



# 1,4-Dioxane

NEWMOA Meeting  
EPA New England Presentation  
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# 1,4-Dioxane

- Industrial solvent
- Stabilizer for chlorinated solvents
  - 1,1,1-TCA
- Groundwater contaminant
- Not a routine analyte
- Final oral assessment released Aug. 2010 with new IRIS cancer and non-cancer toxicity values.
- External peer review draft ongoing for inhalation assessment.



## 1,4-Dioxane – screening levels

- EPA residential screening levels for tap water:
  - Cancer Level 0.67 µg/L  
(30 years, 1E-06 risk)
  - Non-cancer Level 46.8 µg/L  
(30 years, HI of 0.1)
- IRIS drinking water level 0.35 µg/L  
(70 years, 1E-06 risk)
- Screening levels are starting points of departure in risk assessment, not action levels.



## 1,4-Dioxane – analytical methods

- EPA Method 522, Reporting Limit = 0.2 µg/L
  - September, 2008
  - Solid Phase Extraction (SPE), GC/MS, Selective Ion Monitoring (SIM)
- EPA SW846, Method 8270C, RL = 2.0
  - Useful for “high” concentrations



## 1,4-Dioxane – Complexities/Issues

- Emerging contaminant
- New analyte/contaminant of concern
- Treatment complexities
- Multiple source issues
- Unknown sources
- Detection limits vs. screening levels