

LSPA 2026 Environmental Symposium

Renaissance Framingham Hotel & Conference Center, Framingham, MA

Risk Assessment of Petroleum Hydrocarbons Under the MCP

April 9, 2026, 10:00 AM–12:00 PM, Track 2

2.0 Technical LSP Credits (#1931); 1.0 CT LEP (CTLEP-644)

NY PE/PG Credits PENDING

AGENDA

- I. Introduction (Jane Parkin Kullmann)
 - A. What makes petroleum different, what are the elements that distinguish it?
 - B. Course overview

- II. Hazard ID/N&E (Jane Parkin Kullmann)
 - A. Data collection and identifying the data set for risk assessment
 1. Soil
 - a) E.g., a lot of UST removals may have ND samples
 2. Groundwater and surface water
 3. SG/IA for VI pathway
 - a) Follow the VI guidance
 - B. COPC selection considerations (use EPH/VPH guidance)
 - C. Examples from NOAFs

- III. Toxicity (Jane Parkin Kullmann)
 - A. Carbon ranges
 1. Use of surrogates to represent toxicity and the assumptions that go into that
 2. Only non-cancer tox values identified
 - a) Oral/dermal
 - b) Inhalation
 - c) Chronic vs. sub-chronic
 - B. Target compounds – generally have compound-specific toxicity values (non-cancer and cancer; oral/dermal and inhalation if relevant)
 - C. NAPL/coal tar – no toxicity values for direct contact, coal tar perhaps can be evaluated using carbon ranges/targets

- IV. Risk characterization (Marie Rudiman)
 - A. Method 1 considerations for PHC
 1. Basis of Method 1 Standards for soil (odor threshold vs risk-based)
 2. Basis of Method 1 Standards for GW (ORSGLs)
 - a) GW-1 areas specifically

- B. Method 3 considerations for PHC
 - 1. Exposure assumptions – specifically, drinking water pathways
 - 2. Toxicity values, how those factor in (because they don't really affect the M1 Standards the same way)
 - a) For ingestion/dermal pathways, risks are less conservative
 - b) Can be more conservative for inhalation pathway
 - 3. Shower modeling assumptions
 - 4. Other exposure scenario/pathways
 - a) Vapor intrusion
 - b) Ecological risk
 - c) Coal tar
 - (1) Hot spot
 - (2) M3CL, AULs etc.

- V. Case Studies/Examples (Marie Rudiman)
 - A. Method 1
 - B. Method 3

- VI. NAPL (Steve Boynton)
 - A. N&E
 - 1. How to sample, how to analyze? How to get data to evaluate it?
 - 2. Transmissivity/mobility
 - B. CSM
 - 1. Migration routes (e.g., water, vapor intrusion)
 - 2. Potential exposures (e.g., direct contact, surface water, indoor air)
 - 3. Receptors