of the State are to be considered as potential potable sources. An opinion was voiced that it would be shortsighted to allow our ground water to be contaminated for the long term, impacting future generations, because we do not have the political will or financial incentive to clean it up. It was suggested if there were stronger enforcement of remediation laws, the sites would be remediated quicker, including remediation of contaminated ground water. In addition, there was a concern about leaving contamination in the groundwater because it has the potential to cause vapor intrusion issues.

A discussion ensued between the Department and the regulated community about the statewide risk management factor used in developing remediation standards. In Pennsylvania, the risk management factor for carcinogens is one (1) excess cancer in 100,000 (1×10^{-5}), while New Jersey's risk management factor for carcinogens is one (1) excess cancer in 1,000,000 (1×10^{-6}). The Department believes that the difference in the risk management factor is a major reason why New Jersey has a greater number of sites requiring remediation. This difference in the factor not only results in a lower remediation standard, but also requires sites to be delineated to a greater extent for both groundwater and soils.

The regulated community also gave a presentation on the Massachusetts remediation model. This is a risk based approach that evaluates each current and foreseeable site activity and use. The approach is similar to the Pennsylvania process in that it uses a combination of "look-up" tables and risk assessments to determine the risk posed by the contamination. It involves three "methods" for remediation. The first method ("look-up" table) provides an option that is simple to use and results in predictable outcomes. If the site is remediated to the standards in the table, the agency closes out the case. Most sites are remediated under the second method, which allows limited modification of Method 1 standards based upon site-specific conditions and information. This method looks at pathways and controls that would prevent exposure. Many times, this method allows for the ground water at the site to be remediated to a level that does not meet either drinking water or ground water standards. The third method is the site specific risk assessment

that establishes the need for remediation and determines cleanup goals. This method is not used as often as other methods due to the time and cost in preparing such assessments.

Massachusetts couples the performance based remediation process with a licensed site professional (LSP) process. Massachusetts DEP oversees the remediation of the highest priority cases, and allows most other cases to be overseen by a LSP. The LSP must report to the MA DEP on key phases of the remediation. The LSP renders a decision for cleanup and there is no final agency action such as a No Further Action letter issued by MA DEP. MA DEP also requires public notification and community involvement processes.

The Department suggested that the regulated community's view that the remediation process in New Jersey is lengthy because it is too prescriptive, did not consider other reasons for a "slowness" of the remediation process. The Department noted that many cases move through the remediation process quickly, especially those with non-recalcitrant responsible parties and those remediated by eager developers. The Department believes there are reasons a case may move slowly through the system that do not deal with the prescriptive nature of the process. First and foremost is the unwillingness of a party to comply with a case manager's repeated requests for information or action. There has historically been a lengthy process that involves the Department reviewing documents which do not comply with its Technical Regulations, issuing comments to a consultant, receiving responses to its comments, phone calls and meetings in which technical and scientific issues are endlessly debated, the resubmittal of documents, and the issuance of more Departmental comments. This process can be repeated multiple times and clearly delays cleanup. Additionally, there may be recalcitrance on the part of the person responsible for conducting the remediation for a variety of reasons including lack of financing for the cleanup, legal debates of liability, etc. It was noted that the Technical Regulations, in fact, allow any person responsible for conducting the remediation to proceed with a preliminary assessment, site investigation and remedial investigation without the Department's oversight. The Department can review all the documents associated with these phases after the work has been completed. Lastly, Department oversight is not required for remediations that only involve the remediation of soils that can be implemented and completed within five years. The Department holds that the prescriptive nature of the Technical Regulations allows a party to move forward with exact knowledge of what is required and that the variance provisions allow for flexibility. The Department recognized however that the current caseload does not allow for timely review of documents, that some units/case managers handle cases differently than other units/case managers and that the iterative paper process is not as effective as other processes such as face-to-face meetings and additional field visits.

Primarily, it was noted that the regulated community would like greater flexibility in investigating and remediating soils and ground water when a site is not located in a drinking water aquifer and there are no vapor intrusion concerns or sensitive receptors.

The regulated community presented four specific legislative changes for the New Jersey remediation process:

1. Provide more options for groundwater remediation.
2. Develop a permit program for sites with engineering and environmental controls.
3. Make future purchasers of remediated sites responsible for additional remediation.
4. Require notification to DEP if the use of a remediated site change after a No Further Action letter has been issued.

The regulated community also presented three policy changes:

1. Ensure that the focus of remediating a site is on risk reduction, not process.
2. Carve out the homeowner cases.
3. Make public comment on the remediation of the site a part of the remediation process.

The environmental community felt that the approaches presented would lessen the degree to which sites are remediated and would not result in protective remedies.

Other states:
A review was conducted of 11 States to determine how they approach the remediation of contaminated sites. Each state was asked if their remediation process is performance based or prescriptive. The responses fell into the following three categories: performance based; prescriptive based; and a combination of both.

The states that indicated they use a performance based method were North Carolina, Oklahoma, Montana, Alaska, and Pennsylvania. Montana, however, noted that they only use a performance-based method for the remedial investigation phase.

The states that indicated they use a prescriptive method were Florida, New York, Georgia, Oregon and Montana. Both Florida and Oregon indicated that although they use a prescriptive process, there are provisions to provide flexibility. Montana uses a prescriptive method only the for remedial actions phase.

Massachusetts, Wisconsin and Michigan each indicated they use a combination of a prescriptive and performance based approach. Both Michigan and Wisconsin indicated, however, that they are moving toward a more performance based approach.