



Distinction Between Monitored Natural Attenuation and Enhanced Monitoring at DERR Remedial Sites

The purpose of this Technical Decision Compendium is to distinguish between monitored natural attenuation plans and enhanced monitoring to assess the natural attenuation process.

Key Words

Monitored Natural Attenuation, Enhanced Monitoring.

Background

During the preparation of several recent preferred plans, there was confusion as to the difference between a monitored natural attenuation plan and a monitoring plan intended to measure the natural attenuation process. Several draft preferred plans included natural attenuation components that lacked the major elements required to support it as a remediation technology. Instead those plans include elaborate monitoring programs to measure the progress of attenuation. These plans did not document a comprehensive, site-specific study of the process, performance standards for meeting remediation goals, or contingency plans that take effect if the natural attenuation processes fail to meet their goals. Even though natural attenuation may be occurring at these sites, enhanced monitoring alone does not constitute a monitored natural attenuation plan.

Decision

If monitored natural attenuation is a component of a remedy, the process must be demonstrated in advance. Performance of this portion of the remedy should be rigorously monitored during remediation, should have a clearly defined performance goal and time frame, and a contingency plan with a trigger in the event that goals are not achieved. If these components are not included, this monitoring component should be identified as an enhanced monitoring plan as opposed to monitored natural attenuation.

Rationale

The Agency will generally not propose natural attenuation as a remedy, or component of a remedy, without prior documentation that it is occurring. A monitored natural attenuation plan requires a study of the processes (based on extensive monitoring) to establish that natural attenuation is already occurring and the rate of attenuation of contaminants of concern. Such documentation should allow the Agency to develop measurable performance standards, an appropriate monitoring plan, and a contingent remediation plan in the event remedial goals are not be achieved in the predicted time frame. Each of these components will generally be included in a preferred plan that includes monitored natural attenuation.

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