



Lahontan Regional Water Quality Control Board

May 12, 2017

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Bobby Pages, Inc. c/o Allison Mackenzie, LTD. 402 North Division Street Carson City, NV 89703

Connolly Development, Inc. c/o Mary and Matt Connolly 9120 Double Diamond Parkway Reno, NV 89521

CLEANUP AND ABATEMENT ORDER (CAO) R6T-2017-0022 REQUIRING REMEDIATION AND ADDITIONAL INVESTIGATION OF PCE GROUNDWATER CONTAMINATION, LAKE TAHOE LAUNDRY WORKS, SOUTH LAKE TAHOE, CALIFORNIA, SITE CLEANUP PROGRAM CASE T6S043

I am issuing the enclosed CAO as a step forward in requiring cleanup and abatement of known tetrachloroethylene (PCE) groundwater contamination that is a result of an historic PCE release from the Lake Tahoe Laundry Works site. This CAO requires the responsible parties to investigate and determine the complete vertical and lateral extent of the PCE groundwater contamination originating from their site and to cleanup and abate its effects.

PETER C. PUMPHREY, CHAIR | PATTY Z. KOUYOUMDJIAN, EXECUTIVE OFFICER



The Water Board is greatly concerned that municipal wells spanning two water districts have been impacted by PCE contamination covering a large portion of the South Lake Tahoe area, near the intersection of Highway 50 and 89. This area has PCE concentrations in the unconfined, drinking water supply aquifer that exceed the drinking water standard. Because the PCE groundwater plume from the Lake Tahoe Laundry Works site has not been fully defined, there is insufficient evidence to link all PCE contamination in the region to Lake Tahoe Laundry Works site at this time. It is possible that there are other parties responsible for portions of the PCE, which merits additional investigation. It is also possible that there are portions of the PCE plume that we are unable to tie back to a responsible party, and I want to better understand the orphan share of the regional plume if we determine, from the required investigation results, that other sources have contributed to the PCE contamination.

Because the PCE is currently affecting drinking water supply wells, this is one of our highest priority cases and I am directing my staff to meet with the water purveyors, known responsible parties and the affected community to collectively plan a path forward to address the regional aquifer pollution. This would include a discussion to identify other potential PCE sources; goals and objectives for future site-specific and regional investigations to be conducted by identified responsible parties; implementation of short-term and long-term mitigation measures, such as replacement drinking water and well-head treatment; how to address the "orphaned" areas of the plume for which no responsible party can be identified and for funding opportunities; and the path forward for plume control.

Public drinking water purveyors in the area, including South Tahoe Public Utility District, Lukins Brothers, and Tahoe Keys Water Company, are equally concerned about PCE in the drinking water aquifer and are seeking funding to protect their water supply systems. I support all efforts by the public water purveyors to secure grant funding for costeffective treatment alternatives and will provide any assistance needed. If other sources or responsible parties can be identified based on sufficient data, then I am prepared to issue cleanup orders to require removal of the PCE from the groundwater to reduce reliance on mitigation measures at the drinking water supply wellhead.

Thank you for your cooperation. If you have questions about the final CAO, you can contact me at either (530) 542-5412, or <u>patty.kouyoumdjian@waterboards.ca.gov</u> or Doug Smith, Supervising Engineering Geologist at (530) 542-5453 or <u>doug.smith@waterboards.ca.gov</u>.

Patty 3. Konyoundin

PATTY Z. KOUYOUMDJIAN EXECUTIVE OFFICER

Enclosures: Cleanup and Abatement Order No. R6T-2017-0022

cc (via email): Lahontan Regional Water Board Members Doug Smith, Lahontan Regional Water Quality Control Board Kim Niemeyer, State Water Resource Control Board Lauri Kemper, Lahontan Regional Water Quality Control Board Mayumi.Okamoto, State Water Resource Control Board

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD LAHONTAN REGION

CLEANUP AND ABATEMENT ORDER NO. R6T-2017-0022

REQUIRING SEVEN SPRINGS LIMITED PARTNERSHIP, FOX CAPITAL MANAGEMENT CORPORATION, BOBBY PAGES, INC. AND CONNOLLY DEVELOPMENT, INC. 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

