ADEQ Arizona Department of Environmental Quality

Janice K. Brewer, Governor
Benjamin H. Grumbles, Director

FACT SHEET

Valle Verde Water Company Update - June 2010

BACKGROUND AND RECENT DEVELOPMENTS

Customers of Valle Verde Water Company (Valle Verde) were informed by a public notice mailed on January 19, 2007 that the water system violated the maximum contaminant level (MCL) for tetrachloroethylene in December 2006. The public notice stated that Valle Verde would test the water quality quarterly; inform the customers when the problem is remedied; provide the required health effects statement; and provide a phone number for customers to obtain a translated copy or to ask questions.

ADEQ did a limited well survey in the area in December 2007, and found PCE in some private wells up to 21 µg/L (Figure 1). ADEQ then provided funding for Valle Verde to build a treatment system at well #2. This treatment system, which uses granular activated carbon (GAC) to remove PCE, has been providing treated water since it was completed in October 2008. In addition, ADEQ paid for a permanent connection between the Valle Verde water system and that of the City of Nogales to be used when necessary.

ABOUT THIS PUBLIC WATER SYSTEM AND HOW IT OPERATES

Valle Verde Water Company (East System), public water system ID# AZ0412009, is regulated, in part, by the Arizona Department of Environmental Quality (ADEQ), by rules promulgated under the Safe Drinking Water Act. Valle Verde is classified as a "community" public water system because it serves a year-round population of roughly 2,400 persons via 750 service connections (water meters). The system is comprised primarily of wells (wells #2 and #3), treatment plants, storage/booster tanks and various other distribution system components (e.g., main lines, pipes, meters, etc.).

Inspections and site visits by ADEQ staff in 2007 and 2009 determined that the system's overall physical infrastructure meets technology standards. No infrastructure deficiencies were observed and the facilities appeared to be well maintained overall.

ADEQ engineering/construction approvals were granted for two permanent emergency interconnections with the City of Nogales in January 2008 and February 2009. In addition, a GAC treatment plant at well site #2 for the treatment/removal of PCE was completed in October 2008.

WHAT IS TETRACHLOROETHYLENE?

Tetrachloroethylene is primarily used in the dry cleaning industry and for textile processing. It has also been used for rubber coatings, solvent soaps, printing inks, adhesives, glues, sealants, polishes, lubricants and silicones. Tetrachloroethylene has also been used in producing refrigerants and for degreasing metals.

Tetrachloroethylene is most commonly referred to as PCE or PERC.

WHAT IS THE STANDARD (MAXIMUM CONTAMINANT LEVEL) AND PUBLIC NOTIFICATION REQUIREMENTS FOR TETRACHLOROETHYLENE IN COMMUNITY PUBLIC WATER SYSTEMS?

Tetrachloroethylene became regulated in 1991under the Safe Drinking Water Act with a maximum contaminant level (MCL) of 5 µg/L (equivalent to parts per billion or ppb). That means that the EPA determined that consuming water with tetrachloroethylene levels less than or equal to (≤) 5 µg/L does not pose a significant health risk. It should be noted, however, that EPA's maximum contaminant level goal (MCLG) for tetrachloroethylene in water served by public water systems is "zero."

Should a regulated public water system determine at any time that it is providing water with tetrachloroethylene levels exceeding 5 µg/L, the system must provide notification to its customers that includes the following mandatory health effects statement for tetrachloroethylene: "Some people who drink water containing tetrachloroethylene in excess of the MCL over many years could have problems with their liver, and may have a risk of getting cancer."

Not all classifications of public water systems are required by rule to monitor for every regulated contaminant including tetrachloroethylene. For example, water systems that primarily serve "transient" populations (e.g., campgrounds, RV sites, restaurants, rest areas, etc.) are only required to monitor for the presence of bacteria, nitrate and nitrite. As such, these types of regulated public water systems are not required to monitor for tetrachloroethylene.

