
Lahontan Regional Water Quality Control Board

September 15, 2015

INTERESTED AGENCIES AND PARTIES:

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 THE GROUNDWATERS OF THE LAKE TAHOE HYDROLOGIC UNIT, AT 1024 LAKE TAHOE BOULEVARD, SOUTH LAKE TAHOE, EL DORADO COUNTY

The California Regional Water Quality Control Board, Lahontan Region (Water Board) intends to issue a Cleanup and Abatement Order (CAO) by the end of the year. The CAO names Seven Springs Limited Partnership and Fox Capital Management Corporation (collectively referred to as "Dischargers") as responsible parties for discharges of solvent wastes from the former Lake Tahoe Laundry Works Laundromat to groundwater. The discharges have resulted in violations of prohibitions contained in the Water Board's Water Quality Control Plan.

The Water Board is requesting your review and comments upon the proposed CAO (enclosed). The proposed CAO can also be viewed at the Water Board's webpage at <http://www.waterboards.ca.gov/lahontan>.

All comments regarding the proposed CAO must be received by the Water Board by **October 30, 2015, 5:00 p.m.** Please send your comments to:

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

Alternatively, you may electronically submit comments (**Subject Line: Lake Tahoe Laundry Works' CAO Comments**) to: RB6enfproceed@waterboards.ca.gov.

The Cleanup and Abatement Order is being issued in response to recent detections of tetrachloroethene or PCE in groundwater at nearby off-site locations in South Lake Tahoe. The proposed CAO requires the Dischargers to (1) contain the plume migration on-site so as to prevent further adverse impacts to water supply wells and other receptors, (2) conduct off-site investigations to define the lateral and vertical extent of solvents in groundwater, (3) actively clean up and abate on-site soil, soil gas, and groundwater contamination, (4) propose and implement off-site groundwater

containment and remediation, and (5) conduct related monitoring and reporting actions. These actions are needed to protect existing and potential beneficial uses, including the restoration of the drinking water aquifer to levels safe for human consumption.

If you have questions or comments regarding this matter, please contact me at (530) 542-5436 or Lisa Dernbach at (530) 542-5424.



LAURI KEMPER, P.E.
ASSISTANT EXECUTIVE OFFICER

Enclosure: Cleanup and Abatement Order No. R6T-2015-(PROPOSED)

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION**

**CLEANUP AND ABATEMENT ORDER
NO. R6T-2015-PROP**

**REQUIRING SEVEN SPRINGS LIMITED PARTNERSHIP AND FOX CAPITAL
MANAGEMENT CORPORATION TO CLEAN UP AND ABATE THE EFFECTS OF
THE DISCHARGE OF CHLORINATED HYDROCARBONS TO THE
GROUNDWATERS OF THE LAKE TAHOE HYDROLOGIC UNIT AT THE FORMER
LAKE TAHOE LAUNDRY WORKS LOCATED AT 1024 LAKE TAHOE BOULEVARD
IN SOUTH LAKE TAHOE**

El Dorado County

The California Regional Water Quality Control Board, Lahontan Region (Water Board), finds:

BACKGROUND

1. The former Lake Tahoe Laundry Works (hereinafter referred to as the Facility or Site) is located at 1024 Lake Tahoe Boulevard, South Lake Tahoe, El Dorado County (Assessor's Parcel Number 023-430-32-100). The Site is located on the northwest corner of an "L" shaped shopping center. A laundromat operated at the Site from early 1970s to 2011.

GROUNDWATER IMPACTS

2. The geology beneath the Facility consists of an unconfined sandy aquifer with thin fine-grained lenses. The water table varies in depth from 4.4 feet in wet years to 17 feet in dry years. The groundwater gradient ranges from 0.01 to 0.06 feet/feet and groundwater velocity varies from 1 to 2 feet/day.
3. Since 1989 when chlorinated hydrocarbons (e.g., solvents) were required to be tested in regulated water supply wells, compounds such as tetrachloroethene (PCE), trichloroethene (TCE), and dichloroethene (DCE) have been identified in private and municipal supply wells in the South Y area of South Lake Tahoe, where Lake Tahoe Boulevard intersects with Emerald Bay Road. Many supply wells have since ceased operating due to solvent concentrations exceeding drinking water standards. Such supply wells have included those by the South Tahoe Public Utility District, the Lukins Brothers Water Company, a motel well, and private domestic wells. These well owners incurred significant costs to either replace the wells or hook up to municipal water supply.

4. Since the early 1990s, the Water Board has conducted its own soil gas and groundwater investigations to identify possible solvent sources affecting water supply wells. In the mid-1990s, the Water Board required site investigations at many properties in the western area of the South Y, suspected of being solvent sources. These properties included maintenance facilities, a gas station, automotive repair facilities, a metal shop, and the high school automotive shop. None of these other investigations were able to identify solvents in soil at sufficient amounts that could have led to the concentrations detected in groundwater and water supply wells in the South Y area now and in the past.
5. Five site investigations were conducted at the Facility between 2003 and 2008. Solvent contamination in soil was found mostly beneath the northern parking lot of the shopping center and some beneath the laundromat building. In the parking lot, soil contamination, to at least 8 feet below ground surface, was detected up to 12 milligrams per kilograms (mg/kg). A soil gas investigation detected PCE, TCE, and DCE in soil gas at ten locations surrounding the north side of the building and in the parking lot. PCE in soil gas has been detected up to 7 parts per million by volume (ppmV).
6. The suspected source for the solvent release was a self-service, coin-operated, dry cleaning machine in the laundromat at the Facility and the hose used to transfer solvent chemicals from delivery trucks in the parking lot. The dry cleaning machine was removed from the Site about 1979. Investigation data suggests that a majority of solvent mass exists above and below the fluctuating water table.
7. Groundwater investigations have collected water samples from both temporary and permanent sampling locations. Samples collected from on-site monitoring well locations have historically detected PCE in groundwater up to 5,380 $\mu\text{g/L}$, TCE up to 74 $\mu\text{g/L}$, cis-1,2-DCE up to 339 $\mu\text{g/L}$, and 1,1-DCE at 7.7 $\mu\text{g/L}$. Such concentrations exceeded the primary drinking water standards for the respective constituents and demonstrated significant impairment to the drinking water aquifer and its designated beneficial uses.
8. The concentrations and extent of solvent compounds in groundwater correlate with the extent of both soil contamination in the northwest portion of the Site and soil gas beneath the building and parking which is more wide-spread. Prior to the start-up of remediation in 2010, the chlorinated hydrocarbon plume in groundwater at the Facility had a width of 375 feet between monitoring wells LW-MW-12 and LW-MW-13. After start-up of remediation and from 2010 to the end of 2013, the plume width in groundwater was greater than 200 feet, as defined by monitoring wells LW-MW-12S and LW-MW-5S.

WATER QUALITY MONITORING RESULTS

9. During 2015, solvent contamination continues to be detected in soil gas on-site and in groundwater on and off-site. The First Quarter 2015 Groundwater Monitoring Report provides the results of groundwater sampling on March 26, 2015. The Report shows PCE detected in monitoring wells on and off the Facility property as well as in soil gas locations. The highest reported concentrations are as follows:

Well Number	Sample Location	Sample Matrix	PCE Concentration
LW-MW-13S	On-site	Water	2.7 µg/L
OS-1	Off-site	Water	64 µg/L
VP-9	On-site	Soil gas	520 ppbV

Off-site monitoring well OS-1 located at 2015 Lake Tahoe Boulevard across the South Y intersection and adjacent to a different shopping center, approximately 730 feet N25°E of LW-MW-1S at the Facility. Besides PCE, OS-1 contained TCE at 1.4 ppb, below the drinking water level of 5 ppb. On-site soil gas samples show PCE up to 520 parts per billion by volume (ppbV), TCE up to 6.6 ppbV, and DCE up to 50 ppbV.

10. Continual detection of PCE in off-site monitoring well OS-1 since 2010 is assumed to be from historical solvent releases at the Facility. This assumption is based on the comparable reduction of PCE levels over time at OS-1 to reductions of PCE levels in groundwater at the Facility, such as in LW-MW-2S, due to remedial actions. Recent concentrations of PCE in OS-1 reflect concentrations seen at the Facility from approximately 1.3 years ago due to the 735-foot distance and rate of groundwater movement in the South Y area.
11. Sample results reported in the First Quarter 2015 Groundwater Monitoring Report point to a continuing solvent source at the Facility and remedial actions that are ineffectively containing groundwater contamination from migrating off-site. Soil gas data indicate solvents remain in soil beneath the Site at concentrations that threaten groundwater quality. PCE concentrations detected at OS-1 were the highest levels in five years at that location and suggest remedial actions (air sparge/soil vapor extraction) are not sufficient to fully contain the groundwater plume on-site as originally designed.
12. In 2014 and 2015, Water Board staff collected a water sample from a different off-site monitoring well at 2015 Lake Tahoe Boulevard, located 50 feet northwest of OS-1. This monitoring well, referred to as the "Hurzel monitoring well", was installed upgradient of the former laundromat on the former Hurzel property in 2007. The sample was taken due to detections of PCE in water supply wells on Eloise Avenue. An August 25, 2014, laboratory report by E.S. Babcock, listed the sample as containing 80 µg/L PCE. Another water sample collected on August 12, 2015, contained 85 µg/L PCE, as shown in an August 21, 2015 laboratory report by E.S. Babcock.

13. Water Board staff collected water samples from all but one of the ten private supply wells in the Lukins Brothers Water Company service area. One of the nine private supply wells sampled is located in the South Y area, which is also the eastern area of the Lukins Brothers service area. This one domestic well contained PCE above the MCL. A September 9, 2014, laboratory report by E.S. Babcock showed the domestic well at 883 Eloise Avenue with 52 µg/L PCE, 1.3 µg/L TCE, and 0.32 µg/L DCE. A follow-up sample collected by Water Board staff on September 11, 2014, showed 50 µg/L PCE, 1.2 µg/L TCE, and 0.2 DCE in a September 17, 2014, report by E.S. Babcock. The domestic well is located nearly 2,000 feet north from the Facility, in the downgradient groundwater flow direction. Based on the results of private well sampling and that there are no other known PCE sources in the South Y area, Water Board staff believes the Facility is the source of PCE contamination affecting 883 Eloise Avenue.
14. Groundwater investigation reports submitted since 2008 have shown the direction of groundwater flow ranging from N15°W to N25°E from the Facility. This 40 degree range affecting flow direction reflects seasonal and drought/wet groundwater conditions. However, Fox Capital and Seven Springs (collectively known as the Dischargers) contend the predominant direction of groundwater flow has been N15°W since 2010 (approximately 61% of the monitoring events), with flow directions to the east and west during less frequent events. The Dischargers also contend that on-site monitoring well data point to a smaller plume width in groundwater than that described above. Such information suggest to the Dischargers that impacts to the Hurzel monitoring well and OS-1 may be due to another source or sources, or to releases from the Facility prior to 2010.
15. Principles of hydrogeology and contaminant transport properties show that dissolved hydrocarbon plumes typically expand in width with distance from the source. This physical phenomenon is due to dispersion which causes the dissolved contaminant to deviate from the average groundwater path. As the plume at the Facility migrates over time with groundwater flow over the 40 degree range of direction, the plume could reach a width of 1,550 feet on Eloise Avenue between the intersections with 7th Street in the west and Dunlap Street in the east because of dispersion. Such calculation is based on recent PCE detections in domestic wells at 883 and 903¹ Eloise Avenue, and historical PCE detections in domestic wells at 2111 Dunlap Drive and 941 and 861 Emerald Bay Road, a municipal well at 915 James Avenue, and in monitoring wells at 913 and 960 Emerald Bay Road. There are no pumping wells that exist between these locations and the Facility (a distance of nearly 2,000 feet) to abate or alter plume migration. PCE detection in the two Eloise domestic wells correspond with PCE concentrations reported in the thousands of parts per

¹ On January 27, 2015, the owner of the private domestic well at 903 Eloise Avenue requested that the Water Board collect a water sample. The private well was the one well not sampled by Water Board staff during summer 2014 due to access issues. A sample collected that same day contained 8.4 µg/L PCE, as listed in a February 4, 2015 laboratory report by E.S. Babcock. It was learned later that the sample may represent water in a holding tank rather than water from the supply well. If this is the case, water from the well may actually have higher PCE levels than the tank water where head space allows vaporization of chlorinated hydrocarbons.

billion at the Facility in 2011 and 2012 and the length of time for contaminants to migrate with groundwater the nearly 2,000 feet distance. PCE data collected at all off-site locations (domestic wells and monitoring wells) in 2014 and 2015 point to a much larger plume in groundwater affecting the drinking water aquifer and justifying the need for additional corrective actions. This information greatly contradicts the Dischargers original calculation of plume dimensions being 375 feet long and 145 feet in width, stated in the August 2010 Draft Remedial Action Plan.

16. The Dischargers dispute the dimensions of the dissolved chlorinated hydrocarbon plume theorized by the Water Board in Paragraph 15. Groundwater samples collected from well LW-MW-13S have not exceeded the primary drinking water standards for PCE or other VOCs since June 2010, therefore the width of the PCE plume at the Facility since 2010 is significantly less than 325 feet.
17. The Dischargers contentions do not take into consideration the following evidence: (1) PCE data in domestic wells at 903 and 883 Eloise Avenue, (2) PCE data in off-site monitoring wells OS-1 and the Hurzel Well, (3) area-wide groundwater flow direction towards Lake Tahoe, (4) dispersion properties increasing the width of the PCE plume in groundwater with distance from the Site, and (5) the lack of PCE sources in soil at other potential sites. Since the Facility has been the only PCE source site identified in the South Y area of the City of South Lake Tahoe, it is reasonable for the Water Board to assume that PCE detections at off-site locations in the downgradient groundwater flow direction (bounded by Eloise Avenue in the north, Dunlap Drive in the east, and Glorene Avenue and 7th Street in the west) are from historical solvent releases at the former laundromat. The Dischargers have not conducted supplemental investigations, including tracer tests, to provide relevant data to prove PCE detections at off-site locations is not from the Facility.

