Performance and Refresh of a Full Scale Biowall System; A Lines of Evidence Approach to Identifying System Depletion

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Capped incinerator ash

Enhanced bioremediation PRBs

1,000 µg/L

Parent COC rebound

Daughter COC decline

VOC trends and profile changes

Geochemical shifts

Movement toward oxic conditions

Sulfate / nitrate rebound

Decline in anoxic products

Decline in dechlorinators

Decline in reductase gene expression

Increase in stress indicators

Depletion?

Geochemical shifts

VOC trends and profile changes

Decline in dechlorinators

Decline in reductase gene expression

Increase in stress indicators