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WHAT WAS DONE TO CORRECT THE PROBLEM?

On January 27, 2007, the City of Nogales allowed Valle Verde access to the city's water supply through an interconnect, while Valle Verde worked to remedy the situation through the installation of treatment and/or a permanent connection to the city's regulated water system. The Valle Verde water system is no longer supplying water from its untreated tetrachloroethylene contaminated sources (wells #1, #4 and #7). As previously mentioned, wellhead treatment at well site #2 was completed in October 2008 and all subsequent compliance samples collected since October 2008 have shown non-detectable levels of PCE. Historically, due to Valle Verde distribution system delivery limitations, City of Nogales water could not be provided to the Los Robles Subdivision (Southern most portion of the Valle Verde system) and well #4 was used to supply water for non-consumptive purposes (flushing toilets, laundry, etc.). During the time well #4 was used, Valle Verde provided up to 15 gallons of bottled water per home per day for consumptive uses to the Los Robles customers. On October 26, 2009 well #4 was disconnected from the Valle Verde system as a new water main was constructed to provide potable water to the entire Los Robles Subdivision.

ADEQ wants to assure Valle Verde customers that we are committed to having the water system maintain the provision of potable drinking water that meets all state and federal standards.

In 2010, ADEQ will conduct more investigations of the extent of PCE contamination in the area. These investigations will include the installation of several monitor wells, the generation of an up-to-date PCE plume map, and identification of possible sources of PCE contamination.

I LIVE IN THE NOGALES WASH AREA BUT DO NOT GET MY WATER FROM VALLE VERDE. HOW DOES THE PRESENCE OF TETRACHLOROETHYLENE IMPACT MY PRIVATE WELL?

If you have a private well, regular water quality testing is very important. Many contaminants cannot be identified by taste or odor, making it difficult for homeowners to know if the water quality of their well has changed. Neither EPA nor ADEQ regulate private wells and the State of Arizona does not require periodic sampling of private wells after they are initially installed. This makes it the responsibility of homeowners to periodically test their well for contamination.

More information on the testing of private wells can be found on EPA's Web site at the following link: www.epa.gov/safewater/privatewells/index2.html

CORRECTIVE ACTION AT THE CONN-SELMER, INC. FACILITY

Conn-Selmer, Inc. (CSI) (formerly United Musical Instruments, Inc., or UMI) operates a groundwater remediation system (GRS) at 1310 West Fairway Drive, Nogales, Arizona (see Figure 2). The site is to the west of the Nogales Wash Monitoring Well 13 (NGW-13), and is about 1.5 miles from Valle Verde. Based on the most recent groundwater monitoring results, the contaminant plume from CSI has not joined with any plume at Valle Verde.

The GRS is designed to remove volatile organic compounds (VOCs) – mostly trichloroethene and 1,1,1,trichloroethane – from the groundwater. The GRS is a "pump and treat system." The contaminated groundwater is pumped at 50-75 gallons per minute through two air stripper towers, in series. Clean, treated groundwater is then sent to Palo Duro Creek Golf Course to be used for irrigation. The GRS has operated since 1998. The concentrations of contaminants at the center of the contamination have been reduced by 97 percent over twenty years. VOC contamination, originally at 10,000 parts per billion have been reduced to less than 250 parts per billion at all wells. Treated water leaving the GRS contains no VOCs, and is used for irrigation at the City of Nogales, Palo Duro Creek Golf Course.

ADEQ CONTACTS

For additional information please contact:

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Complete public files regarding the site are located at ADEQ's Phoenix offices. Call 1(800) 234-5677 for information. Hearing impaired persons may call ADEQ's TDD line at (602) 771-4829.

Para información en español sobre este sitio, se puede contactar a Felicia Calderon al (602) 771-4167.

