

EXHIBIT RRT-9

From: Rhodes Trussell <rhodes.trussell@trusselltech.com>
Subject: Marina Coast
Date: January 25, 2009 8:29:03 PM PST
To: Gary.Hoffmann@cdph.ca.gov, "Catherine S. Ma, PE" <cma@dhs.ca.gov>
Cc: Céline Trussell <celine.trussell@trusselltech.com>, Gordon Williams <gordon.williams@trusselltech.com>, David R Hokanson <david.hokanson@trusselltech.com>



Dear Gary and Catherine,

I'd like to thank Gary for sharing with Céline some thoughts on the direction the Department of Public Health (DPH) may take on its comments on our draft sampling plans for the Salinas River and for the proposed desalination plant at Marina Coast Water District. We appreciate the time DPH has spent reviewing these documents and your early feedback will help us address some of the comments and move forward with appropriate sampling.

As I understand it, during the conversation, Gary also mentioned that, because the GWUDI decision on the Marina Coast Water District's existing well was made on information received several years ago, DPH is considering requiring GWUDI sampling for the monitoring well in the 180-ft aquifer (near State well No. 14S/01E-24L50) to verify the previous ruling (January 20, 2000). I would like to offer some thoughts on that decision for your consideration.

Even though the one-year study performed by District was conducted some time ago, the hydrogeology has not changed and, and I understand them, neither have the criteria for the GWUDI determination. GWUDI sampling practice also remains the same, except for the requirement for *Cryptosporidium*. Ten years ago, the 180 ft aquifer was already intruded with seawater as it is today. The data collected at that time was collected to characterize the shallower aquifer's ability to protect the groundwater against microorganisms. These characteristics remain the same today. One could also argue that the 1998-1999 study data would more representative than a new study because it was conducted using a production well. Finally the distance between the monitoring well and the ocean is about 700 ft depending on the tide, but the actual production wells will most likely be located north east of that point, a little more than twice this distance from the ocean. I respectfully request that DPH consider these issues in making its decision. I want you to know, however, that I understand that the GWUDI determination is DPH's to make, not mine.

Whatever decision DPH makes on this matter, I expect that our client will cooperate in providing the information required. Also following DPH's decision, I also expect our client will agree to provide the treatment specified. Nevertheless I would also like to offer some thoughts on the purpose of the GWUDI determination, on how appropriate tests might be implemented and how the results might be interpreted should additional sampling be undertaken.

THE PURPOSE OF THE GWUDI DETERMINATION:

First, my understanding is that the question is not one of determining whether the water in the well originates as surface water, for surely all groundwater does. Rather the question to be resolved is whether the communication between this well and its surface supply are so intimate that the treatment requirements of the surface water treatment rule should apply. In using the term "surface water treatment rule" (SWTR) I refer to the original SWTR and to all its subsequent stages through the latest Long Term 2 Enhanced Surface Water Treatment Rule.

The stimulus for the SWTR was the discovery that *Giardia* and *Cryptosporidium* in surface waters could result in gastroenteric illnesses. Of particular interest was the understanding that these illnesses can be zoonotic (transferred from animal to man). As a result our traditional oral-fecal indicator system could not be relied upon for protection. EPA took the opportunity to establish national regulations on the disinfection of surface water and these regulations also address the inactivation of viruses. Most importantly, however, the regulations presume the presence of an ongoing exposure to *Giardia* and *Cryptosporidium*, organisms resistant to chlorine. This is important because virus inactivation requirements are easily met using chlorine.

As the name implies, the SWTR is intended to address the treatment requirements of surface water, not groundwater. Nevertheless, from the beginning, it was recognized that some groundwater sources (e.g. Ranney collectors, infiltration galleries, springs, etc.) can be so intimately connected to the surface water that absence of *Giardia* and *Cryptosporidium* could not be assured. To address this problem, EPA introduced the designation, "ground water under the direct influence" of surface water (GWUDI). Groundwater sources designated as GWUDI are presumed to be exposed to *Giardia* and *Cryptosporidium* and must meet SWTR requirements.

In the Rule (22 CCR §64651.50) groundwater under the direct influence of surface water (GWUDI) is defined as: "any water beneath the surface of the ground with significant occurrence of insects or other macroorganisms, algae or large diameter pathogens such as *Giardia lamblia*, or significant and relatively rapid shifts in water characteristics such as turbidity, temperature, conductivity or pH which closely correlate to climatological or surface water conditions".

APPROPRIATE TESTING AND ITS INTERPRETATION:

I understand that DPH is considering having the District sample for temperature, pH, conductivity, turbidity and Total Dissolved Solids (TDS) for the ocean and the groundwater over the course of one year to capture seasonal variations. I also understand that samples will be taken for the EPA Consensus Method for Microscopic Particulate analysis (MPA) and for *Cryptosporidium*.

I am concerned about the time-frame to be used to identify, "relatively rapid shifts in water characteristics such as turbidity, temperature, conductivity or pH which closely correlate to climatological or surface water conditions". While I agree that "rapid variations in these parameters that correlate to climatological or surface water conditions" is an appropriate criterion, I am not aware of a method to unambiguously establish the time-frame over which this judgment should be made. At the extreme, it is my view that correlation of hourly variations is clearly a problem, but correlation of seasonal variations is not.

If DPH determines that the "correlation of rapid variations" issues is to be reviewed again, we propose to conduct two sampling events of one week each – each during a different season of the year. During each event, we would sample the ocean and the groundwater on five consecutive days for temperature, pH, conductivity, and turbidity (Not TDS as conductivity and TDS are so closely related). These data would be used for examining the presence of rapid variations in these parameters and whether they correlate to climatological or surface water conditions.

These events would be in addition to our original sampling plan that includes quarterly sampling of Total Coliform and *E.Coli*. I understand that you are considering a requirement of MPA to be conducted on one occasion for the groundwater and more frequent sampling for *Cryptosporidium*. We agree that these methods are appropriate for the GWUDI determination.

Finally, I want to thank you again for being so helpful in this effort.

Rhodes