

Economic Impacts of EPA's Draft Recommended Interim Preliminary Remediation Goals for Dioxin in Soil

On December 30, 2009 the Environmental Protection Agency (EPA) issued draft interim Preliminary Remediation Goals (PRGs) to evaluate remediation requirements for dioxin (2,3,7,8-tetrachlorodibenzo-p-dioxin, TCDD) and dioxin-like compounds in soil¹. Using these draft interim PRGs, EPA will re-evaluate site cleanup decisions made under the authority of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the Resource Conservation and Recovery Act (RCRA).

EPA did not provide any analysis of economic impacts as part of its December 30 notice. However, the draft interim PRGs are anticipated to have significant cost implications as clean-up sites throughout the U.S. are reassessed and further site remediation ensues. Economic disruption within impacted communities and municipalities also will be significant.

PRGs serve as *de facto* cleanup levels for CERCLA and RCRA sites across the U.S.

While described as the “starting point” for soil cleanup levels, PRGs typically determine the final cleanup levels at CERCLA and RCRA sites.

ACC compared dioxin soil clean-up levels from EPA Records of Decision (RODs) to the applicable state-based dioxin clean-up levels for 170 sites dating back to 1984. For the vast majority of EPA RODs, the current dioxin residential soil PRG value of 1000 ppt was selected as the enforceable standard.

EPA's revised PRGs will significantly alter cleanup requirements

The draft recommended interim PRGs are significantly lower than existing PRGs for both residential and commercial/industrial land use. “Alternative” levels under consideration by EPA are even more stringent, representing a greater than 1000-fold reduction from EPA's current cleanup levels for commercial/industrial sites.

PRG Values (ppt TEQ)

	Current PRGs	Recommended Interim PRGs	Alternative PRGs
Residential	1000	72	3.7
Commercial/Industrial	5000 – 20,000	950	17

An analysis of Missouri sites demonstrates dramatic cost implications for EPA's Recommended and “Alternative” Interim PRGs

Previously remediated sites

In Missouri alone, 56 dioxin contaminated sites (CERCLA and RCRA combined) have already been through the cleanup process once.

With revised PRGs, however, each of these Missouri sites would have to be resampled, at a total estimated cost of \$3.4 million (\$60,000/site).

¹ US EPA Office of Superfund Remediation and Technology Innovation. *Draft Recommended Interim Preliminary Remediation Goals for Dioxin in Soil at CERCLA and RCRA Sites, OSWER 9200.3-56* (December 30, 2009).

It is estimated that 38 of the 56 sites would require additional remediation to comply with the draft recommended interim PRGs. Based on an analysis of selected sites, total estimated costs for remediation at these 38 sites are over \$155 million. To comply with the “alternative” PRGs, estimated remediation costs for these sites are over \$225 million.

Estimated Cost for Compliance with Revised PRGs (\$ millions)

Cost Category	Proposed PRGs	Alternative PRGs
Pre-mobilization activities	\$9.2	\$9.2
Pre-design activities	\$9.2	\$9.2
Site Preparation and General Equipment	\$9.7	\$9.7
Excavate & load dioxin-impacted soil	\$0.74	\$1.4
Confirmatory analysis	\$29	\$30
Off-site disposal, treatment, and landfill fees of impacted soil	\$48	\$95
Contingencies	\$46	\$68
Public Communication	\$0.45	\$0.45
Additional Review Cost	\$2.9	\$2.9
TOTAL	\$155.2	\$225.9

Previously Evaluated No Further Action (NFA) Sites

- In Missouri, there are an additional 153 sites investigated by EPA for dioxin contamination where remedial action was not taken because levels were below the current PRGs. These No Further Action (NFA) sites range in severity, from dioxin well within acceptable levels to contamination just below current PRGs.
- If EPA adopts the recommended or alternative PRGs, each NFA site would require re-testing to determine if remedial action is needed to comply with the more stringent PRGs. Total estimated testing costs for these sites is \$9.1 million (\$60,000/site).
- No analysis has been conducted to determine the cleanup costs for current NFA sites that would require remediation under revised PRGs. Although EPA has data available to develop a fairly accurate sample of these sites, we are not aware that EPA has produced any cost estimates for either these NFA sites or other sites.
- For over 20 years, NFA sites (which include schools, businesses, and residences) were deemed safe. Under the draft PRGs, they would likely be reinvestigated, calling into question the property's safety and value. Community concern will also be reignited. Sampling and identifying these sites for remediation could add substantially to EPA's and States' budgets.