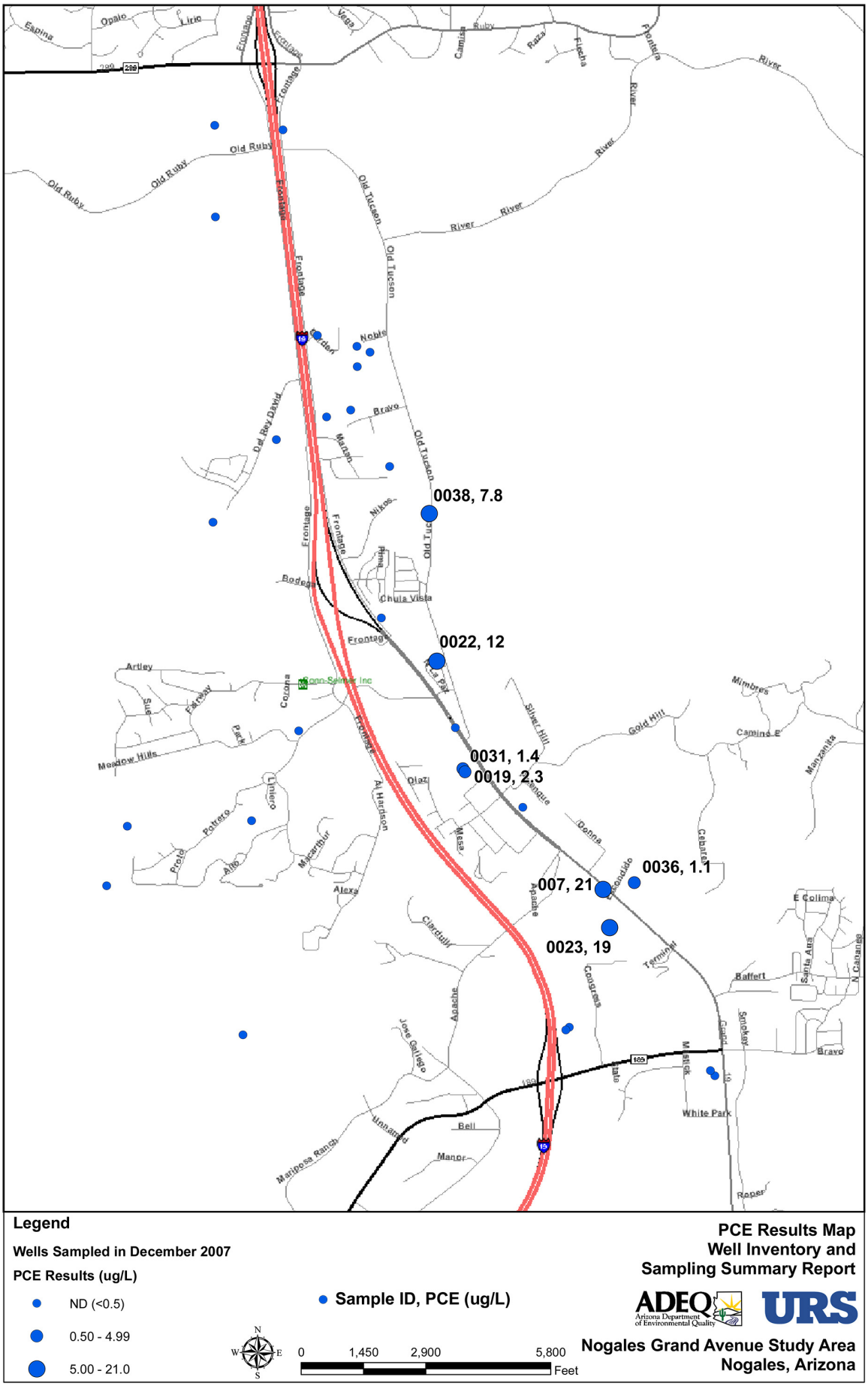

Figure 1 – Shows survey results of private well inventory and PCE sampling results.

