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: March 28, 2017

SUBJECT: Expert Panel Communication No. 13

Recommendation on the Closure of all Wells on EERA Properties Connected to Public Water Supply, Priority List and a Recommended Schedule for Well Closure

As discussed during the August 5, 2014 meeting between you and the members of the Expert Panel (EP), and as expressed again in the Revised Expert Panel Communication #9, dated June 6, 2015, "[T]he EP views universal closure of EERA wells and the cessation of spring water use within the EERA to be highly desirable as a means of limiting risk of exposure to landfill-related contaminants in groundwater, conserving Remedy Fund resources, and fulfilling the long-term objectives of the Order's mandates."

Our overall goal, as also expressed in Communication #12, is that that 1) all properties within the EERA are connected to PWS, 2) all wells within the EERA are plugged and abandoned and springs are protected from use, and 3) property owners who refuse to connect to PWS and/or 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.

As an incentive for accomplishing this goal, participants to the August 5, 2014 meeting agreed to offer well owners within the EERA up to \$3,000 for full closure and abandonment of their well (\$2,500 for their agreement to abandon their well and \$500 for the well pump and other equipment, if the well still has a pump). In Revised Communication #9 the EP recommended that this offer be also extended to landowners who have a spring on their property.

Messrs. Potter, Stagg, and Wall March 28, 2017 Page 2

A priority list and schedule for connecting to PWS properties that use wells or springs as a source of water supply, and hence for making the above-mentioned incentive offer to these properties, was presented in EP Communication #12 dated February 18, 2016. The purpose of this Communication #13 of the EP is to recommend a priority and schedule for making incentive offers for closing and abandoning wells on properties within the EERA that were already connected to PWS at the time the Consent Order was entered, or which have been connected to PWS since then, but which continue to have a well (including some properties with more than one well). There are 63 such wells in the EERA, including two hand-dug wells. In addition to these 63 wells, there are 6 wells (4 hand-dug and 2 drilled) on properties that are not connected to PWS but which are undeveloped and vacant; these properties were included as Priority 10 on the priority list for connection to PWS (see Communication #12), but are also included in the priority list of this communication for well plugging and abandonment. Of these 69 wells, 55 are reported as "inactive," 9 as "limited use," and 3 as "limited use, temporarily inactive;" the status of the remaining two wells is not known.

The EP recognizes that some well owners, particularly those whose well status is reported as "limited use," may not agree to the closure of their well, regardless of the offered incentive. The EP expects that the terms and sample agreements outlined in EP's Revised Communication #9, dated June 9, 2015, or equivalent terms and agreements, would form the basis of the County's offers to property owners for well plugging and abandonment. As discussed in Revised Communication #9 with respect to closure of wells on properties that are being connected to PWS, in these instances, and if the County's research indicates that well closure cannot be enforced, the EP intends for the landowner to (1) be informed about potential risks associated with use of the well or spring, (2) expressly acknowledge those risks, and (3) release the County, EP, and other relevant entities from any and all liability associated with the well's or spring's use. These conditions should run with the property, so as to be enforceable to successors in the property interest, not just to the current landowner.

A priority list for the closure of these wells and a recommended schedule for the implementation of this well closure program are presented below.

Priority List for Well Closure

The wells recommended for closure are listed on Table 1, separated into seven priorities for closure. The locations of these wells are shown in Figure 1, color-coded for their closure priority. Wells in Priority 1 are wells in which landfill-related contaminants have been detected one or more times at levels ranging from "J" values to considerably above MCLs. The remaining wells were grouped by their location and prioritized based on their likelihood to be or become contaminated.

Recommended Schedule for Well Closure

The EP desires that all wells listed on Table 1 are closed before the termination of the Consent Order on March 31, 2022. The EP, therefore, recommends to the County to close these wells in accordance

Messrs. Potter, Stagg, and Wall March 28, 2017 Page 3

with the following schedule. If the County believes that they can proceed more cost-effectively on a faster schedule than described below, the EP has no objection. The schedule described below is the minimum pace of effort the EP believes is needed to meet the objectives described herein.

Priority 1 and 2 properties:

These properties should be offered the incentive for full closure and abandonment of their well no later than June 1, 2017, with a ninety (90) day deadline for a reply; wells on properties accepting the offer should be plugged and abandoned within nine (9) months of their acceptance;

Priority 3 and 4 properties:

These properties should be offered the incentive for full closure and abandonment of their well no later than May 1, 2018, with a ninety (90) day deadline for a reply; wells on properties accepting the offer should be plugged and abandoned within nine (9) months of their acceptance;

Priority 5 and 6 properties:

These properties should be offered the incentive for full closure and abandonment of their well no later than May 1, 2019, with a ninety (90) day deadline for a reply; wells on properties accepting the offer should be plugged and abandoned within nine (9) months of their acceptance; and

Priority 7 properties:

These properties should be offered the incentive for full closure and abandonment of their well no later than May 1, 2020, with a ninety (90) day deadline for a reply; wells on properties accepting the offer should be plugged and abandoned within nine (9) months of their acceptance.