ELIMINATION OF OTHER SOURCES OF SOLVENT CONTAMINATION

18. On February 11, 2009, the Water Board issued a No Further Action letter to the owner of the Hurzel property at 949 Emerald Bay Road. Like the Facility, the laundromat at the Hurzel property also operated a self-service, dry cleaning machine in the 1970s. Past small spills had resulted in soil contamination mostly in the western parking area. About 368 cubic yards of contaminated soil was excavated down to 7 feet below ground surface. Remaining PCE in soil of 0.045 mg/kg at 2 feet below ground surface was left in place due to threat to the building foundation from potential excavation. Verification water samples collected from the monitoring well network over the next year demonstrated that PCE in groundwater downgradient of the release reflected background concentrations in upgradient monitoring wells including the Hurzel monitoring well. Site closure was justified since remaining PCE did not pose a threat to the drinking water aquifer and public health. The laundromat on the Hurzel property was located 975 feet N14°E of the Facility and 300 feet N22°W of monitoring well OS-1 but has since closed in 2014.

19. The Dischargers contend that investigations of the two properties referenced in Paragraph 3 (specifically, the Lakeside Napa Auto and Big O Tire facilities), revealing high concentrations of solvents (PCE up to 3,000 µg/L and 4,700 µg/L, respectively) in groundwater samples collected on those properties, indicate that those properties contribute to the solvent concentrations detected in groundwater and water supply wells in the South Y area.
20. The Dischargers contend that the two site investigations conducted at the Big O Tire facility in 2001 and 2006 by the owners did not fully assess the potential for sources of PCE to be located on that property and to contribute to contamination of groundwater. Besides tires, the Big O Tire facility, located at 1961 Lake Tahoe Boulevard, offered brake services. The Dischargers note that PCE and PCE-containing solvents are commonly used for brake cleaning and parts cleaning. Shallow soil containing PCE (up to 42 micrograms per kilogram [µg/kg] in one sample collected at 3 feet below ground surface [bgs]) was not detected at a depth of 6.5 feet. However, due to the presence of very shallow groundwater at the time of the 2006 investigation (approximately 6 feet bgs, the shallowest depth groundwater that has been encountered at the Big O Tire facility) and sample locations positioned at significant distances from potential sources (e.g., floor drains adjacent to brake and parts cleaning sinks and within a lube pit positioned immediately adjacent to the brake and parts cleaning sinks), the Dischargers contend that the characterization of the Big O Tire facility is incomplete. The Dischargers also contend that soil at 3 feet bgs impacted by PCE likely did not originate from PCE-impacted groundwater originating off-site and therefore supports the belief that releases from the Big O Tire facility contributed to PCE in groundwater.
21. The owners of the Lakeside Napa Auto Store property, located at 1935 Lake Tahoe Boulevard, conducted site investigations in 2002 and 2003. Of the 17 soil samples collected, none showed detections for PCE or PCE-related constituents. Groundwater samples showing up to 3,000 µg/L PCE were collected in the parking lot facing the street (east side). Other groundwater samples contained lesser PCE concentrations beneath the building and in the downgradient flow direction (west) from the property.
22. Investigations conducted at the Big O Tire and the Lakeside Napa Auto facilities showed high concentrations of solvents (PCE, TCE, and DCE) in groundwater beneath their parking lots which were in the upgradient flow direction to potential sources within their buildings. This information and the lack of significant solvent soil contamination beneath these properties indicate they are not PCE sources. Rather, the parking lots for the two properties are within 100 feet of the Facility where contamination has existed since the late-1970s. Also, the Dischargers have not submitted any evidence that demonstrates either the Big O Tire or Lakeside Napa Auto property are contributing to solvent sources to groundwater. Therefore, the Facility is believed to be the only source of solvent compounds affecting groundwater quality in the South Y area of the City of South Lake Tahoe.

23. The Water Board believes that adequate site investigations occurred at the Big O Tire Store and Lakeside Napa Auto properties to determine whether either Site was contributing to chlorinated hydrocarbon contamination in groundwater. All site investigations included sufficient number of soil and groundwater samples collected at spatially sufficient locations on the properties. Groundwater samples detected PCE at concentrations that were highest next to Lake Tahoe Boulevard and were at lower concentrations beneath buildings and adjacent to Tucker Avenue. Since none of the Site investigations identified significant concentrations of solvent compounds in soil or indicated increasing concentrations in groundwater beneath or in the downgradient flow direction (towards Tucker Avenue), based on the information presently available, neither property is considered by the Water Board to be a PCE source affecting groundwater quality. Solvent compounds detected in groundwater beneath both properties are considered to have migrated there from the Facility and since both properties implemented adequate site investigations, no further investigations are needed.

RESPONSIBLE PARTIES

24. Century Properties Equity Fund 73, a limited partnership, was the owner of the Facility at the time the self-service, coin-operated, dry cleaning machine existed in the laundromat during the 1970s. When the machine was removed from the Site in approximately 1979, PCE releases also ceased at that time. The ultimate corporate successor to Fund 73 is Fox Capital.
25. Fox Capital Management Corporation was the owner of the Facility at the time the self-service, coin-operated, dry cleaning machine existed in the laundromat during the 1970s. As the machine was removed from the Site in approximately 1979, PCE releases also ceased at that time. It is appropriate to list Fox Capital Management Corporation as a responsible party in this Order since chlorinated hydrocarbon contamination from that time period remains beneath the Facility and continues to adversely affect groundwater quality for beneficial uses.
26. According to El Dorado County property records, Seven Springs Limited Partnership became the owner of the Facility in 1991. As the owner of the Facility, Seven Springs Limited Partnership is an appropriate responsible party pursuant to California Code of Regulations, title 23, section 2720 and consequently is properly added to this Order. The agent for service of process is The Commerce Trust Company.