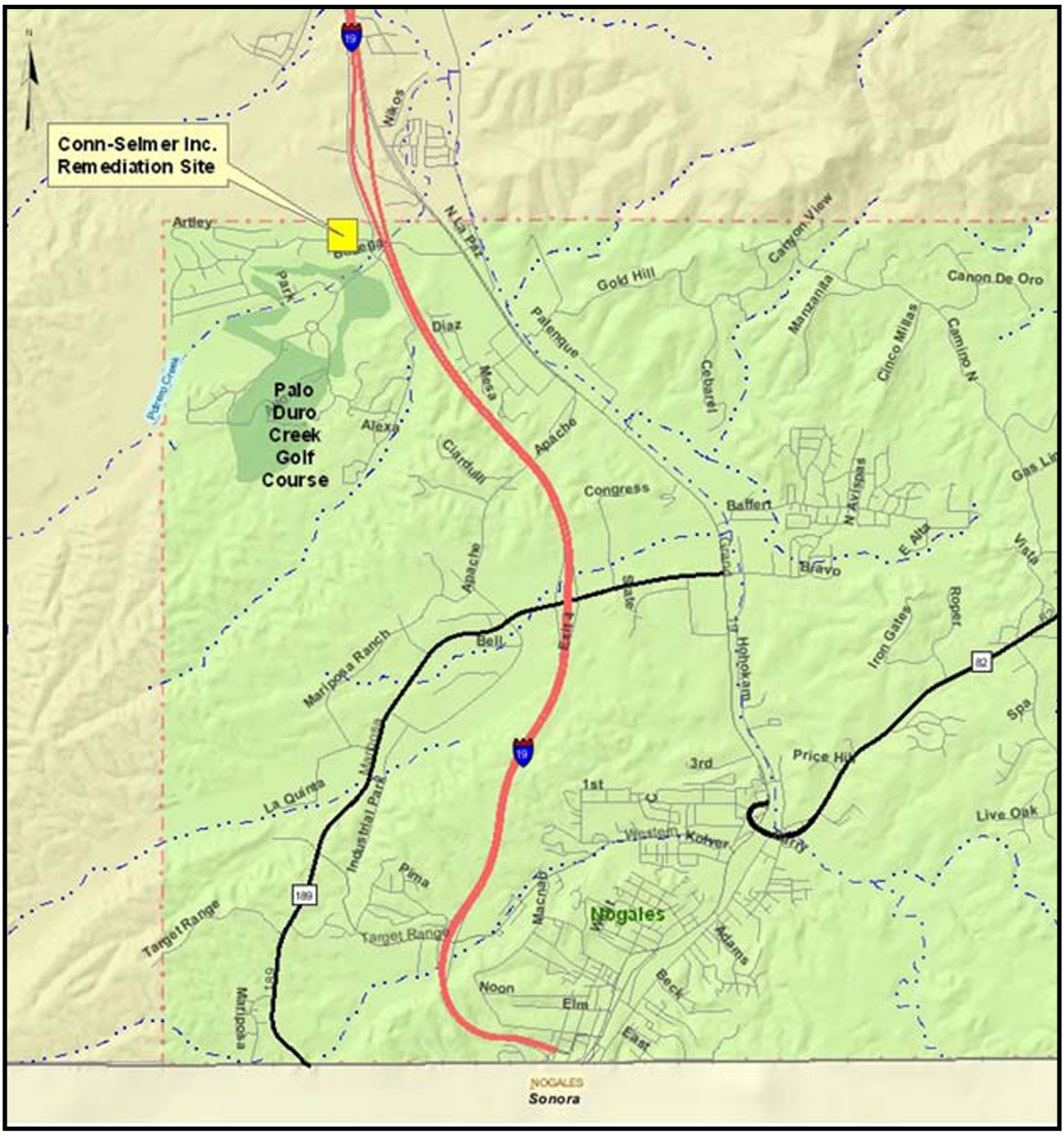

Figure 2 – Shows Conn-Selmer, Inc. facility location.