EXPERT PANEL

for THE DICKSON COUNTY LANDFILL DICKSON, TENNESSEE

Memorandum

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. Papadopulos, 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: August 28, 2018

SUBJECT: Expert Panel Communication No. 14

Concerns about Progress in Achieving the Overall Objectives of the Expert Panel

To achieve the objective expressed in paragraph IV.6.(a) of the Remedy Fund established in the December 9, 2011 Consent Order, the Expert Panel (EP) has expressed, in several past communications, specific objectives that include the following:

- 1) All properties within the EERA be connected to public water supplies;
- 2) All wells within the EERA be closed by plugging and abandonment, and springs be isolated, or their use prevented through agreements with property owners; and
- 3) Property owners who refuse to connect to PWS and/or to abandon their well or spring do so at their own risk, hold the County and others harmless against any claim due to groundwater contamination, and bear the costs of the continued monitoring of their 'active' or 'limited use' well or spring.

The EP reaffirms these objectives; however, given the progress to date, the EP is concerned about whether the County will have achieved these objectives before the termination of the Consent Order on March 31, 2022. We summarize these objectives and the basis for our concerns regarding progress toward meeting these objectives below.

Objective 1: Property Connections to PWS

To achieve the first objective, the EP started by identifying, with the help of County's consultants, properties within the EERA that were not connected to PWS and relied on wells or springs for water supply. In the summer of 2012, while this process was ongoing, the EP was informed that during the Spring 2012 sampling event low levels of trichloroethylene (TCE) were detected in two wells that supplied water to properties within the EERA. The EP recommended that the owners of these two properties and of three nearby properties be offered connection to PWS (EP Communication No. 5, dated August 24, 2012). The two properties with the wells where TCE

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was detected were connected to PWS soon after the EP's recommendation. (It is of interest to note that despite the detection of TCE in these two wells, the wells continue to be of "limited use.")

The EP next developed a priority list for connecting properties within the EERA that use wells or springs as a source of water supply to PWS. The first version of this list was presented on Table 5 of Communication No. 7 dated April 18, 2013. Three additional wells were connected to PWS after the issue of this priority list, and the list was amended in Communication No. 8 dated June 9, 2015 to reflect these connections and other changes. Finally, the list was amended again in Communication No. 12 dated February 18, 2016, primarily to add to the list properties which relied on springs as a source of water supply. In accordance with the terms of the Consent Order, Communication No. 12 also included a recommended schedule for the connection of the listed properties to PWS. This most recent priority list included 50 properties. Of these 50 properties, 35 were properties that relied on wells and 9 were properties that relied on springs for water; the remaining 6 properties were undeveloped/vacant (U/V) properties which had wells on them.

Based on the latest information available to the EP, another 8 properties served by wells were connected to PWS since the issuance of Communication No. 12, bringing to 13 the total number of properties connected to PWS since the entering of the Consent Order. The latest connection was made in October 2016. Thus, there have been no connections to PWS during the last 22 months, and the PWS connection program is well behind the schedule recommended by the EP in Communication No. 12, dated February 18, 2016. As of today, there are 42 properties, including the 6 U/V properties, that remain on the priority list for PWS connections, or for accessibility to PWS connections (the U/V properties).

The EP requests that by November 2, 2018 the County provide the EP with a proposed revised connection schedule that would complete PWS connections for all 42 properties by March 31, 2021, one year ahead of the termination of the Consent Order.

Objective 2: Well Closure and Spring Use Prevention

To achieve the second objective, the EP recommended to the County that a monetary incentive be offered to property owners connected to PWS, both prior to the issue of the Consent Decree and under the current program, for agreeing to the closure of the well on their property, or to the

¹ To explain the lack of connections over this long period, Shaun Winter of Ensafe, the County's consultant, informed the EP that "[A]dditional PWS connections and well closures are pending final "Agreement" language." (4/10/2018 e-mail to members of the EP.) The use of such agreements was recommended and potential language for them was suggested by the EP on June 9, 2015 (see Revised Communication 9). A draft copy of the County/Landowner agreement prepared by the County was provided to the EP on 12/6/2017 (e-mail from Michael Stagg to EP and representatives of NRDC and County), and the EP commented on the document on 12/27/2017 (e-mail from David Langseth to representatives of NRDC and County). The County responded to EP's comments and provided a final copy of the agreement on 2/19/2018 (e-mail from Michael Stagg to EP and representatives of NRDC and County). Although the Agreement now appears to be finalized, the EP has no information on whether this final Agreement has yet been used in offering any additional PWS connections. [An e-mail with today's date (August 28, 2018) from Michael Stagg to EP and representatives of NRDC and County, informed the EP that this Agreement is being used by the County to sign up well owners for PWS connections, and provided for EP's review, proposed Landowner Agreements for (a) well closure for properties already connected to PWS, and (b) spring closure and PWS connection. Review of these two documents will be EP's top priority in the next few weeks.]