- The former Lake Tahoe Laundry Works (hereinafter referred to as the 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, approximately 9,000 feet south of Lake Tahoe and approximately 5,500 feet south of the Tahoe Keys. The shopping center encompasses approximately 11.7 acres and consists of an irregularly shaped parcel located on the south corner of the intersection of Lake Tahoe Boulevard and Highway 50. A laundromat operated at the Site from early 1970s to 2011. Another laundromat currently occupies the tenant space.
- Investigation and corrective actions prior to the date of this Order have been implemented by Seven Springs Limited Partnership (Seven Springs) and Fox Capital Management Corporation (Fox) in compliance with previous Water Board directives.
- 3. Seven Springs and Fox conducted initial investigation activities at the Site between 2003 and 2008. The investigations identified tetrachloroethylene (PCE) in soil and groundwater and indicated a coin operated dry cleaning unit that used PCE had operated at the Site between 1972 and 1979. Spills associated with PCE delivery practices are the likely source of PCE at the Site.
- 4. Seven Springs and Fox proposed interim remedial measures in 2009 to address the chlorinated hydrocarbons in soil and shallow groundwater at the Site. The interim remedial measures consisted of the installation and operation of a soil vapor extraction and air sparging (SVE/AS) system. The SVE/AS system began operation in 2010 and has been consistently operated, with the exception of

downtimes associated with verification monitoring (2012 and 2014) and equipment issues (2015), to date. Approximately three months of pulsed ozone sparging was conducted in select air sparge wells in 2013. The SVE/AS system provides source remediation but does not provide hydraulic containment and capture of groundwater contamination. No other remedial actions have been performed at the Site.

- 5. On June 5, 2015, Lahontan Water Board, Fox, and Seven Springs entered into a *Stipulated Agreement for Replacement Water Supply at 883 and 903 Eloise Avenue*. On February 17, 2016 Lahontan Water Board provided a *Satisfaction of Stipulated Agreement for Replacement Drinking Water* letter to Fox and Seven Springs.
- 6. On September 15, 2015, the Lahontan Water Board issued a proposed Cleanup and Abatement Order (CAO) to Seven Springs and Fox and requested comments by October 30, 2015. The comment period deadline was subsequently extended to December 14, 2015, to January 15, 2016, and finally to February 11, 2016. After receiving comments on the proposed CAO, the Prosecution Team submitted a significantly revised proposed CAO on July 18, 2016. The revised proposed CAO added Bobby Pages Inc. as a discharger, included recommendations for No Further Action Required status at the Lakeside Napa Auto Store and Former Big O Tires Store, and expanded the off-site area to be investigated and remediated. Comments on the proposed CAO and the revised proposed CAO were received from Hogan/Lovells, Morrison/Foerster LLP, Tahoe Keys Property Owners Association, Kevin Leid, South Tahoe Public Utility District, Lukins Brothers Water Company, Commerce Bank, and Kopania. Fox also provided the September 8, 2016 Workplan to Perform Batch Pumping with their comments on the revised proposed CAO to address remaining contamination in the vadose zone and two shallow groundwater monitoring wells.
- 7. After consideration of the available information and comments received on the proposed CAO and the revised proposed CAO, the Site and regional groundwater investigations performed to date have not generated conclusive data identifying or eliminating the Site as the sole source of the regional PCE plume. Existing groundwater quality data cannot definitely link contaminant concentrations detected in the municipal and domestic supply wells in the region to the Site given insufficient data produced by limited scopes of the site specific and regional investigations conducted to date, the distribution of contaminants reported, location of other potential sources, the significant amount of time that has passed since the alleged historical PCE release(s) at the Site in the 1970s, and the significant fluctuations in the groundwater table from decades of intermittent municipal supply well pumping. As a result, current evidence is insufficient to require the cleanup and abatement of the regional PCE plume under California Water Code section 13204. However, sufficient evidence currently exists under California Water Code section

contamination originating from the Site, and (2) cleanup and abatement of chlorinated hydrocarbon waste originating from the Site.

- 8. This is a new Order being issued to Seven Springs and Fox and now also includes Bobby Pages, Inc. and Connolly Development, Inc. as Dischargers. Rationale for the naming of dischargers is provided in the "Identified Discharger" section below.
- 9. This Order requires the Dischargers to submit a work plan to define the lateral and vertical extent of contamination originating from the Site, continue to operate the SVE/AS system until a remedial method is proposed to contain chlorinated hydrocarbons on-site and cleanup and abate the effects of the discharge of chlorinated hydrocarbons originating from the Site.

