



PROJECTS

ENVIRONMENTAL AUDIT

Audit27

Voluntary Audit: Herbicide Applications to Drainage Sumps City of Stirling (CoS283)



A voluntary audit was commissioned by the City of Stirling to provide independent technical advice on contamination issues, relating to the application of the herbicide Hexazinone on eight surface drainage water sumps. It was alleged that the herbicide may have been applied incorrectly in a manner inconsistent with the manufacturer's application instructions, which may therefore have breached section 4(2) of the Contaminated Sites Regulations (2006). All of the eight sumps had been reported as potentially contaminated sites to the Department of Environmental Protection (DEC), following concerns over apparent observations of vegetation decline in and around the sumps.

The application of Hexazinone was discontinued, and a consultant was appointed to undertake the investigation, which was reviewed at various stages by the Auditor. Surface soil samples were taken from within the sides and base of the sumps and the immediate surrounding areas which may have been impacted by overspray. Subsurface soils were taken at shallow depth by hand auger, and at greater depth using a rotary drilling rig. Groundwater monitoring bores were established on the up and downgradient boundaries of the sumps.

Soil and groundwater samples were analysed for a range of organo-chlorine and organo-phosphorous (OCP/OP) herbicides associated with previous and ongoing applications, together with Hexazinone and its potential decomposition products. Special analytical techniques were employed to achieve limits of reporting below applicable guideline levels for individual herbicides/ pesticides, to meet site-specific ecological investigation levels. This approach was accompanied by stringent QA/QC analysis to justify the use of non-NATA methods.

In addition, other potential contaminants associated with the urban drainage sump landuse, including TRH, PAHs, metals, surfactants etc. The analysis did not identify any pCoCs exceeding applicable published and site-specific ecological guidelines. Accordingly, all eight sumps were recommended as *'Not contaminated - unrestricted use'* which was subsequently accepted by DEC.

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