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prevention of the future use of the spring on their property. (See Communication 9, dated June 9, 2015.) This monetary incentive, which is to be paid out of the Remedy Fund, consists of \$2,500 for well closure or spring use prevention, and an additional \$500 for the removal and destruction of the well or spring pump, if one existed.²

Well Closure

There are 64 properties within the EERA (58 connected to PWS and the 6 U/V properties) which have wells that should be plugged and abandoned; a few of these properties have more than one well and, thus, the total number of wells on these 64 properties is 69. Most of these wells are reported to be inactive or of limited use. A priority list and a recommended schedule for the closure of these wells was presented in Communication No. 13, dated March 28. 2017. According to this schedule, 22 property owners listed under Priority 1 and 2 should have been offered the incentive for the closure of their well and those accepting the offer should have been closed by this time; however, it appears, based on information available to the EP, that closure of these wells is also "pending final "Agreement" language" (see footnote 1).

The EP requests that by November 2, 2018 the County provide the EP with a proposed revised schedule for the closure of the 69 wells listed in Communication 13. This proposed schedule should be such that all listed property owners have been made an incentive offer for well closure, and the closure of the wells on properties accepting the offer has been completed by June 30, 2021, nine months ahead of the termination of the Consent Order on March 31, 2022.

Spring Use Prevention

In addition to the wells within the EERA that should be closed by plugging and abandonment, if the properties are connected, or after they get connected, to PWS, there are also 25 springs within the EERA that need to be prevented from future use. Of these 25 springs, which are located on 22 properties, 9 are sources of water supply and the properties served by these springs have been included on the priority list for PWS connection.³ Two of the other 16 springs, the Sullivan and Bruce Springs have already been affected by contaminants from the Dickson County Landfill. Sullivan Spring has a fence that is intended to prevent its use, but during their last visit to the site, on December 6, 2017, the members of the EP noticed that the fence is in need of maintenance in order to continue fulfilling the intended purpose of preventing the use of this spring. Similarly, the EP did not have any difficulties in accessing Bruce Spring during this visit.

The EP requests that by March 31, 2019 the County provide the EP with plans on how to isolate these two springs for preventing their public access, and to implement these plans within six months of their approval by the EP.⁴

² The owners of nine of the thirteen properties that have been connected to PWS since the entering of the Consent Order have accepted the offer for this monetary incentive and agreed to the closure of the well on their property.

³ The 9 springs are located on 8 properties; one spring, serves two properties, and one property, the property, is served from a pond which receives the discharge from two springs on the property.

⁴ Implicit in this action is the offer to the owners of Sullivan and Bruce Springs of the same monetary incentive as that offered to other spring owners for forgoing the use of their spring.

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Measures need also to be taken to restrict the future use of the other 14 springs and, after connection to PWS, of the 9 springs that currently serve as sources of water supply. These springs are currently being sampled semi-annually or annually under the Spring Sampling Program recommended in Communication No. 7 dated April 18, 2013 and updated in Communication No. 12 dated February 18, 2016. For as long as these springs remain free of landfill--related contaminants, posting of signs that warn residents and visitors of the potential risks associated with their use and deed notifications on the properties that they are located would be sufficient measures for restricting their use. The County should obtain, however, the agreement of property owners that more restrictive measures, such as those contemplated for Bruce Spring, will become necessary and will be implemented if a spring becomes contaminated.

Objective 3: Dealing with Recalcitrant Property Owners

To achieve the third goal, the EP recommended changes to the County's Water Well and Spring Regulations that were in the process of being revised in late 2017 and early 2018. These changes would have made the sampling and treatment requirements of these regulations applicable not only to new wells and new uses of springs within the EERA, but also to existing wells and springs which continue to be used by property owners within the EERA. However, the EP's recommended changes were not incorporated in the final version of the regulations because the County's attorneys asserted that, under Tennessee law, the County does not have the authority to enforce these rules on the owners of existing wells. NRDC attorneys disagreed with this claim, stating that the County has authority to enforce these rules using its Police and/or Zoning Powers (e-mail and memo from NRDC to EP and County on 2/15/2018).

The EP does not intend to resolve this legal disagreement. From a purely technical perspective, however, the EP continues to recommend that the County should require all property owners within the EERA who refuse to connect to public water supply and/or to abandon their well or spring, including those who have been connected to PWS in the past but continue to use and refuse to abandon an existing well or spring, to sample their well or spring semi-annually, at their own expense, and report the results to the County. If the property owners refuse to do so, then the EP recommends that the County should require those owners to take full responsibility for the potential consequences of their continued use of their well or spring, and hold the County, the EP, and any other third parties harmless from these consequences. The attorneys' disagreement over the County's legal authority to carry out these recommendations is for the attorneys to resolve and does not affect the EP's technical recommendations.

cc: Mr. Bob Rial, Mayor, Dickson County

Ms. Cecilia Segal, NRDC

Mr. Shaun Winter, Ensafe