Risk Evaluation Manual Updates

STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

Introduction

- One full year of using EPA's risk calculators and the updated Risk Evaluation Manual
- Manual has been updated to incorporate a few changes that will help clarify concepts and provide flexibility



Surficial and Subsurface Soil

EPA does not distinguish between surficial and subsurface soil but the REM did.

EPA's terms of "soil" or "resident soil" are used instead of "surficial" and "subsurface".

Clarification on Tables and Columns

Screening levels for groundwater are the lowest of the following concentrations:

MCLs for chemicals that have them or calculated values for ingestion of water in a residential scenario (Use the Summary Table (TR=1E-06 THQ=0.1); MCL column if an MCL for that COI exists~~.~~ – Where no MCL exists, use the ~~Tap Water column where no MCL exists. However, EPA's tap water screening level is based on dermal, ingestion, and inhalation so the Ingestion column in the~~ Resident Tap Water table (TR=1E-06 THQ=0.1), Carcinogenic Target Risk Ingestion column or Noncancer Ingestion Child column if carcinogenic doesn't exist~~can also be used~~. The RSL calculator can be used for all scenarios.), or

No Risk Output – Soil to GW Pathway

The soil to groundwater medium in the RSL Calculator does not have a risk output and the risk option will become disabled when selected.

When to Require Vapor Sampling

EPA's Technical Guide For Addressing Petroleum Vapor Intrusion At Leaking Underground Storage Tank Sites

Criteria for:

Residual Soil Contamination

- benzene equal to or less than 10 mg/kg
- benzene greater than 10 mg/kg

Residual Groundwater Contamination

- benzene equal to or less than 5 mg/L
- benzene greater than 5 mg/L

Detected Chems Are Cumulative Exposure

- Clarification that detected chemicals below screening levels can be considered cumulative exposure.
- Allows use of risk level 1E-05 vs 1E-06.
- In the EPA Calculators, enter the lower value of the practical quantitation limit or method detection limit.

Consistent Defintions

Acceptable Target Risk Level: ~~For combined exposure to all carcinogens and ROE, IELCR must be less than or equal to 1 x 10-5 for a receptor at a reasonable maximum exposure.~~ For exposure to individual carcinogens a lifetime excess cancer risk of less than or equal to one per one million (1 E-6) for a receptor at a reasonable maximum exposure. For combined exposure to all carcinogens and routes of exposure, a lifetime excess cancer risk of less than or equal to one per one hundred thousand (1 E-5) for a receptor at a reasonable maximum exposure.

Acceptable HI: ~~The summation of HQs for all petroleum chemicals that have noncarcinogenic health effects and ROE must be less than or equal to 1.~~ The summation of the hazard quotients of all chemicals and routes of exposure to which a receptor is exposed and equal to a value of one (1). If the initial value exceeds one (1), further evaluation, including individual organs, can be completed.

Site Closure Flexibility

On a limited, case-by-case basis, DEQ can determine if closure can be granted at properties that exceed residential soil and/or soil vapor screening levels or risk. DEQ will take into consideration residual soil and/or soil vapor sample results, risk calculations, separation distances, release location, existing contamination sources, previous and future land use, etc. Properties that may meet this criteria are highways, right-of-ways, historically and high future likely industrial sites such as railyards, airports, and manufacturing plants. If DEQ grants closure under these circumstances, the closure letter issued will outline the specific circumstances and why the decision was made. If the closure was based on current land use and likelihood of future land use, the letter will specify that DEQ must be contacted if land use changes because additional assessment or corrective action may be required.

Various Typos

There are corrections to typos and minor changes like defining acronyms.

"This appendix provides background on the concepts of PQLs, method detection limits (MDLs), and remediation standards and provides guidance on using the above factors when PQLs are proposed as remediation standards."

Comments by November 6th, 2026

Kristi Lowder
UST/LUST Program Manager
kristi.lowder@deq.idaho.gov

STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY