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February 10, 2016

Sue Genera, Executive Assistant
Lahontan Regional Water Quality Control Board
2501 Lake Tahoe Blvd.
South Lake Tahoe, CA 96150

RE: COMMENTS IN RESPONSE TO THE REVISED REQUEST FOR COMMENTS - PROPOSED CLEANUP AND ABATEMENT ORDER, REQUIRING SEVEN SPRINGS LIMITED PARTNERSHIP AND FOX CAPITAL MANAGEMENT CORPORATION, TO CLEAN UP AND ABATE THE DISCHARGE AND THREATENED DISCHARGE OF CHLORINATED HYDROCARBONS TO GROUNDWATERS OF THE LAKE TAHOE HYDROLOGIC UNIT AT 1024 LAKE TAHOE BLVD, SOUTH LAKE TAHOE, ELDORADO COUNTY (CAO No. R6T-2015-PROP).

The South Tahoe Public Utility District (District) has reviewed the Proposed Clean Up and Abatement Order (CAO) issued on September 15, 2015 to Seven Springs Limited Partnership (Seven Springs) and Fox Capital Management Corporation (Fox Capital), to clean up and abate the discharge and threatened discharge of chlorinated hydrocarbons at 1024 Lake Tahoe Blvd, South Lake Tahoe, Eldorado County, CA. Through its groundwater management efforts as the Groundwater Sustainability Agency for the Tahoe Valley South Groundwater Sub-Basin, District staff has met with representatives from the Lahontan Regional Water Quality Control Board (LRWQCB) and Lukins Brothers Water Company (LBWC) regarding this matter.

As a result of our review of the draft CAO, we respectfully offer the following comments that have been identified and listed below in accordance with the numbering scheme presented in the draft CAO. In addition, the District supports comments made by agencies in support of enforcing the CAO in order to protect and restore all of the beneficial uses of the drinking water aquifer throughout the South Y Area.

BACKGROUND

Ppgh 2. Numerous contamination assessment investigations have been performed throughout the South Y Area. Many of the contamination assessment reports from these investigations include boring logs and geologic cross-sections that were used to delineate the extent of MtBE contamination in groundwater. Review and evaluation of this data should be performed to better define the hydro stratigraphy below the Facility and through the affected off-site areas. The LRWQCB should consider adding this information to the existing paragraph.

Ppgh 3. Last sentence- In order to acknowledge the District's installation of a packed column air stripper at the Clement Well in 1991 to remove PCE contamination from groundwater, consider changing to: …well owners incurred significant costs to either add wellhead treatment, replace the wells or hook-up to municipal water supply.

Ppgh 4. It would be helpful to add the locations of properties where site investigations have been performed to identify the potential sources of PCE contamination to Attachment 1.

WATER QUALITY MONITORING RESULTS

Ppgh 9. Suggest adding the screen interval depths to the PCE Concentration table.

Ppgh 14. The District's Clement Well was taken off-line due to MtBE contamination in 2001. The District abandoned the Julie, South Y and Tata No. 4 wells in 2006. As these wells have been removed from service, variations in groundwater flow direction reported in groundwater investigations completed since 2008, should not be attributed to the operation of these public water supply wells.

Ppgh 15. Comment; Shallow aquifers throughout the South Y Area contains various soil materials ranging from gravelly sands to silty fine sands, silt and clay. The aquifer characteristics of these differing materials can have a substantial effect on groundwater flow paths and the dispersion of PCE contamination through the aquifer. Aquifer heterogeneity should also be considered when estimating groundwater plume dimensions in the South Y Area. The probability that chlorinated hydrocarbons have sorbed to fine grained material must also be considered when the persistence of PCE in the aquifer is apparent.

REMEDIATION EFFORTS

Ppgh 27. The District has four (4) public water supply wells neighboring the South Y Area which have been affected by PCE groundwater contamination (Clement, Julie, South Y and Tata Well No. 4). Three (3) of these wells have been destroyed; the fourth well (Clement) is presently inactive. In 1997, the District in conjunction with LRWQCB began investigations to identify the potential source(s) of PCE contamination found in the Clement Well. Findings of this investigation indicated that PCE detected in the Clement Well was likely moving through water-bearing zones at depths greater than 48 feet. Further investigations have shown that highest concentrations of PCE were detected in water samples collected

from observation wells screened through the lowest portion of the Clement Well production zone at a depth of approximately 115 feet. The vertical extent of PCE contamination in the Clement Well shows that limiting remediation efforts to the "shallow groundwater area" is not likely adequate to protect off-site receptors affected by this contamination. Remediation efforts should extend to depths that include deeper water bearing zones pumped for drinking water supply by nearby public and private water supply wells.

Ppgh 28. It is unclear how soil vapor extraction and air sparge remediation systems (SVE/AS) deployed at the Lake Tahoe Laundry Works (LTLW) provide any effective means of hydraulic control to prevent off-site migration of the PCE contaminant plume. The LRWQCB should require proof of hydraulic control as a condition of continuing remediation efforts at the LTLW. If those efforts prove to be ineffective, then alternate hydraulic control methods should be required.

Ppgh 31. The SVE/AS system was replaced with a "pulsed" ozone sparge system in January/February 2013. Ozone sparge systems lack hydraulic control. If improperly applied, operation of the ozone sparge system could adversely impact groundwater flow directions and gradients, increasing the rate of contaminant plume movement. Operations data, including system run times, injection pressures, sparge flow rates and local groundwater elevations should be collected on a regular basis and reported to the LRWQCB to insure that the LTLW system is being operated in an appropriate manner.

Ppgh 32. Operation of ozone sparge systems often show short term "spikes" in dissolved contaminant concentrations which are often attributed to the release of adsorbed-phase contaminants to the dissolved phase. This may also explain the 100-fold increase in PCE concentrations observed at the LTLW site (LW-MW-1S) in July 2013.

Ppgh 33. See comment - Ppgh 28.

Ppgh 34. Proof of hydraulic control should be added as a condition of continued operation of the remediation system. This could be provided in part, using remediation system logs showing site-appropriate AS flow rates and injection pressures; and potentiometric maps showing groundwater flow directions and hydraulic gradients during operation.

LEGAL REQUIREMENTS - AUTHORITY

Ppgh 41. Loss of water production resulting from the impairment of public water supply wells operated by LBWC and the Tahoe Keys Water Company (TKWC) has caused these water systems to enter into Mutual Aid and Assistance Agreements with the District. These agreements provide for the delivery of drinking water from the District's water system through an inter-tie on an as-needed and available basis. The LRWQCB should request financial assistance from the Discharger for this replacement water.

The LRWQCB should also consider requiring the Discharger to evaluate the effect from operation of the ozone sparge system at the Facility, on the mobilization of adsorbed PCE contamination to groundwater. This evaluation should attempt to provide a mass–balance showing the amount of contaminant mass

transferred from the absorbed to dissolved-phase; the amount of contaminant mass destroyed by the ozone sparge system; and the remaining contaminant mass released to groundwater. The findings of this evaluation should be provided in the technical report.

Ppgh 46. There is a long and established history of public water supply wells used for drinking water production located in and around the South Y Area. Many of these wells are either inactive or have been destroyed due to impairment by either MtBE and/or PCE groundwater contaminant plumes. Supplemental corrective actions should be required to protect public health and restore the drinking water aquifer through this area for municipal and domestic supply.

Ppgh 47. See comment - Ppgh 41

ORDERS

General Comment: The LRWQCB should require the Order to address all groundwater contamination, not just contamination in down-gradient groundwater. For example, the current order only appears to require the Dischargers to provide replacement water or service to well users' down-gradient of the Facility. The Order itself, however, suggests that the contaminated groundwater can move in multiple directions, not just down gradient.

Item 1: Require analyses showing hydraulic containment of the PCE contaminant plume prior to resuming "continuous" operation of the SVE/AS system.

Item 2.1.1: Boundary Containment Monitoring should be established at the leading edge of the PCE groundwater contaminant plume. The presence of PCE contamination in LBWC # 4, #2 and #5 wells; and TKWC #2 well shows that the leading edge of the contaminant plume is likely located north of Patricia Lane. Boundary Containment Monitoring should be determined after the full lateral and vertical extent of the PCE contaminant plume has been adequately delineated.

Item 4.1: The presence of PCE contamination in LBWC # 4, #2 and #5 wells; and TKWC #2 well shows the leading edge of the contaminant plume is likely located north of Patricia Lane. The off-site investigation should include areas north of 883 Eloise Avenue to define the extent of PCE contamination at depths consistent with the perforated intervals of the neighboring public and private water supply wells.

Item 4.3.6: Geologic sections from the Facility to the extent of groundwater sampling are important tools to show the full lateral and vertical extent of contamination. These should be made a requirement of the technical report and not an "if applicable" option.