SITE INVESTIGATIONS

- 10. Investigations conducted by Seven Springs and Fox indicated that a coin-operated dry cleaning unit was located at the Site since at least 1972 until about 1979. The coin-operated dry cleaning unit used PCE as a cleaning solvent and was connected via hose to a 30 to 50 gallon drum. The drum was used for solvent storage and a pump was located on top of the drum to transfer solvents from the drum to the dry cleaning unit. A pump truck delivered solvents to the Site via a hose from the truck to the indoor drum.¹
- 11. Five investigations were conducted at the Site between 2003 and 2008. Investigation activities included the collection of over 100 soil samples to depths up to 52.5 feet below ground surface (bgs), 22 grab groundwater samples, and 21 groundwater samples from on and off-site monitoring wells. Eight temporary dual zone monitoring wells screened between approximately 10-25 feet bgs (shallow zone aquifer) and 35 to 50 feet bgs (middle zone aquifer) were installed during this time period; of the eight installed temporary dual zone monitoring wells, two on-site and one off-site wells were incorporated into the future quarterly monitoring program while the remaining five were destroyed.

Chlorinated hydrocarbon contamination in soil was found in the shopping center parking lot directly adjacent to the north side of the Site and beneath the laundromat building.² PCE concentrations in soil were detected up to 410 milligrams per kilograms (mg/kg) at 7 feet bgs in the parking lot and 0.095 mg/kg PCE at 1 foot bgs within the laundromat. The PCE concentrations in soil extended from the laundromat entrance approximately 80 feet northwest and 40 feet north and northeast.

¹ Deposition of Mary Louise Baisley, former operator starting in 1976, dated April 13, 2007 pp. 89-90.

² Although there is no evidence of when a spill occurred at the Site, available literature related to the maintenance of coin-operated dry cleaning units in the 1970s and 1980s noted that contamination generally results from significant releases during solvent delivery or in solvent storage areas. (See https://drycleancoalition.org/download/dryclean_cardamone.pdf)

During the April 2005 investigation, of the 47 soil samples collected, soil boring SB8 indicated the highest PCE concentrations, with 12 mg/kg and 6.3 mg/kg reported at 4 and 8 feet bgs, respectively. No deeper soil samples were collected from boring SB8. Additional borings to delineate the lateral extent of contamination were not advanced to the west of SB8 due to the presence of underground utilities at the time. These underground utilities, and the associated trench backfill materials, represent potential preferential pathways for contaminant transport that were not adequately investigated.

Groundwater monitoring well sampling conducted between 2003 and 2008 indicated the highest PCE concentrations in the driveway (monitoring well LW-MW-1S; 706 micrograms per liter [μ g/L]) and at the northeastern property corner (boring GW9; 1,000 μ g/L). Detectable PCE concentrations were reported in all eight of the middle zone aquifer temporary dual zone monitoring wells at concentrations ranging from 1.43 μ g/L (LW-MW-5D) to 137 μ g/L (LW-MW-1D).

REMEDIATION

12. On June 4, 2009, Fox and Seven Springs submitted the document, *Remedial Action Workplan for Shallow Zone Aquifer Groundwater Investigation, Shallow Zone Aquifer Groundwater Monitoring, Interim Remedial Action Vadose Zone Soil and Shallow Groundwater Cleanup* proposing an air sparge and soil vapor extraction (AS/SVE) system to remediate the chlorinated hydrocarbons in soil and shallow groundwater beneath the Site. Installation and pilot testing of the system, including revisions described in the August 26, 2009 Addendum to Interim Remedial Action Workplan, are described in the August 12, 2010 Interim Remedial System Installation/Pilot Testing Report of Findings and Draft Remedial Action Plan for Vadose Zone Soil and Shallow Groundwater Cleanup.

In November 2009, the following components were installed in relation to the operation and monitoring of the SVE/AS system:

- 20 nested soil vapor extraction wells (screen intervals of approximately 3 to 8 and 10 to12 feet bgs),
- 6 horizontal SVE wells (30 feet of screen at approximately 4.5 feet bgs),
- 27 air sparge wells (screen interval of approximately 28.5 to 30 feet bgs),
- 10 vapor probe points (0.125 feet of screen at approximately 5 feet bgs),
- 5 additional on-site shallow zone aquifer monitoring wells (screen interval of approximately10 to 25 feet bgs),
- 1 off-site shallow zone aquifer monitoring well (OS-1; screen interval of approximately10 to 25 feet bgs) located approximately 750 feet northeast of the Site.

13. On April 6, 2010 the system commenced operation. During the 4th Quarter 2016 an average volatile organic compound (VOC) mass removal rate of 0.027 pounds

per day was reported with approximately 935.53 pounds of VOCs estimated recovered since startup.

14. The SVE/AS system was designed to remediate vadose zone soils to reduce shallow zone aquifer groundwater concentrations and limit further migration from the shallow zone aquifer source area through volatilization and recovery. The SVE/AS system does not provide any hydraulic control and does not appear to affect contamination migration at depths below the influence of the air sparge wells. The January 4, 2016 O&M Air Sparge Performance Test Data Summary indicated little to no depth to water or air pressure changes in monitoring well LW-MW-5D when compressed air was applied to air sparge wells AS-6, AS-8 and AS-16 at 17 psi.

