



STATE OF CONNECTICUT  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



January, 22, 2003

Peter W. Szymanski  
Installation Manager  
Stratford Army Engine Plant  
550 S Main St.  
Stratford, CT 06615

RE: Dense Non-Aqueous Phase Liquids, Stratford Army Engine Plant, Stratford

Dear Mr. <sup>date</sup> Szymanski:

I am responding to your installation's August 20, 2002, request for guidance regarding the Connecticut Remediation Standard Regulation requirement to contain or remove dense non-aqueous phase liquids (DNAPL) from soil and groundwater to the maximum extent prudent under section 22a-133k-2(g). Although I have discussed the issues embodied in this requirement with various installation representatives in the past few months, I feel it is necessary to recap and expand those discussions in this letter.

Please note that the Remediation Standard Regulations cited in the August letter are applicable to releases that have been fully characterized. At the Stratford Army Engine Plant (SAEP) there are additional data needs before the release will be sufficiently characterized to allow a full evaluation of whether all prudent measures have been taken relative to DNAPL. The below comments are specific to the occurrence of DNAPL at SAEP, but do not incorporate information that may be newly presented in the latest (January 2003) draft of the Remedial Investigation.

1. SAEP should conservatively expect that DNAPL is widely present at the site:

DNAPL was only specifically identified in one boring, although the site investigation data has defined several general areas of highly elevated groundwater concentrations for various chlorinated solvents. SAEP seems to take the approach that, since free DNAPL was not specifically encountered, it is only minimally present on the site. DEP prefers to take a body of evidence approach in site characterization. Using this approach, a commonly accepted rule of thumb is to use, as a screening consideration for DNAPL presence, groundwater concentrations exceeding one percent (1%) of the solubility limit. Please note that the "hot spots" identified as a focus of investigation by SAEP are generally an order of magnitude higher than this screening value, and therefore may overly limit SAEP evaluations of the solvent contamination at the site.

2. SAEP must define the physical nature of the DNAPL occurrence at the site:

The potentially relevant remedial technologies, and their effectiveness, vary depending on whether the DNAPL is present as pools of recoverable product, distributed ganglia of product in interstitial spaces, or sorbed product on the aquifer framework. Soil sampling data are limited because much of the solvent distribution profiling was through use of direct push technologies. Further site characterization is therefore needed before the applicability and effectiveness of various remedial technologies can be evaluated. Until the technologies can be evaluated, the implementation cost of a

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