

May 27, 2009

Illinois Pollution Control Board
Clerk's Office
James R. Thompson Center
100 West Randolph Board, Suite 11-500
Chicago, Illinois 60601

And participants on the Service List (via First Class Mail)

Re: Case No: R2009-009

Case Name: In the Matter of: Proposed Amendments to Tiered Approach to Corrective Action Objectives (35 Ill Adm. Code 742)

Board Member: Johnson, T.E.

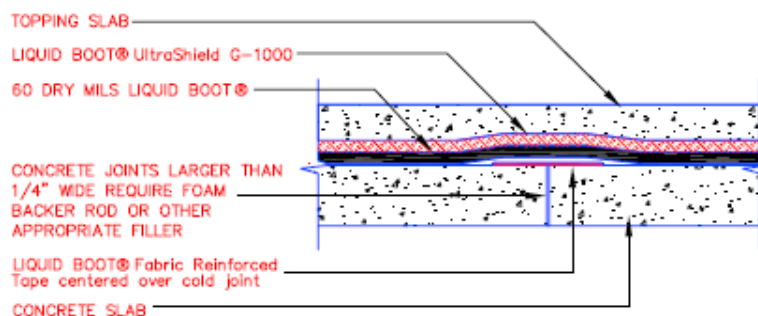
Hearing Officer: McGill, R.

Dear Board Members:

CETCO has prepared the following responses to questions posed at the March 17, 2009 hearing held in Chicago, IL.

Question from Gary King, Illinois Environmental Protection Agency (IEPA): IEPA is concerned about the feasibility of installing a 60-mil liner in a crawl space. I was wondering if you could comment on that.

Response: [CETCO 60-mil spray applied membrane has been installed in three existing basements: Wesleyan U, Middletown, CT; Belgravia Redevelopment, South Haven, MI and Residential Basement, Biddeford, ME.](#) A typical installation cross section is shown in following detail G3.1 with overlaying geotextile and a minimum 2-inch topping slab.



GAS VAPOR BARRIER
BETWEEN SLAB &
CONCRETE COLD JOINTS
NOT TO SCALE



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The 60-mil membrane could also be installed over a prepared dirt crawl space with similar overlaying geotextile and topping slap.

Question from Mr. Anand Rao, IPCB: You indicated that GeoKinetics had significant experience and you mentioned thousands of sites that they have handled. I was wondering if you have any information in a database as to what kind of issues were dealt with related to (a 60-mil) membrane, 6-mil membrane or other membrane that were evaluated as part of this experience.

Response: Per Glen Tofani, GeoKinetics, they do not have a database. However, based upon their plans on file and billing records of VOC and methane vapor intrusion mitigation projects, he made the following estimate:

- minimum 60-mil: 90%
- minimum 12-mil: 10%
- <12-mil: 0%

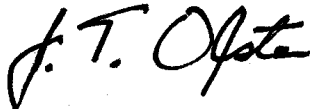
The <60-mil vapor barriers were for low concentration VOC or methane projects dating back to the mid-1990s and earlier. More recent projects were all minimum 60-mil vapor barriers.

Question from Ms. Kimberly Geving, IEPA: If you are spray (applying) how do you make sure it's all the same thickness? Do you do periodic measurements after it's sprayed on once it's dry?

Response: Yes, current CETCO brownfield membrane/liner specification guidelines state the following: "The membrane must be cured at least overnight before inspecting for dry-thickness. ON CONCRETE/SHOTCRETE/MASONRY & OTHER HARD SURFACES Membrane may be checked for proper thickness with a blunt-nose depth gauge, taking one reading every 500 square feet. Record the readings. Mark the test area for repair, if necessary. If necessary, test areas are to be patched over with LIQUID BOOT® to a 60 mils minimum dry thickness, extending a minimum of one inch (1") beyond the test perimeter. DIRT AND OTHER SOFT SUBSTRATES. Samples may be cut from the membrane and geotextile sandwich to a maximum area of 2 square inches. Measure the thickness with a mil-reading caliper, per 500 square feet. Deduct the plain geotextile thickness to determine the thickness of LIQUID BOOT® membrane. Mark the test area for repair. Voids left by sampling are to be patched with geotextile overlapping the void by a minimum of two inches (2"). Apply a thin tack coat of LIQUID BOOT® under the geotextile patch. Then spray or trowel apply LIQUID BOOT® to an 60 mils minimum dry thickness, extending at least three inches (3") beyond geotextile patch."

Thank you for the opportunity to present at the March 17th hearing. Please do not hesitate to contact me if you have any further questions.

Sincerely,

A handwritten signature in black ink, appearing to read "J. T. Olsta". The signature is written in a cursive, flowing style.

James T. Olsta, P.E.
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