REMEDIATION EFFORTS

27. In a meeting with Water Board staff and the Dischargers on September 24, 2008, it was discussed that the area to be addressed for remedial action consists of two parts: 1) the vadose zone soils impacted by VOCs; and 2) an area of the shallow groundwater area that was approximately 375 feet in length and 145 feet in width with a vertical extent (from the bottom of vadose zone to approximately twenty-five feet bgs). These dimensions were based on results of Site investigations and that no known off-site receptor was affected by groundwater contamination.
28. The Dischargers installed and pilot tested a soil vapor extraction and air sparge (SVE/AS) system (Attachment 3) at the Site in 2010 to 2012. Air sparging strips volatile organic compounds out of groundwater which are then extracted by vacuum by the soil vapor extraction system. Contaminants are piped from the remediation wells to a shed where remediation equipment treats the air stream using carbon. The remediation system was designed to cleanup on-site soil, soil gas, and groundwater contamination and prevent off-site migration of solvents in groundwater.
29. On August 2, 2013, the Water Board conditionally accepted the Dischargers' proposal to implement permanent SVE/AS for site cleanup at the Facility. The proposal contained data showing reduced solvent concentrations over time in groundwater and soil vapors. At the time, more than 850 pounds of volatile organic compound mass had been removed from the Site. As the SVE/AS system becomes less effective with time, it will be replaced with an ozone sparge system to clean up remaining low levels of chlorinated hydrocarbons in groundwater. Investigative Order No. R6T-2013-0064 required the Dischargers to implement the remediation plan and to submit quarterly remediation status reports that demonstrate progress towards cleaning up chlorinated hydrocarbons at the Site and restoration of the drinking water aquifer. The acceptance preceded a June 13, 2013, request for public comments with an attached fact sheet about contamination at the Site.
30. In 2012, the Dischargers entered into the State Water Resources Control Board's Oversight Cost Reimbursement under the Site Cleanup Program. The Dischargers are billed quarterly for costs associated with the Water Board's ongoing regulatory activities.
31. On September 25, 2013, the Water Board received the document "Second Quarter 2013 Groundwater Monitoring Report and Remediation Status Report (Report)." The Report states that following detection of low chlorinated hydrocarbon levels in groundwater, the SVE/AS system was replaced with an ozone sparge system in early 2013 to be used in a pulsed manner once every three months. The Water Board approved this change. The ozone sparge system was used from January to February 2013. However, the ozone sparge system was down for repairs from February to August 2013. Attempts to restart the ozone system in May 2013 were unsuccessful due to technical issues. The ozone system was repaired in August

2013 and operation resumed at that time. On August 4, 2013, the ozone system was restarted in continuous operation mode and has operated in that mode since August 2013 with minor shutdowns for maintenance.

32. Laboratory results of monitoring well samples collected in July 2013, when the ozone sparge system was down, showed significant increases in chlorinated hydrocarbons in groundwater compared to the previous quarterly monitoring event. The greatest increase occurred at monitoring well LW-MW-1S where PCE concentrations rose from 5.9 µg/L to 550 µg/L. The Water Board attributes the increase in pollution to groundwater to the lack of remediation during the six-month period. The downed ozone sparge system was without knowledge or consent by Water Board staff.
33. On November 1, 2013, the Water Board issued Investigative Order No. R6T-2014-0090 to the Dischargers requiring immediate resumption of the SVE/AS system pursuant to the Water Board's August 2, 2013, letter. The Order required the Dischargers to provide written notification (1) within 21 days of re-starting operation of the remediation system on-site and (2) whenever remediation ceases at the Site for 7 days or more and provide a cause or reason for the downtime. The Dischargers were told that whenever chlorinated hydrocarbons in groundwater at the Site exceeded drinking water standards, remediation must be continuously implemented to control off-site migration and to reduce concentrations. The Dischargers provided notice on November 12, 2013 that the SVE/AS had been re-started at the Site. However no action was taken to prevent any potential off-site PCE migration in groundwater during the six months of ozone sparge system downtime.
34. On April 9, 2014, the Water Board's Assistant Executive Officer accepted a proposal from the Dischargers' consultant, E2C Remediation, to cycle on and off the operation of the SVE/AS system every two weeks. This action was based on preliminary results of groundwater sampling during first quarter 2014 showing PCE concentrations in groundwater at less than 10 µg/L in all well locations. The Assistant Executive Officer's acceptance of the Dischargers' proposal remains in effect as long as PCE concentrations do not rebound in groundwater or soil vapor by increasing one order of magnitude above concentrations detected in first quarter 2014. If PCE concentrations should rebound in subsequent quarters, the remediation system must resume full scale, operation within 14 days.

AFFECTED BENEFICIAL USES

35. The beneficial uses of groundwater in the area as designated in the 1995 Water Quality Control Plan for the Lahontan Region (Basin Plan) include municipal and domestic supply, agricultural supply, and industrial service supply.

36. The discharge of chlorinated hydrocarbons to the groundwater of the Lake Tahoe Hydrologic unit violates prohibitions contained in the Basin Plan. Specifically, the discharge violates the regionwide prohibition and the specific discharge prohibition for the Lake Tahoe Hydrologic Unit:
- i. Regionwide Prohibition: “The discharge of waste which causes a violation of any numeric water quality objective contained in this Plan is prohibited.”
 - ii. Discharge Prohibition for the Lake Tahoe Hydrologic Unit: “The discharge of waste...as defined in section 13050(d) of the California Water Code which would violate the water quality objectives of this plan, or otherwise adversely affect the beneficial uses of water designated by this plan, is prohibited.”
37. The 1995 Basin Plan establishes water quality objectives for the protection of both existing and potential beneficial uses. Groundwater designated as MUN shall not contain concentrations of chemical constituents in excess of Maximum Contaminant Levels (MCLs) established by the California Department of Public Health as safe levels to protect public drinking water supplies. Below are the MCLs for chemical constituents of concern for this matter:
- | | |
|-------------|--------------|
| PCE | 5 µg/L (MCL) |
| TCE | 5 µg/L (MCL) |
| Cis-1,2-DCE | 6 µg/L (MCL) |
| 1,1-DCE | 6 µg/L (MCL) |
38. The historical and recent concentrations of PCE, TCE, and DCE detected in groundwater samples taken from monitoring wells on and off the Facility exceed water quality objectives for the groundwater specified in the Basin Plan. Many water supply wells have since ceased operating, including those operated by the South Tahoe Public Utilities District, the Lukins Brothers Well Company, a motel well, and private domestic wells, due to solvent concentrations exceeding drinking water standards. These concentrations adversely affect the existing and potential beneficial uses of groundwater in the Lahontan Region.
39. The level of wastes in groundwater at the Facility constitute a pollution as defined in Water Code section 13050, subdivision (l); Pollution means an alteration of the quality of the waters of the state by waste to a degree which unreasonably affects either of the following: (a) the waters for beneficial uses; or (b) facilities which serve these beneficial uses.

LEGAL REQUIREMENTS - AUTHORITY

40. California Water Code section 13304, subdivision (a) states in part:

- i. *Any person...who has caused or permitted, causes or permits, or threatens to cause or permit any waste to be discharged or deposited where it is...discharged into waters of the state and creates, or threatens to create, a condition of pollution or nuisance, shall upon order of the regional board clean up the waste or abate the effects of the waste...*

41. Pursuant to Water Code section 13304, subdivision (f):

- ii. *Replacement water provided pursuant to subdivision (a) shall meet all applicable federal, state, and local drinking water standards, and shall have comparable quality to that pumped by the public water system or private well owner prior to the discharge of waste.*

42. California Water Code section 13267, subdivision (b) states in part:

In conducting an investigation [of the quality of any waters of the state within its region] the regional board may require any person who has discharged waste within its region...[to] furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports. In requiring those reports, the regional board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports.