MONITORING

Bobby Page, Inc.

Seven Springs Limited Partnership

Connolly Development, Inc.

Fox Capital Management Corporation

- 15. Groundwater monitoring began in August 2008 and has been conducted consistently on a quarterly basis from March 2010 to the 4th Quarter 2016. Two monitoring events, August 13, 2008 and December 4, 2009, occurred prior to the start of the quarterly monitoring schedule. Quarterly groundwater monitoring has included 8 on-site shallow zone aquifer wells and 2 off-site shallow zone aquifer wells; middle zone aquifer wells are not included in the quarterly monitoring program. Quarterly monitoring has shown groundwater flow directions in shallow zone monitoring wells ranging from N15°W to N25°E.
- 16. LW-MW-1 has historically contained the highest chlorinated hydrocarbon concentrations in groundwater with up to 5,380 μg/L PCE, 74 μg/L TCE, 339 μg/L cis-1,2-DCE, and 7.7 μg/L 1,1-DCE reported during sampling events conducted in August 2008 and May 2011. PCE concentrations above 2,000 μg/L were also reported in LW-MW-1 during four monitoring events spanning December 2009 to May 2011. The PCE concentrations above 2,000 μg/L indicate DNAPL was likely present onsite prior to, and during, remediation.
- 17. Groundwater sample results from monitoring wells located along the northern property boundary (LW-MW-2S, LW-MW-5S, and LW-MW-13S) have consistently shown detectable PCE concentrations since monitoring began with concentrations up to1,400 µg/L reported (LW-MW-5S; June 2010). During the 4th Quarter 2016 groundwater monitoring event, PCE concentrations of 2.6µg/L and 51 µg/L (duplicate sample 52 µg/L) were reported in LW-MW-2S andLW-MW-5S, respectively. The PCE detections in these wells located along the northern property boundary, coupled with the northerly groundwater flow direction described in Findings 15 and 18, indicate PCE impacted groundwater is still migrating off-Site.
- 18. During the 4th Quarter 2016 monitoring event, two monitoring wells contained PCE concentrations above 5µg/L (LW-MW-1S at 56µg/L and LW-MW-5S at 51/52µg/L).

Groundwater in the shallow zone aquifer monitoring wells was reported to flow in a northerly direction at an average gradient of 0.017 to 0.019 feet per feet. The reported northerly flow direction is consistent with the historical range.

- 19. Sixteen soil vapor monitoring events have been conducted since April 2010. Analytical results indicate the highest historical and current chlorinated hydrocarbon concentrations in the driveway (VP2) and along the building's northern edge (VP5, VP6, and VP9). A maximum PCE concentration of 949,200 micrograms per cubic meter (µg/m³) was reported on September 30, 2013 in vapor probe VP2. During the 4th Quarter 2016 monitoring event, a maximum PCE concentration of 556 µg/m³ was reported in vapor probe VP2; soil vapor probe VP2 previously contained 42,036 µg/m³ PCE during the 3rd Quarter 2016 monitoring event.
- 20. The concentrations of chlorinated hydrocarbons in soil vapor and shallow groundwater indicate sufficient mass remains at the Site to threaten beneficial uses and warrant additional cleanup and abatement.
- 21. Chlorinated hydrocarbons detected in soil vapor and shallow groundwater samples indicate the highest chlorinated hydrocarbon concentrations (i.e. soil samples collected at 4 and 8 feet bgs in soil boring SB8 (see Finding 11) and soil vapor samples collected from vapor probe VP2 (see Finding 19)) are located adjacent to utility lines and associated trench backfill materials that represent potential preferential pathways for contaminant transport.

SITE SETTING

- 22. Cross sections and boring logs in the September 22, 2008 Site Investigation Report of Findings indicate the presence of fill materials to depths of between 6 and 9 feet bgs across the Site. Soils underlying the fill materials generally consist of unconsolidated sands with occasional gravel. At five of the eight locations (LW-MW-1 through LW-MW-5; western Site area) a thin layer or thin layers of silt alternating with sands (used to define the bottom of the shallow zone aquifer) were encountered between approximately 30 and 35 feet bgs. No shallow zone aquifer bottom defining silt was encountered in the borings located in the eastern Site area. Sands of varying coarseness and color were reported below the silt (where present) to the explored depths. At four locations (LW-MW-4, LW-MW-6, LW-MW-7, and LW-MW-8), silt layers of varying thickness were reported and used to define the bottom of the middle zone aquifer. No middle zone aquifer bottom defining silt was encountered at the other four locations (LW-MW-1, LW-MW-2, LW-MW-3, and LW-MW-5).
- 23. Downward vertical gradients have been reported in all eight of the dual zone monitoring well pairs when measurements have been taken. The borings log for monitoring well LW-MW-1S/D indicated water levels of 12.00 feet below top of

