

**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: March 31, 2022

SUBJECT: Expert Panel Communication Number 17,  
Recommendations regarding future activities related to addressing contamination  
associated with the Dickson County Landfill

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The Consent Order in the matter Natural Resources Defense Council, Inc. *et al.* v. County of Dickson, Tennessee, *et al.* (U.S. District Court, Middle District of Tennessee, Nashville Division, No. 3:08-cv-00229) terminates on March 31, 2022. The Consent Order provides for a Remedy Fund and stipulates the Fund's purposes. The Consent Order also provides for the appointment of an Expert Panel (EP)<sup>1</sup> to, among other responsibilities, "decide on which remedy actions moneys from the Remedy Fund shall be expended and the relative priority of such remedy actions." After the date of the Consent Order termination, the Dickson County Landfill (DCL) EP will also terminate. However, the EP understands that unspent monies (i.e., "residue") from the Remedy Fund will continue to be available for the Remedy Fund's stated purposes. The EP has prepared this document to summarize some activities that The EP believes will be prudent for the County to undertake as it continues to manage the water contamination in the Expanded Environmental Risk Area (EERA). The EP has not attempted to foresee all possible situations in the future, and recognizes that the County, with the assistance or oversight of the State of Tennessee, will need to make decisions based on the information available in the future. Nevertheless, the EP believes that certain categories of activities are likely to be prudent and has summarized its thoughts on those activities in this document. The EP believes that all

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<sup>1</sup> For the entire term of the Consent Order, the EP has consisted of Stavros Papadopoulos (appointed by the Natural Resources Defense Council) and David Jackson and David Langseth (both appointed by Dickson County).

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activities described in this document are reasonable uses of the Remedy Fund Residue, but this document is not intended to be a complete list of all activities that may be reasonable uses of the Remedy Fund Residue.

This document addresses the following topics:

- Continuing connections to public water supply and well closures within the EERA
- Continuing education for residents and property Owners within the EERA
- Background briefing for future Dickson County officials
- Spring monitoring within the EERA
- EERA perimeter monitoring
- Public information

### **Continuing Connections to Public Water Supply and well closures within the EERA**

There may be certain properties within the EERA that have requested or agreed to be connected to public water supply and/or to have wells closed before the Consent Order terminates, but for whom the associated agreements have not been fully executed or the connection and/or well closure has not been completed before the Consent Order terminates. In such situations, the EP recommends that Remedy Fund Residue monies be used to complete such connections or well closures and to provide the same financial incentives as were being offered during the term of the Consent Order.

### **Continuing education for residents and property owners within the EERA**

The EP recommends the following continuing education program for property owners and residents within the EERA after the Consent Order term is over.

- Mail educational materials to all residents and property owners within the EERA, and to all realtors doing business in Dickson County, every 10 years. These educational materials should be comparable to those provided during the term of the Consent Order, but should be updated to reflect future adjustments to regulatory criteria or toxicological understanding of the relevant chemicals.
- Whenever ownership for a property in the EERA changes, send educational materials comparable to those described in the prior item to the new owner, regardless of the water supply source for the property. These materials should be sent in a manner that provides

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confirmation of receipt by the new property owner. The County should maintain record of what was sent and the receipt confirmation.

### **Background Briefing for future Dickson County officials**

The EP believes that a formal approach to providing background briefings to future Dickson County officials and relevant County staff, those who have not lived through the litigation or ensuing Consent Order, should be developed. The purpose of these background briefings would be to advise future officials and staff of EERA contamination causes, risks, restrictions, and Remedy Fund Residue purpose and use. This section describes the EP's proposed approach to preparing and communicating these briefing materials.

Within 9 months after the Order's termination, the County's environmental consultant and outside environmental counsel should prepare an outline of the briefing materials to be presented to future newly-elected County Commissioners, County Mayors, and relevant County staff. The briefing should include a tour of the Landfill site and EERA, a notebook of written materials, and a live presentation. The briefing should include both technical and legal issues, such as the following:

- Contaminant history and status
- Potential health risks associated with Landfill contaminants
- Litigation and settlement history
- Continuing obligations to protect human health and safety
- Regulatory implications of the EERA
- Well, spring, and stream sampling program
- Remedy fund sources (*i.e.*, Dickson County taxpayers), purposes, and residue balance
- PWS connection status within the EERA
- Tennessee Department of Environmental Conservation (TDEC) regulatory oversight, the County's reporting obligations, and general lines of communication and coordination with TDEC
- Potential legal and financial liabilities, and associated risk management measures

The live presentation for the newly elected Commissioners or Mayor should be given by the County's environmental consultant and outside environmental counsel.

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Additionally, the County's environmental consultant should annually provide a written review of Landfill issues and an update on contamination status and recent monitoring results.