Water Code section 13267, subdivision (b) authorizes the Water Board to require technical and monitoring reports to investigate the quality of waters of the state within its region. The technical and monitoring reports required by this Order are necessary to ensure the cleanup and abatement of hydrocarbons in groundwater pollution downgradient of the Facility. As part of the investigation into the quality of groundwater within the Lake Tahoe Hydrologic Unit, the Water Board is requiring the Discharger to produce a report to address the containment of the hydrocarbon plume on-site and a report that evaluates the lateral and vertical extent of the plume that has migrated off-site. The Discharger is also required to provide the Water Board with a corrective action plan that describes the off-site area to be remediated and the necessary methods and remediation technology to achieve the restoration of groundwater to levels that meet primary maximum contaminant levels for drinking water. Every quarter, the Discharger will be required to conduct groundwater sampling and submit a technical report describing the groundwater monitoring results. All of the reports required by this Order are necessary for the investigation of water quality to effectively reduce solvent compounds and restore the drinking water aquifer for beneficial uses.

43. Pursuant to Water Code section 13304, the Water Board is entitled to, and may seek, reimbursement for all reasonable costs actually incurred by the Water Board to investigate unauthorized discharges of wastes or to oversee cleanup of waste, abatement of the effect thereof, or other remedial action pursuant to this Order.
44. The Dischargers are required to clean up and abate the effects of historical discharges and to address the remaining threat of discharge to water quality of chlorinated hydrocarbons in accordance with Water Code section 13304.
45. The on-site wells are showing low levels (less than 5 µg/L) of PCE in groundwater. However, evidence from off-site nearby monitoring wells, particularly OS-1 and the former Hurzel property, show levels of PCE which is due to the migration of hydrocarbons from the Facility. Solvent contamination in the soil from the Facility continues to discharge to groundwater despite current remediation efforts. As long as the soil remains contaminated, an ongoing and imminent threat of discharge to groundwater exists.
46. Recent off-site domestic well and monitoring well data indicate that the solvent plume in groundwater from the Facility is longer and wider than originally believed when the August 2010 Remedial Action Plan was accepted by the Water Board. Such data also indicate that current cleanup actions at the Facility are not sufficiently containing the plume in groundwater from migrating to off-site locations. Thus, supplemental remedial actions to those in the Remedial Action Plan are needed to contain the solvent plume on-site and clean up detected compounds to background conditions. Additionally, given the current PCE concentrations detected at off-site locations, remedial actions are needed off-site to protect the beneficial uses of groundwater including probable future uses such as drinking water.
47. This new Order requires the Dischargers to conduct supplemental corrective actions to (1) contain plume migration on-site so as to prevent further adverse impacts to water supply wells and other receptors, (2) conduct off-site investigations to define the lateral and vertical extent of solvents in groundwater, (3) actively clean up and abate on-site soil, soil gas, and groundwater contamination, (4) propose and implement off-site groundwater containment and remediation, and (5) conduct related monitoring and reporting actions. These actions are needed to protect public health and restore the drinking water aquifer for existing and potential beneficial uses.
48. Issuance of this Order is being taken for the protection of the environment and as such is exempt from provisions of the California Environmental Quality Act (CEQA) (Public Resources Code section 21000 et seq.) in accordance with California Code of Regulations, title 14, sections 15061(b)(3), 15306, 15307, 15308, and 15321. This Order generally requires the Discharger to continue to implement previously approved work plans and to submit an additional work plan proposing a remedial method for containing chlorinated hydrocarbons from migration in groundwater from leaving the Facility. CEQA review at this time would be premature and speculative,

as there is simply not enough information concerning the Discharger's supplemental corrective actions and possible associated environmental impacts. If the Water Board determines that implementation of any plan required by this Order will have a significant effect on the environment, the Water Board will conduct the necessary and appropriate environmental review prior to Executive Officer's approval of the applicable plan. The Discharger will bear the costs, including the Water Board's costs of determining whether implementation of any plan required by this Order will have a significant effect on the environment and, if so, in preparing and handing any documents necessary for environmental review. If necessary, the Discharger and a consultant acceptable to the Water Board shall enter into a memorandum of understanding with the Water Board regarding such costs prior to undertaking any environmental review.

ORDERS

THEREFORE, IT IS HEREBY ORDERED that pursuant to Water Code sections 13267 and 13304, Seven Springs Limited Partnership and Fox Capital Management Corporation (referred to hereafter as the "Dischargers") shall clean up and abate the discharge and threatened discharge of chlorinated hydrocarbons to waters of the state, and shall comply with the provisions of this Order:

1. The Dischargers shall continuously implement current corrective actions at the Facility in accordance with previously accepted workplans and proposals, including the Remedial Action Plan submitted to the Regional Water Board on August 12, 2010, monitoring programs, or as modified with the Water Board's Executive Officer's or Assistant Executive Officer's approval. "Continuous" is defined as 90 percent of the time or more. Corrective actions can include the operation and/or cycling of the SVE/AS system and/or ozone sparge system.
 - 1.1. The Dischargers shall notify the Water Board **within 72 hours** from discovery when remediation ceases at the Site for 15 days or more. Written notification must describe: when downtime occurred or was discovered, cause or reason for downtime, action planned to correct problem, and expected timeframe to resume remediation.
 - 1.2. In addition to existing and on-going monitoring requirements, the Dischargers shall conduct groundwater sampling at all monitoring well locations and impacted supply wells associated with the Facility, as follows:
 - 1.2.1. Collect water table elevation data at each monitoring well location.
 - 1.2.2. Water samples must include analyses for VOC using EPA Method 8260B with a detection level of 0.5 µg/L.

- 1.2.3. To the extent that new monitoring wells are installed for the Site, they shall be added to the monitoring program and sampled and reported quarterly.

2. On-Site Plume Containment

- 2.1. **Within 30 days** of the effective date of this Order, submit a workplan proposing a method, other than the SVE/AS or ozone sparge system currently in use, to contain the migration of chlorinated hydrocarbons in groundwater within the Facility property. Include a time schedule for implementing the containment option that can comply with the deadlines listed below.
 - 2.1.1. Boundary Containment Monitoring: The workplan shall propose an off-site monitoring program that has the ability to fully evaluate chlorinated hydrocarbon data in groundwater in the downgradient flow direction between the Facility and domestic wells on Eloise Avenue, before and after implementing the containment measures in Order No. 3.1. The purpose of the monitoring program is to gather baseline data prior to implementation of the containment method and should be able to evaluate the effectiveness of the containment method after implementation.
- 2.2. Implement Containment: In accordance with an accepted workplan and implementation schedule, the Dischargers shall implement a monitoring program and remedial method that has the ability to evaluate and contain, respectively, chlorinated hydrocarbons in groundwater from leaving the Facility property. The containment method must operate continuously, defined as 90 percent of the time or more, on a monthly basis, unless prior approval is received by the Water Board Executive Officer.
 - 2.2.1. **Within six months** from the date of this Order, achieve containment of chlorinated hydrocarbons in groundwater from leaving the Facility property. If data indicates hydrocarbons are not contained, it will be a violation of this Requirement.
 - 2.2.2. **Within seven months** from the date of this Order, submit a technical report to the Water Board with data and information sufficient to demonstrate containment of the chlorinated hydrocarbons in groundwater from leaving the Facility property.

