EXPERT PANEL

for

THE DICKSON COUNTY LANDFILL DICKSON, TENNESSEE

Memorandum

TO: Timothy V. Potter, Esq., Reynolds Potter, Ragan & Vandivort, PLC

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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: February 18, 2016

SUBJECT: Expert Panel Communication No. 12

Updates to Detection Monitoring Wells, to Spring Sampling Schedule and to PWS Connection Priority List, and a recommended Schedule for PWS

Connections

This Communication No. 12 from the Expert Panel (EP) established under the referenced Consent Order presents updates to the following lists which were included in earlier EP communications:

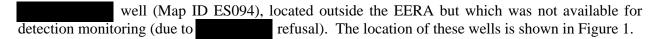
- a) the list of detection monitoring wells;
- b) the list of springs to be sampled and the schedule of their sampling; and
- the priority list for connecting properties within the Expanded Environmental Risk Area (EERA) to public water-supply systems (PWS).

The communication also presents a recommended schedule for the connection of properties within the EERA to a PWS.

Detection Monitoring Well List

As recommended in EP Communication #7 dated April 18, 2013, certain residential wells are monitored to detect potential migration of landfill contaminants to areas beyond the limits of the EERA (i.e., "detection monitoring"); wells previously selected for this purpose are listed in Table 3 of Communication #7. Most of these wells are located near the EERA boundary, but outside of the EERA itself; however, three of the detection monitoring wells are located *within* the EERA. These are the well (Map ID 139), the well (Map ID 173), and the well (Map ID 180). An additional well, belonging to (Map ID 188) and also located within EERA boundary, has been used for detection monitoring as a replacement for the

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Active and regular well pumping during household use is an advisable criterion for detection monitoring. However, the referenced Consent Order requires all homes and businesses within the EERA to be connected to public water supply (PWS) and, when fully implemented, this directive is expected to result in curtailed or eliminated pumping of all wells within the EERA, including those cited above (i.e., the wells) that currently are in the detection monitoring network. Accordingly, to continue implementation of the Order while maintaining an effective detection monitoring network, and after discussion with EnSafe, the County's consultant, regarding the status of alternative wells also located near, but outside, the EERA boundary, the EP recommends that:

- (1) the well be replaced by the common flow from the wells (Map ID 359 and 321) which comprise two wells interconnected through one pressure vessel and which are the source of water for three residences on the property;
- (2) the well be replaced by the well (Map ID 306);
- (3) the well (Map ID 219); and
- (4) the well be replaced by the well (Map ID 143).

These recommended changes are reflected on the attached Table 1, and well locations are shown in Figure 1.

Spring Sampling List and Schedule

Based on observations made by EnSafe at spring sampling locations, and our recent discussions with EnSafe, the EP has updated the spring sampling schedule by adding the Spring which is, or about to be, used for household water supply, and eliminating some springs that EnSafe has established as not existing. The updated spring sampling schedule is presented on Table 2, and the locations of the springs are shown on Figure 1.

PWS Connection Priority List

The foregoing recommended substitutions to the detection monitoring well network requires that the PWS connection priority list provided in Table 5 of EP Communication #7 dated April 18, 2013, and subsequently modified by Communication #8, dated August 13, 2013, be updated again to include the four properties within the EERA whose wells were previously used for detection monitoring. Also, the original PWS connection priority list proposed by the EP in Communication #7 and updated in Communication #8 did not include properties which are depending on springs as a source of water supply for household use. The attached Table 3 presents an updated PWS connection priority list that includes the properties of the four former detection monitoring wells and the spring-

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using properties, incorporates the changes that were made through Communication #8, and has a few other minor changes. The locations of the wells on the properties listed on Table 3 are shown on Figure 2 and those of the listed springs in Figure 1.

Recommended PWS Connection Schedule

The EP is concerned with the pace at which properties within the EERA are connected to PWS, and recommends this pace to be accelerated to achieve connection of all properties controlled by willing owners before the termination of the Consent Order on March 31, 2022. The EP, therefore, recommends to the County to connect to PWS the properties listed on Table 2 in accordance with the following schedule:

Priority 1 and 2 properties:

Any Priority 1 properties that have not been already offered a PWS connection and Priority 2 properties should be offered connection to PWS by April 1, 2016, with a ninety (90) day deadline for a reply; those accepting the offer should be connected within nine (9) months of their acceptance;

Priority 3 and 4 properties:

These properties should be offered connection to PWS no later than April 1, 2017, with a ninety (90) day deadline for a reply; those accepting the offer should be connected within nine (9) months of their acceptance;

Priority 5, 6, and 7 properties:

These properties should be offered connection to PWS no later than April 1, 2018, with a ninety (90) day deadline for a reply; those accepting the offer should be connected within nine (9) months of their acceptance;

Priority 8 and 9 properties:

These properties should be offered connection to PWS no later than April 1, 2019, with a ninety (90) day deadline for a reply; those accepting the offer should be connected within nine (9) months of their acceptance; and

Priority 10 properties:

These properties are currently undeveloped and vacant; they should be offered connection to PWS whenever they apply for development, and be connected to PWS within nine (9) months of their acceptance of this offer. If any of these properties continue to be undeveloped and vacant on April 1, 2020, access for a future connection to PWS should be provided to these properties by March 31, 2021.

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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 PWS connection offers to property owners, except for those properties where the County has already entered into or offered agreements with different terms to the property owners. The EP would like to reiterate that its goals, as also expressed in previous communications, are 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 continued monitoring of their well or spring. Any agreement that meets these goals would be acceptable.