

September 23, 2009

George Seel
Director, Division of Technical Services
Department of Environmental Protection
17 State House Station
Augusta, Maine 04333-0017

Re: Comments to Draft Petroleum Guidelines

Dear Mr. Seel:

Acadia Environmental Technology (Acadia) prepared these comments to the *August 14, 2009 Public Review Draft Remediation Guidelines for Petroleum Contaminated Sites in Maine* (Guidelines) for consideration by the Maine Department of Environmental Protection (DEP). We appreciate the work of the DEP in developing these Guidelines. These comments are offered in the spirit of cooperation and are intended to assist the DEP. Individual comments for your consideration are below.

Applicability

The limitation of the Guidelines (1.2.1) to the listed items and excluded items (1.2.3) seems unnecessary. We recommend extending the applicability to all types of discharges including oil discharges from USTs and transportation spills. The soil remedial action guidelines (RAGs) should be incorporated into the Draft *Implementation of Maine Remedial Action Guidelines for Soil* (MERAGS) dated July 2009 to provide a single risk-based source for all guidance on RAGs. It is confusing to have separate basis documents for the same chemicals depending on whether they were released during an oil spill or a chemical spill. This would allow use of the several methods for selecting RAGs for multiple contaminant scenarios. The Guidelines would contain the DEP policies for remedial actions at petroleum sites and could reference MERAGS for soil cleanup goals. This would be similar to the current practice of referencing Maximum Exposure Goals (MEGs) from the Maine Center for Disease Control.

Retroactivity

The Guidelines are inconsistent in retroactivity. According to 1.2.2, the Guidelines will be applied to “discharges discovered and reported after the guidelines’ adoption”. In 1.4, “(December 5, 2008) until January 1, 2010. Both sets of guidelines will be in effect...” We recommend allowing the responsible party to choose either set of guidelines until the Guidelines are finalized.

Free Product

The paragraph “2. Free Product and Oil Saturated Soil Remediation” is unnecessary. The RAGs have a ceiling level of 10,000 milligrams per kilogram (mg/Kg), which is less than the definition of Free Product. The term Free Product is antiquated and should be discontinued. Free Product was never free and the term product could apply to apples and paper. We recommend deleting this paragraph and using the term light non-aqueous phase liquid (LNAPL) as the technical term for Free Product.

Soil Sampling for Analysis

In 3.2.3, it specifies that “One sample is to be collected from the location of the highest field reading and a second from the lowest.” Similar language is in 8.1. The lowest field concentration would likely be below the detection limit of the instrument and could be distant from the area of concern. We suggest the following wording: Collect two soil samples to characterize the range of petroleum concentrations remaining in soil.

Exceptions

In 4.2.1.2, dense commercial and residential developments are exempted when they have subsurface wastewater disposal systems and public drinking water service. By this language, densely developed areas with public sewer and water would not be exempt. We suggest removing the requirement for subsurface wastewater disposal systems. Similar language is in the definition of urban ground water non-attainment area (10.14.2).

Point of Entry Treatment

In 4.3.2.3 and its footnotes, the acronyms POE, POET are used for point of entry treatment, and POU is used for point of use treatment. We recommend using only one acronym.

Cleanup Below Action Levels

In paragraph 4.3.2.6, “When a private or public well is found contaminated,” remediation of potential sources is required “regardless of the concentration of oil parameters (including below action levels)”. This seems to suggest that remediation is not required if no well is contaminated and that action levels are irrelevant.

Multiple Contaminants

The Guidelines use the multiple contaminate RAGS from MERAGS. This is overly conservative and inconsistent with MERAGS. This would not be an issue if MERAGS were incorporated in the Guidelines by reference.

Leaching Model

The UST scenario used for the inputs to the leaching model is excessively conservative. The scenario is based on protection of a well in sand and gravel within 50 feet of the UST. The 50-foot distance used in the model input is too close. We would all likely accept that installing wells within 50 feet of USTs is not good public policy. Septic system rules use a 100-foot setback. UST rules define a Sensitive Geologic Area as within 300 feet of a private well and/or within 1000 feet of a public water well. The use of this model input creates overly conservative MERAGS. In particular, the concentrations of xylenes are likely to be the limiting factors for petroleum site cleanups. Meeting the groundwater protection concentrations for xylenes would be a high cost to society with little if any benefit. We suggest using a 100-foot distance for the model for petroleum compounds to obtain more realistic soil concentrations.

Excavation Worker

The excavation worker scenario (5.1.1.4) is unlikely and the RAGs calculated for this scenario would cause expensive remediation at little value to society. The 6-month exposure scenario is not appropriate. Excavation projects typically take days, not months. After excavation, native soil is typically covered quickly with engineered fill that is used under foundations and pavement. Therefore the exposure time in this scenario, which assumes exposed contaminated soil, is very short.

If a site is remediated to the Residential goals, it is extremely unlikely that excavation workers would be at risk. If the site is remediated to Commercial Worker goals, there would be an environmental covenant that would provide notice to developers of the site that there are potential hazards. Because these alternatives are protective, we recommend removing the Excavation Worker scenario.

Vapor Intrusion

These comments do not address the vapor intrusion guidance that is referenced in MERAGS. In MERAGS, vapor intrusion is covered in V.G.2, which states: "Depending upon their proximity to receptors and preferential pathways, soil gas concentrations exceeding 50 times the Indoor Air Targets (IATs) will require additional investigation into actual indoor air exceedences of the IATs". This is unnecessarily proscriptive and could be in disagreement with the vapor intrusion guidance as it is amended. We recommend removing this sentence.

Consumptive Use Fuel Oil ASTs

The investigation and remediation of consumptive use kerosene and No. 2 fuel oil ASTs is different than other ASTs and USTs. The consumptive use ASTs comprise a large portion of the DEP workload. We recommend a separate guidance document for consumptive use ASTs.

Conclusion

In conclusion, we appreciate the DEP's effort in revising the guidelines for remediation of petroleum sites. This was a comprehensive re-write, so additional editing should be expected. We request consideration of these comments by the DEP.

Sincerely,

A handwritten signature in black ink, appearing to read "Tom Schwarm". The signature is fluid and cursive, with a long horizontal stroke at the end.

Thomas E. Schwarm, CG
President-Hydrogeologist