- 2.2.3. Cease Discharging Off-Site: The Discharger shall not discharge chlorinated hydrocarbons off-site or allow groundwater containing chlorinated hydrocarbons from migrating to off-site locations within 30 days after achieving containment as required by Order No. 2.1.

3. Impacts to Water Supply Well(s)

If at any time, water sample results from active water supply wells in the downgradient groundwater flow direction from the Facility and different from the Eloise Avenue supply wells, should show a chlorinated hydrocarbon constituent exceeding the primary drinking water maximum contaminant level, or secondary drinking water standard if a primary standard does not exist, the Discharger may be required, upon a separate Order, to provide replacement water service to users of those impacted water supply wells.

- 3.1 “Impacted additional water supply wells” are defined as domestic or municipal supply wells containing any Contaminants in concentrations that are above the primary maximum contaminant level or, if no primary maximum contaminant level exist, the secondary drinking water standard, the contamination of which is the result from discharges from the Facility according to the Water Board.

Impacted wells shall continue to be monitored in the quarterly Groundwater Monitoring and Reporting program as required in Section 6.0 of this Order for at least four quarters even if water samples contain chlorinated hydrocarbon constituents in concentrations that are below the primary maximum contaminant level or, if no primary maximum contaminant level exists, the secondary drinking water standard.

4. Off-Site Investigation

- 4.1. **Within 75 days** of the date of this Order, submit a workplan to the Water Board that is designed to determine the lateral and vertical extent of off-site chlorinated hydrocarbons in groundwater from the Facility property line north to 883 Eloise Avenue. The workplan must propose collecting multi-depth samples or propose another suitable method to define the lateral and vertical extent of contamination out to background concentrations. The investigation must be designed in a manner that does not promote the vertical migration of contaminants to lower portions of the aquifer. All maps must be drawn to scale, color coded, show the Facility and proposed sampling locations, and other relevant features, such as roads, etc.
- 4.2. **Within 30 days** of workplan acceptance by Water Board staff, implement the Site investigation for determining the extent of off-site contamination in groundwater. Notify the Water Board within one working day of implementing the investigation.

4.3. **Within 105 days** of workplan acceptance by Water Board staff, submit a technical report to the Water Board that describes the groundwater investigation conducted at the Site in accordance with the accepted workplan. As the Facility is the only known chlorinated hydrocarbon source in the South “Y” area, assume all detections are associated with the Site unless the Dischargers can provide evidence to show otherwise. At a minimum, the report must:

- 4.3.1. Provide a narrative description of work performed and information obtained
- 4.3.2. Include boring logs, monitoring well designs (if constructed), and analytical data.
- 4.3.3. Include Site maps showing the location of all borings and sampling points and results. All figures must be drawn to scale, be in color, and label relevant features, such as roads, 883 Eloise Avenue, etc.
- 4.3.4. Include an isoconcentration map showing all sampling locations with boundary lines of PCE in groundwater drawn out to 5 µg/L from the Facility. Question marks shall indicate areas where boundaries are unknown.
- 4.3.5. Describe the depth of chlorinated hydrocarbons from the Facility to 883 Eloise Avenue.
- 4.3.6. If applicable, describe the geology at off-site sampling locations and include geologic cross sections from the Facility to the extent of groundwater sampling.
- 4.3.7. List the depth of first encountered groundwater at all points sampled. State whether perched zones were encountered and the basis for this finding. Describe whether or not the contaminants are following preferential pathways and the basis for that conclusion.
- 4.3.8. If the full extent of contamination in groundwater is not defined out to 5 µg/L from the Facility, provide a workplan proposing a supplemental investigation.

5. Off-Site Corrective Action Plan (CAP)

Within 60 days of the due date of the technical report for groundwater investigation that defines the extent of chlorinated hydrocarbons in groundwater, submit an off-site CAP to the Water Board to clean up and abate off-site impacts to groundwater from discharges at the Facility. The off-site CAP

shall describe at least three cost-effective remediation technologies to restore groundwater to State of California primary Maximum Contaminant Levels for drinking water. Include, at a minimum, the following information:

- 5.1. Summarize the extent of groundwater contamination caused from releases at the Facility.
 - 5.2. Provide a map showing the boundary of groundwater contamination out to 5 µg/L for chlorinated hydrocarbons. Question marks shall be used to indicate unknown boundaries.
 - 5.3. Describe the geology beneath the Facility and at all off-site areas requiring remediation. Include geologic cross-sections to show the depth to the water table and the lateral and vertical extent of chlorinated hydrocarbons.
 - 5.4. Describe necessary equipment, materials and methods, implementation schedule, and permits required to implement each of the three technologies.
 - 5.5. Estimate the cleanup time to achieve drinking water standards for each of the three technologies and the basis for the estimation.
 - 5.6. State the recommended remediation technology to implement for abating off-site groundwater contamination. Describe an estimate time frame for designing, permitting, constructing, and initial operation of the recommended technology.
 - 5.7. All figures shall be to scale, be in color, and label relevant features, such as roads, 883 Eloise Avenue, etc.
6. Groundwater Monitoring and Reporting

Within **24 hours of due dates**, the Dischargers shall upload all technical documents, such as workplans, reports, letters, etc., to the State Water Resources Control Board's Geotracker database at: <http://geotracker.waterboards.ca.gov/>. Uploaded documents shall include figures and appendices, when applicable.

By December 15, 2015, and quarterly thereafter, conduct groundwater sampling at all monitoring well locations associated with the Facility. Water samples must include analyses for VOC using EPA Method 8260B with a detection level of 0.5 µg/L. Collect water table elevation data at each well location. All new monitoring wells installed for the Site shall be added to the monitoring program and sampled and reported quarterly.

By December 15, 2015, and quarterly thereafter, submit a technical report to the Water Board describing groundwater monitoring results for the prior quarter. The report must contain the following information:

- 6.1. Either a table of contents or an attachment list.
- 6.2. Laboratory analytical results of water samples using EPA Method 8260B or its equivalent for volatile organic compounds. Detection limits shall be no greater than 0.5 µg/L for volatile organic compounds.
- 6.3. A narrative description and analysis of all information provided.
- 6.4. Potentiometric surface map for groundwater elevations in all monitoring wells. Show the ground water flow direction as an arrow on the map.
- 6.5. Calculate horizontal hydraulic gradient.
Maps showing the location of all on-site and off-site monitoring wells together and boundary lines of the dissolved chlorinated hydrocarbon plume out to 5 µg/L, 50 µg/L, and 500 µg/L for PCE, TCE, and DCE. Plume boundary lines shall at on-site monitoring well locations shall extend to similar solvent concentrations at off-site locations.
- 6.6. Tabulate water analytical results and groundwater elevations for each well over time.
- 6.7. Description of groundwater elevation trend from previous monitoring events.
- 6.8. Discussion of contaminant concentration trend in monitoring wells from previous monitoring events.
- 6.9. Description of all remedial actions taken in the past quarter. Discuss operational data, such as rates, flow volume, laboratory data, etc. Discuss and explain all equipment downtimes.
- 6.10. Discussion of whether the dissolved chlorinated hydrocarbon plume is migrating, stable or reducing in size and concentration. Describe the basis for all conclusions.
- 6.11. Submittal of laboratory analytical data, groundwater information, and monitoring well locations in Electronic Data Format to the State Water Resources Control Board Geotracker Database.
- 6.12. Identification of corrective actions planned during the next quarterly reporting period.

