

**EXPERT PANEL**  
for  
**THE DICKSON COUNTY LANDFILL**  
**DICKSON, TENNESSEE**

Memorandum

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TO: Timothy V. Potter, Esq., Reynolds Potter, Ragan & Vandivort, PLC  
Michael K. Stagg, Esq., Waller Lansden Dortch & Davis, LLP  
Michael E. Wall, Esq., Natural Resources Defense Council, Inc.

FROM: David E. Jackson, P.G., P.H.  
David E. Langseth, Sc.D., P.E., D. WRE  
Stavros S. Papadopoulos, Ph.D., P.E. NAE

MATTER: Natural Resources Defense Council, Inc., *et al.*, v. County of Dickson, Tennessee,  
*et al.*, No.: 3:08-cv-00229  
Consent Order Entered December 9, 2011

DATE: December 7, 2012

SUBJECT: Expert Panel Communication No. 6

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This Communication No. 6 from the Expert Panel (EP) established under the referenced Consent Order includes follow-up to our Recommendation 4 and a summary of pending actions from past EP recommendations. We intend to include a summary of pending actions from past recommendations, if any, in each future communication.

### **Recommendation 4A**

This is a follow-up to the initial Recommendation 4, contained in EP Communication 4, dated June 22, 2012.

### **Bruce Spring**

In Recommendation 4, we requested that additional monitoring, specifically of the vapor concentrations at the [REDACTED] residence (inside and outside) be performed. EnSafe collected additional samples on October 5, 2012 and documented the procedures and results in a November 16, 2012 letter report that was transmitted to the EP by Michael Stagg *via* e-mail on November 27, 2012.

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The [REDACTED] residence indoor air trichloroethylene (TCE) concentrations for the samples taken on October 5, 2012 (see Table 1 of EnSafe's November 16, 2012 letter report) were  $0.7 \mu\text{g}/\text{m}^3$  (primary sample, B505-2012) and  $0.86 \mu\text{g}/\text{m}^3$  (quality assurance duplicate sample, B506-2012), both of which are above the U.S. Environmental Protection Agency (U.S. EPA) Residential Screening Level (RSL) for TCE vapor concentration of  $0.43 \mu\text{g}/\text{m}^3$  ([http://www.epa.gov/reg3hwmd/risk/human/rb-concentration\\_table/Generic\\_Tables/pdf/master\\_sl\\_table\\_run\\_MAY2012.pdf](http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/pdf/master_sl_table_run_MAY2012.pdf) accessed June 8, 2011). The [REDACTED] residence indoor air concentrations reported in EnSafe's November 3, 2011 letter report were also above the U.S. EPA RSL (as discussed in the EP Recommendation 4, the RSL was  $1.2 \mu\text{g}/\text{m}^3$  when EnSafe wrote the November 3, 2011 letter report but was subsequently reduced).

The EP believes that the TCE vapor concentration data from the [REDACTED] residence justifies proceeding to a next step of developing, and subsequently implementing, an action plan to either demonstrate that the air in and around the [REDACTED] residence is of acceptable quality with respect to TCE concentrations or provide remedial measures to reduce the TCE concentrations to acceptable levels. The EP specifically requests that the County cause such a plan to be prepared for EP review and comment, with delivery to the EP by no later than March 29, 2013.

The EP also believes that the results of the investigations at the [REDACTED] residence indicate that the potential for indoor air vapor intrusion at properties in the vicinity of the [REDACTED] residence should be assessed. The EP specifically requests, as a first step in this assessment, that the County cause to be conducted the following additional evaluations in the Bruce Spring area:

**Residence Reconnaissance Survey:** A reconnaissance survey of homes within a half-mile of Bruce Spring and located on the east side of the West Piney River shall include at least the following information about each home in the study area:

- Ground surface elevation at the house (approximate average around the house perimeter)
- Estimated groundwater surface elevation at the house (we are not anticipating collection of new groundwater surface level monitoring data, just estimation from existing information)
- The presence or absence of a basement, crawl-space, or first floor built into a slope (as opposed to slab-on-grade construction).

The reconnaissance survey report shall include, at a minimum, the survey methods, a tabular summary of the survey results, a map of the house locations in the survey area, and a proposed vapor sampling plan for the area of the survey. The reconnaissance survey report shall be delivered to the EP no later than April 26, 2013.

**Air Pathway Dispersion Survey:** The region around Bruce Spring in which the TCE concentration in ambient air has a reasonable potential to exceed the RSL shall be evaluated. The EP expects that this evaluation will require a combination of sample collection/analysis and

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mathematical dispersion modeling to extend the sampling results over a reasonable range of conditions that may affect transport of TCE in air. The EP specifically requests that a draft study plan be submitted for review and comment no later than March 29, 2012.

### **Sullivan Spring**

The EP Recommendation 4 contained some comments on the sampling and analysis plan for the Sullivan Spring area that was described in a November 4, 2011 letter report from EnSafe. EnSafe responded to the EP comments in an e-mail from Shaun Winters to the EP dated August 15, 2012, which included a suggestion for an alternative sample collection method for vapor in near-surface soils. The EP concurs with the suggestions in the August 15, 2012 e-mail and requests that the County cause to be prepared an updated sampling and analysis plan for the Sullivan Spring area that addresses the EP comments in Recommendation 4 and the August 15, 2012 EnSafe responses. The updated sampling and analysis plan for the Sullivan Spring area shall be delivered to the EP for final review and concurrence no later than February 22, 2012.

Note that the EP anticipates requesting that a second round of sampling in the Sullivan Spring area be conducted at a suitable interval after the first round regardless of the results from the first round.

### **Action Item Summary:**

As described above, the EP requests that the County cause to be prepared the following:

- An action plan to address the TCE vapor concentrations at the [REDACTED] residence (draft for review due to the EP by March 29, 2013)
- Reconnaissance survey of houses on the east side of West Piney Creek within a half-mile of Bruce Spring (survey report due to the EP by April 26, 2013)
- Study plan for evaluation of airborne transport of TCE in the vicinity of Bruce Spring (draft plan for review due to the EP by March 29, 2013)
- Updated sampling and analysis plan for a vapor survey in the Sullivan Spring area (due to the EP by February 22, 2012).

### **Summary of Pending Action Items**

The following requests for information and questions related to earlier communications by the EP have not yet been addressed:

1. Communication No. 3, dated June 7, 2012, included a request for "...the County to proceed with contacting the WADC and STCP and inventorying approved or potentially imminent plans for water utility expansion in or near the newly-defined EERA." The EP

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requests being informed of the information obtained from the WADC and STCP so that we can be aware of additions to the existing distribution system that may be already planned.

2. Communication No. 5, dated August 24, 2012, included the recommendation (Recommendation No. 5) that the County offer to extend public water connections to [REDACTED] residences on [REDACTED]. Data recently received from the County's consultants indicate that the [REDACTED] and [REDACTED] residences have been connected to public water supply, but that the [REDACTED] and [REDACTED] residences continue to be "not connected." What is the status of connection for these three residences?
3. Communication No. 5 also included the following information requests:
  - a) Cost estimates for connecting the [REDACTED] and [REDACTED] residences on [REDACTED] to public water supply;
  - b) Any educational materials that the County intends to provide to landowners or other residents in the EERA; and
  - c) Copies of the protocols used, or to be used, by County's consultants for sampling residential wells, springs, and streams.

The members of the EP would greatly appreciate that these requests/questions be addressed by the County as soon as possible.