

Guidance on Establishing Remediation Objectives for Sites in Australia

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Background/Objectives. Legislation and policies should ensure that risk assessments are undertaken as necessary to protect human and environmental health, and that appropriate action is undertaken to mitigate the issues. These policies allow decision-makers to undertake risk-based decisions which minimize environmental and public health implications and promote economic development and social wellbeing. Australia has a national legislative instrument for the assessment of site contamination – the National Environment Protection (Assessment of Site Contamination) Measure 2013 (NEPM) (NEPC, 2013). The National Remediation Framework (NRF), being developed by the Cooperative Research Centre for Contamination Assessment and Remediation of the Environment (CRC CARE), will complement the NEPM. The NRF comprises guidance for remediation and management of contaminated sites. This paper will focus on one of the most critical guidelines in the Framework – that which provides a generic approach to developing remediation objectives for a site.

Approach/Activities. Establishing site-specific remediation objectives enables the reduction of costs and uncertainties, reduces the risks to human health and the environment, and promotes best practice. Contaminated sites can have significant health, environmental, social and financial risks, and potentially significant liability for proponents of contaminated sites. As part of the development of the guidance, a review was undertaken of the approaches being used for remediation overseas, and in each Australian jurisdiction. The review affirmed that many of the approaches for assessing and managing risk are fundamental to assessing site contamination and provide a shared basis for remediation and management decision-making. The application of the approaches can differ substantially among jurisdictions, and consequently, the development of this guidance was challenging. At the same time, industry and practitioners were determined to harmonize practices in the different jurisdictions over which their operations ranged. This guidance is therefore considered a unique and useful culmination of a number of guiding principles which could provide remediation and management best practice for setting site-specific remediation objectives for a site, with wider application than the Australian context.

Results/Lessons Learned. When setting remedial objectives, stakeholders are encouraged to consider wider environmental principles such as the precautionary approach, prevention, options/ waste hierarchy, risk management and sustainability. There is also a strong connection between remediation/management decision-making and risk assessment processes. The development of remediation objectives needs to take into account protection of human health and the environment, expressed in terms of protection of beneficial uses or environmental values; and, risk reduction, to ensure sustainability. The remediation objectives for a contaminated site provide a clear indication of what remediation needs to achieve to address unacceptable risks to human health, the environment and relevant environmental values from contamination, and for the remediation to be considered complete. A five-step process has been developed. This process takes into account that development of remediation objectives can be an iterative process. The revision of remediation objectives may include the development of more suitable remediation end-points.