6.13. All figures shall be in color.

7. Any modification to this CAO shall be in writing and approved by the Executive Officer, including any potential deadline extensions. Any written extension request by the Dischargers shall include justification for the delay. If no modification to the CAO follows, the Dischargers must comply with deadlines as originally stated in this Order.

General Provisions

8. Plan Approval and Implementation

All plans required by this Order require the Water Board's approval, and shall be incorporated and implemented as part of this Order whether expressly stated above or not. Any violation of an approved plan required by this Order shall be considered a violation of this Order. The Executive Officer is hereby delegated the authority to approve, conditionally approve, or reject plans submitted in accordance with this Order.

9. Laboratory Analysis

All water sample analyses shall utilize the most recent testing methods. Testing for volatile organic compounds analysis shall be done using United State Environmental Protection Agency (US EPA) Method 8260B to a reporting limit of 0.5 ppb. A part per billion is equivalent to micrograms per liter or $\mu\text{g/L}$, also reported by laboratories. The laboratory used shall be certified by the California Environmental Laboratory Accreditation Program (ELAP). If best available technology in the future allows for better testing methods adopted by the State of California or lower detection levels, the Dischargers shall implement the better method or detection level.

10. Certifications for all Plans and Reports

All technical and monitoring plans and reports required in conjunction with this Order are required pursuant to Water Code section 13267 and shall include a statement by the Dischargers, or an authorized representative of the Dischargers, certifying under penalty of perjury in conformance with the laws of the State of California that the workplan and/or report is true, complete, and accurate. Hydrogeologic reports and engineered plans shall be prepared or directly supervised by, and signed and stamped by a Professional Geologist or Civil Engineer, respectively, registered in California. It is expected that all interpretations and conclusions of data in these documents to be truthful, supported with evidence, with no attempts to mislead by false statements, exaggerations, deceptive presentation, or failure to include essential information.

All reports, workplans, etc., shall be submitted in hardcopy to the South Lake Tahoe office of the Lahontan Regional Water Quality Control Board and El Dorado County Department of Environmental Management:

Lisa Dernbach
Lahontan RWQCB
2501 Lake Tahoe Blvd.
South Lake Tahoe, CA 96150

Karen Bender
EDC Environmental Management
3368 Lake Tahoe Blvd.
South Lake Tahoe, CA 96150

11. Liability for Oversight Costs Incurred by the Water Board

The Dischargers shall be liable, pursuant to Water Code 13304, to the Water Board for all reasonable costs incurred by the Water Board to investigate unauthorized discharges of waste, or to oversee cleanup of such waste, abatement of the effects thereof, or other remedial action, pursuant to this Order. The Dischargers shall reimburse the Water Board for all reasonable costs associated with site investigation, oversight, and cleanup. Failure to pay any invoice for the Water Board's investigation and oversight costs within the time stated in the invoice (or within thirty days after the date of invoice, if the invoice does not set forth a due date) shall be considered a violation of this Order. If this Site is enrolled in a State Water Board-managed reimbursement program, reimbursement shall be made pursuant to this Order and according to the procedures established in that program.

12. No Limitation of Water Board Authority

This Order in no way limits the authority of this Water Board to institute additional enforcement actions or to require additional investigation and cleanup of the Site consistent with the Water Code. This Order may be revised by the Executive Officer as additional information becomes available.

13. Enforcement

Failure to comply with the requirements, terms, or conditions of this Order will result in additional enforcement action that may include the imposition of administrative civil liability pursuant to California Water Code sections 13268 and 13350, or referral to the Attorney General of the State of California for civil liability or injunctive relief. The Water Board reserves its rights to take any enforcement action authorized by law.

14. Permits or Approvals

This Order does not alleviate the responsibility of the Dischargers to obtain necessary local, state, and/or federal permits to construct or operate facilities or take actions necessary for compliance with this Order. This Order does not prevent imposition of additional standards, requirements, or conditions by any other regulatory agency.

15. Replacement of Prior Orders

This Order replaces all requirements of Investigative Orders R6T-2013-0064 and R6T-2013-0090. This Order shall not preclude enforcement against the Dischargers for failure to comply with any requirement in any other Order issued by the Water Board. The Water Board reserves its rights to take any enforcement action authorized by law.

16. Right to Petition

Any person aggrieved by this action of the Lahontan Water Board may petition the State Water Resources Control Board (State Water Board) to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, section 2050 and following. The State Water Board shall receive the petition by 5:00 p.m., 30 days after the date this Order is issued, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition shall be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the Internet at:

http://www.waterboards.ca.gov/public_notices/petitions/water_quality or will be provided upon request.