### **Spring monitoring within the EERA**

Springs have the attribute of providing natural surface access to groundwater as it emerges from the subsurface, but that easy access also creates relatively high potential for exposure, and associated risk, if the water is contaminated. The EP recommends a continued monitoring program along the lines of the following:

- Springs provide a cost effective component of an ongoing monitoring program since they are easy to access and sample, and do not require maintenance. The EP recommends that the County continue sampling springs for which access is available on a schedule with intervals between sampling events that increase over time, along the following lines:
  - Sample every 9-months for 8 sampling events, then
  - Sample every 15 months for the next 4 sampling events, then
  - Sample every 21 months thereafter.
  - Adjust the sampling frequency for specific springs as determined to be appropriate if contamination is detected, as discussed further below.
- If contamination is detected in a spring sample, evaluate the situation and take appropriate action. Such evaluations and actions may proceed along the lines of the following. Initially, additional sampling to determine whether the result was anomalous or continuing would be prudent. Investigation of potential sources other than the DCL may also be prudent. If the contamination is reasonably likely to be emanating from the DCL and continues to be detected on a regular basis, vapor monitoring, as was done under EP direction at Sullivan and Bruce Springs may be appropriate. Depending on the results of these further investigations, appropriate actions may include the following:
  - Continue monitoring on a schedule to be determined for that spring (which may be more frequent than the general schedule outlined above).
  - Physical isolation (*e.g.*, fencing). Note that where physical isolation has been implemented, or is implemented in the future, continuing maintenance of the isolation measures (*e.g.*, fencing) will be required.
  - Treat the spring water to reduce contaminant concentrations

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- Acquire and control development on property sufficiently impacted by vapor emanating from a spring, as was done under EP direction at Bruce Spring and recommended at Sullivan Spring.<sup>2</sup>

### **EERA Perimeter monitoring**

It is well established that contaminants associated with the DCL exist at various locations within the EERA. Further it is likely that the DCL will continue to be a source of contaminants to the EERA groundwater for many years to come. At this time, we are not aware that contaminants from the DCL have migrated outside the EERA, but recognize that in the complex hydrogeologic setting of the EERA future migration outside the EERA cannot be ruled out. Therefore, a key purpose of continued monitoring in the vicinity of the Expanded Environmental Risk Area (EERA) boundary is to determine whether contaminants associated with releases from the DCL may be migrating outside of the EERA, effectively evaluating the continuing validity of the EERA boundary. This purpose was embodied in Consent Order § IV.6.(a)ii. The EP recommends a continued monitoring program along the lines of the following:

- Select wells and springs from which to collect and chemically analyze samples for constituents that may be associated with the DCL, predominantly TCE, but also including other chlorinated solvents. The selected wells should include the dedicated detection monitoring well recently installed along the western perimeter of the EERA and other selected in-use domestic supply wells along, and preferably outside, the perimeter of the EERA.
- The County's environmental consultant has developed information about the character of selected domestic supply wells for the purpose of selecting wells for participation in the perimeter monitoring program. During the term of the Consent Order, however, that information was not developed to the extent needed select candidate wells. The EP recommends that this assessment program be continued, with the goal of selecting a set of wells for continued perimeter monitoring.

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<sup>2</sup> Based on evaluation of air and water monitoring data in the vicinity of Sullivan Spring, the EP recommends that certain land along Worley Furnace Branch downstream of Sullivan Spring should not be used for residential purposes. The specific parcels of concern were discussed at several meetings between the EP and representatives of Dickson County and of the NRDC, including at the June 2, 2021 meeting. The specific parcels in question were documented in a map prepared by EnSafe and attached to a June 7, 2021 email from David Langseth to the representatives of Dickson County and the NRDC. The June 7, 2021 email also provided EP approval for expenditure from the Remedy Fund to acquire the land indicated on the attached map. Additionally, also based on evaluation of said monitoring data, if residences are proposed to be sited closer to Worley Furnace Branch in areas downstream of the parcels indicated on the map attached to the June 7, 2021 email, the potential for excessive exposure to vapors related to chemical associated with the DCL should be evaluated.

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- The perimeter monitoring well network should be monitored on a schedule with intervals between sampling events that increase over time, along the following lines:
  - Sample quarterly for 2 years (eight sampling events) for wells and springs that do not have a baseline testing history
  - Wells and springs with baseline testing history, or after they obtain a baseline history, sample every 9-months for 8 sampling events, then
  - Sample every 15 months for the next 4 sampling events, then
  - Sample every 21 months thereafter.
  - Adjust the sampling frequency for specific locations as determined to be appropriate if contamination is detected. This topic is discussed further below.
- If contamination is detected in a perimeter monitoring sample, the County should evaluate the situation and take appropriate action. Such evaluations and actions may proceed along the lines of the following. Initially, additional sampling to determine whether the result was anomalous or continuing would be prudent. Investigation of potential sources other than the DCL may also be prudent. If the contamination is reasonably likely to be emanating from the DCL and continues to be detected on a regular basis, additional monitoring locations down- and cross-gradient from the location of the detections should be tested to determine the extent of migration beyond the EERA boundary. Depending on the results of these further investigations, appropriate actions may include the following:
  - Continue monitoring on a schedule to be determined for that perimeter monitoring location (which may be more frequent than the general schedule outlined above).
  - Continue monitoring of some or all of the additional locations that were selected to evaluate migration beyond the EERA boundary.
  - Modify the EERA boundary
  - If the EERA boundary is modified, implement programs within the modified EERA that are similar to or modeled after programs implemented during the term of the Consent Decree. These programs would include, but not be limited to the following:
    - Testing of wells or springs in use for potable water supplies within the modified EERA boundary
    - Making offers for public water supply connections and well closures for properties within the modified EERA boundary on terms comparable to those offered with the term of the Consent Order.
    - Providing educational materials regarding water contamination to residents or businesses within the modified EERA

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- Establishing a modified perimeter monitoring system that reflects the modified EERA boundary.

### **Public Information**

The EP generally favors easy access for the public to information relevant to public health and safety whenever public access to that information does not compromise the government's ability to carry out its functions or compromise private property rights. As such, the EP suggests that the County consider making materials such as educational materials provided at various time to EERA residents, monitoring data, and final investigation reports available to the public through a County internet portal and available for review in hard copy at a repository location accessible to the public such as the Dickson County Public Library.