



## Risk-based Closure Guide (R2)

### A Note From the Branch Chief

Spring has finally sprung in Indiana. At IDEM's Remediation Services Branch, we continue to improve customer assistance and have implemented changes to our work policy in accordance with Governor Holcomb's [plan](#).

IDEM now provides flexible work arrangements, allowing 15 hours per week of remote work for employees whose work may be performed outside of state facilities, and education reimbursement for full-time staff up to \$5,250 annual for the cost of an advanced degree, state licensure, or certificate. Additionally, the State's new WHOLE employee policy allows greater flexibility for staff to participate in employee engagement, wellness, learning, and development-related activities. These new policies will continue to make IDEM a great place to work.

Here in the Remediation Services Branch, we strive to improve and streamline the site investigation and closure process, all while keeping Hoosiers and our environment safe.

*Kevin Davis, Remediation Services Branch Chief*

IDEM has completed another round of revisions to the *Risk-based Closure Guide*. IDEM posted the latest version [online](#) in February, and a formal comment period ended on March 24. Following the public comment period and any resulting revisions, IDEM will present the final document to the Environmental Rules Board later this year. Then the *Risk-based Closure Guide* will take effect 30 days after the presentation.

The *Risk-based Closure Guide* is a revision of the 2012 *Remediation Closure Guide*, and the second revision of the 2001 *Risk Integrated System of Closure (RISC) Technical Guidance Document (Tech Guide)*. Because it is the second revision of the RISC Tech Guide, we refer to it as "R2."

R2 is in many ways much like its predecessor. It is a series of tasks related to the characterization of releases, risk evaluation, and remedy selection, implementation, and confirmation. However, there are some important changes.

IDEM has proposed to stop publishing migration to groundwater screening levels, as experience has shown that those levels have little predictive power and are frequently misapplied. Instead, R2 recommends using a leaching test to predict whether chemicals are likely to affect groundwater. IDEM has also proposed to stop publishing vapor intrusion groundwater screening levels because they have little predictive power, and they have led to an over-emphasis on groundwater as a source of vapor intrusion.

R2 proposes to apply the statutory requirement for delineation to release-related chemicals in soil gas, just as previous guidance did for chemicals in soil and groundwater. In accordance with U.S. EPA, IDEM will also require consideration of vapor transport in sewers and other open conduits where those are likely pathways for chemicals to reach the breathing spaces inside occupied structures.

IDEM understands that some of the changes in R2 may take time to get used to, and some may be challenging to implement. However, the agency has determined that these changes are necessary to promote consistent application of the underlying statutes and to ensure protection of human health and the environment.

## Institutional Controls Audit

### What is it?

In 2021, IDEM began the Institutional Controls (IC) Self-Audit initiative to monitor the effectiveness of over 3,200 Environmental Restrictive Covenants (ERCs). ERCs are a common route to closure and minimize the potential exposure to remaining contamination. ERCs are land-use restrictions perpetually attached to property deeds to ensure continuous protection, even if ownership changes.

To make sure that property owners are aware of these protective controls and to verify compliance, IDEM sent requests for self-audits to owners with ERCs on their property. The IC Self-Audit's goal is to educate owners of their ERC and determine an overall ERC restriction adherence rate.

### What you need to know:

If you receive an ERC self-audit request, please complete and submit the **Self-Audit Checklist** within 30 days. You can either mail a hard copy to the Office of Land Quality with "ATTN: Institutional Controls Group," or download a digital copy (available on the [IDEM Agency Forms](#) page) and email it to [institutionalcontrols@idem.in.gov](mailto:institutionalcontrols@idem.in.gov).

### What's next?

In 2022, Hazardous Waste, Solid Waste, and Industrial Waste facilities will be included in the audit. Inspectors will verify that ERC restrictions are functioning as intended. Questions? Contact Nicole Wheeler at 317-234-2485 or toll-free at 800-451-6027 ext. 4-2485, or at [nwheeler@idem.IN.gov](mailto:nwheeler@idem.IN.gov).

# DID YOU KNOW?

## Environmental Restrictive Ordinance Usage Updates

IDEM has developed a new state form, "Acknowledgement of Reliance Upon Ordinance to Control Access to Groundwater." Indiana Code ([IC 13-11-2-71.2](#)) defines Environmental Restrictive Ordinances (EROs) and requires IDEM to consider EROs as a component of closure ([IC 13-25-5-8.5\(e\)](#)).

EROs with sufficiently protective language may be used to eliminate groundwater ingestion and dermal exposure pathways for off-site impacted properties. EROs are not effective in eliminating vapor intrusion exposure pathways.

This new state form provides IDEM project managers with information to make better ERO use determinations.

For **previously enacted EROs**, Responsible Parties (RPs) must obtain a signature from the Unit Legislative Body (ULB) on the new state form.

Together, RPs and the ULB submit the state form and documents ensuring the ERO will be maintained, enforced, and is protective of human health.

For EROs proposed for enactment, IDEM will review the proposed ERO language. After IDEM approves, the RP will approach the ULB for enactment of the ERO and acknowledgement from the ULB. IDEM technical staff will review results to ensure the ERO is protective. The RP then provides IDEM a copy of the enacted ERO.

## HELLOS and GOODBYES

Congratulations to Jin Wang, our new Office of Land Quality Risk Services Section Chief. After earning her PhD in Environmental Sciences from the University of Virginia, she was adjunct lecturer for the Department of Earth Sciences at IUPUI. Jin worked in environmental consulting before joining IDEM's Risk Services Section in 2017.

The ERO should be certified [IC 36-5-2-10.2 (towns); IC 36-4-6-17 (cities); IC 36-2-4-9 (counties)] and must match the language previously approved by IDEM.

If you have a site that may be eligible for closure using an ERO, consult with your Remediation Services Branch project manager.