Ordered by: _____ Dated: _____
PATTY Z. KOUYOUMDJIAN
EXECUTIVE OFFICER

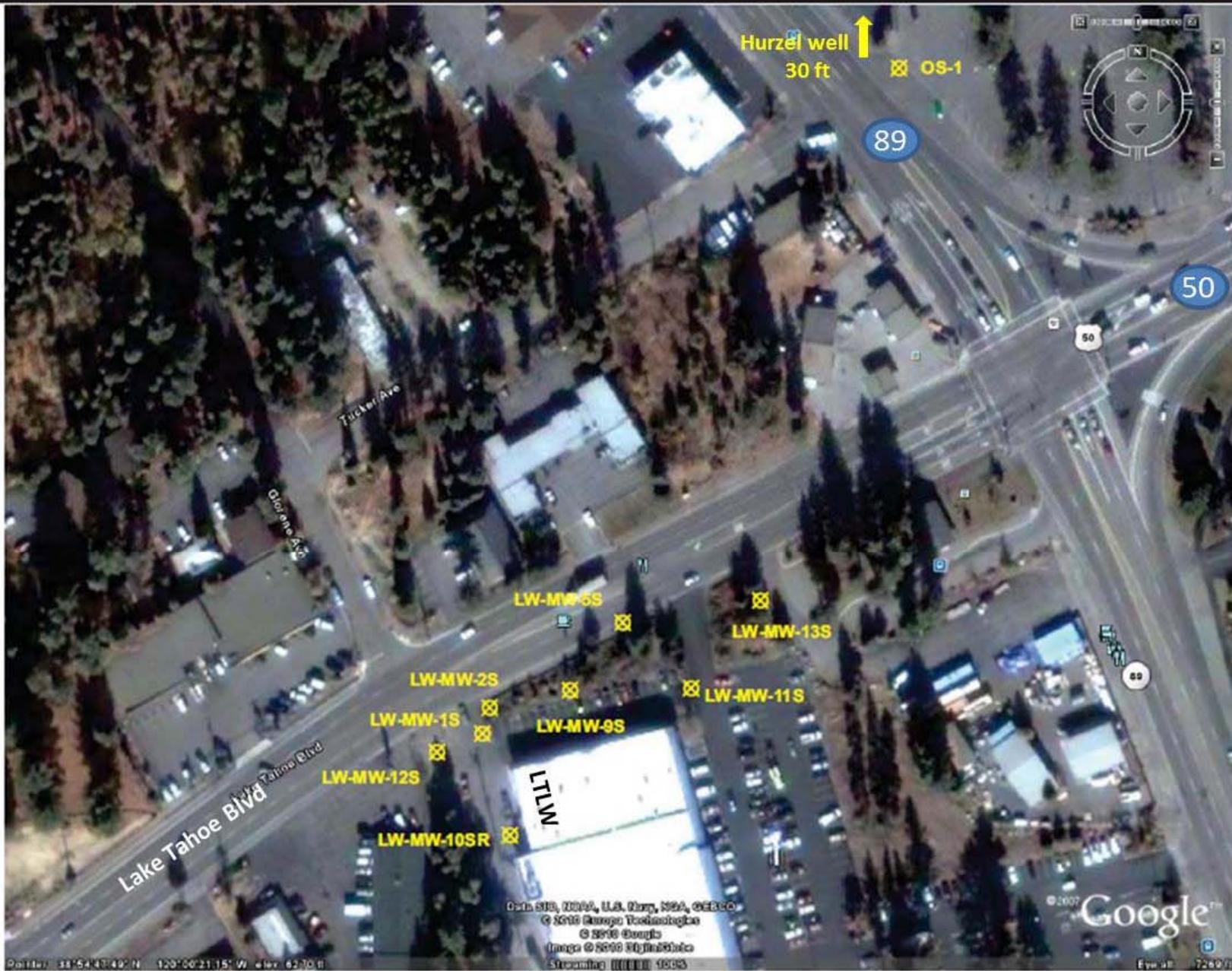
Attachments: 1. Site Map
2. Map of Monitoring Well Locations
3. Map of Shallow Soil Vapor Well Data, First Quarter 2015

LEGEND

⊗ Approximate Location of Groundwater Monitoring Well

LW-MW-1S

Attachment 1



NOT TO SCALE



Environmental Engineering, Consulting & Remediation, Inc.

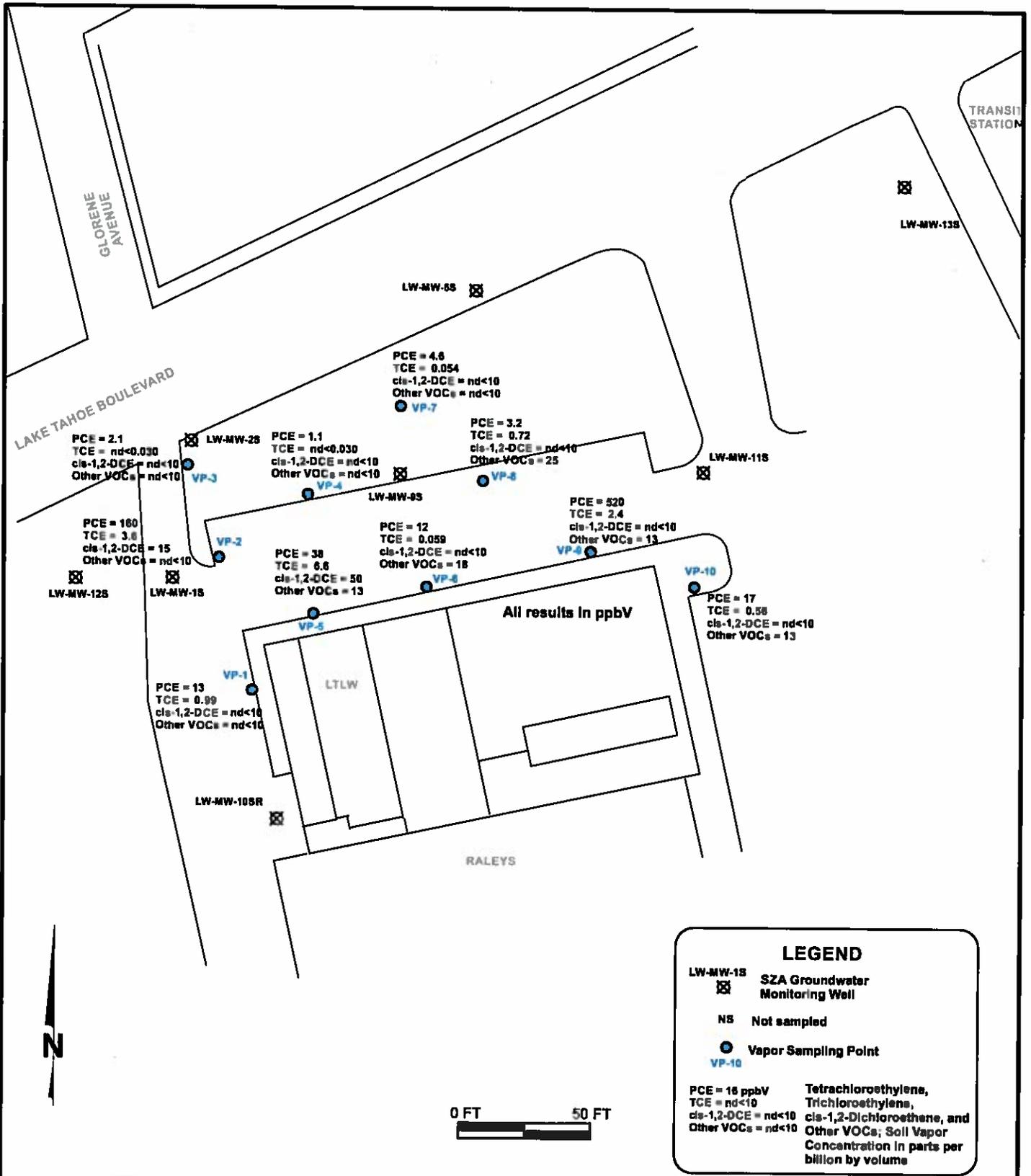
1020 Winding Creek Rd., #110, Roseville, CA 95678
Phone: (916) 782-8700 Fax: (916) 782-8750

LAKE TAHOE LAUNDRY WORKS
1024 LAKE TAHOE BOULEVARD
SOUTH LAKE TAHOE, CALIFORNIA

SITE PLAN

Attachment 2





Environmental
Engineering,
Consulting &
Remediation, Inc.

1020 Winding Creek Rd., #110, Roseville, CA 95678
Phone: (916) 782-8700 Fax: (916) 782-8750

LAKE TAHOE LAUNDRY WORKS
1024 LAKE TAHOE BOULEVARD
SOUTH LAKE TAHOE, CALIFORNIA

FIRST QUARTER 2015
SHALLOW SOIL VAPOR
DISTRIBUTION PLOT

FIGURE

7A