casing (BTOC) in LW-MW-1S and 20.45 feet BTOC in LW-MW-1D following well completion. Water level differences between the shallow and deep well pairs ranged from 0.74 feet (6S/6D) to 7.92 feet (3S/3D) on September 8, 2008 including 7.01 feet in LW-MW-1S/1D. Well pairs that did not encounter the shallow zone aquifer defining silt showed the least water level elevation difference.

In April 2010, water level measurements were recorded in middle zone aquifer wells during pilot testing activities for six different extraction configurations. The measurements indicated downward vertical gradients were present during all configurations tested with depth to water levels ranging between 10.96 to 14.93 feet BTOC in LW-MW-1S and 15.11 to 20.30 feet BTOC in LW-MW-1D.

NEED FOR THIS ORDER

- 24. The current conceptual model is incomplete. The lateral and vertical extent of PCE contamination originating from the Site has never been determined.
- 25. Contaminant transport and migration likely occurred over the thirty years period (1980 to 2010) prior to the implementation of the SVE/AS system and, to a lesser degree, during SVE/AS operation. At least 935 pounds of chlorinated hydrocarbons were present in a subsurface location where potential preferential pathways (e.g. utility lines and associated trench backfill materials), downward vertical gradients, and discontinuous sands and silts were reported. This likely means that there was migration of PCE from the Site, which needs to be investigated and addressed in order to protect beneficial uses and human health.
- 26. Chlorinated hydrocarbon concentrations still remain in soil, soil gas and shallow groundwater beneath the Site at levels that threaten to affect beneficial uses and human health.
- 27. The existing SVE/AS system is not completely controlling lateral or vertical contaminant migration. Groundwater monitoring data from wells located along the northern property boundary consistently show PCE concentrations above MCLs. The concentrations of PCE above MCLs that have been historically and currently detected in wells located along the northern property boundary, coupled with the consistent northerly groundwater flow direction described in Findings 15 and 18, indicate chlorinated hydrocarbons have been, and continue to, migrate off-site in shallow groundwater. Due to a lack of data, it is unknown at this time if PCE impacted groundwater migrated off-site via potential preferential pathways such as utilities and associated utility trench backfill materials. The chlorinated hydrocarbon concentrations reported in middle zone aquifer wells show chlorinated hydrocarbon so riginating from the Site are present to depths up to at least 50 feet bgs and off-site migration was likely occurring at these depths prior to the

implementation of the SVE/AS system and at depths below the influence of air sparge wells during active remediation.

- 28. The September 8, 2016 *Workplan to Perform Batch Pumping* recommends batch pumping after evaluating three different remedial options to "polish" remaining onsite PCE concentrations. Batch pumping utilizing existing wells will not provide onsite plume containment over time.
- 29. It is currently unclear how the Site is related to the regional PCE plume. Water quality monitoring results from off-site private domestic wells, off-site monitoring wells, and off-site municipal water supply wells within the historical shallow zone aquifer groundwater flow direction of the Site have reported PCE concentrations above MCLs. PCE concentrations in groundwater extend from the South "Y" area to Lake Tahoe to depths up to, at least, 160 feet bgs. Public and private supply wells impaired by PCE are shown in Attachment 8. Supply wells affected by PCE span three water districts and cover an area of approximately 600 acres. Tahoe Keys Property Owners Association supply wells indicate the lateral extent of PCE contamination in the area extends from, at least, Venice Drive to Ala Wai Boulevard, a distance of approximately one mile. Determination of the lateral and vertical extent of chlorinated hydrocarbons originating from the Site is necessary to evaluate the Site's contribution to the regional PCE plume.

IDENTIFIED DISCHARGERS

- 30. Water Code section 13304 obligates any person that has "caused or permitted" waste to be discharged where it is, or probably will be, discharged into waters of the state and creates, or threatens to create, a condition of pollution or nuisance, to clean up the waste, abate effects of the waste, or take other necessary remedial action. The key question in assigning responsibility for the cleanup and abatement of waste is whether the discharger caused or permitted the discharge.³
- 31. Seven Springs Limited Partnership, as the current owner of the Site since 1991, is named a discharger under this order. Current landowners are responsible for cleanup, regardless of whether the landowner owned the property at the time of the initial release. (*In the Matter of the Petition of Harold and Joyce Logsdon* (SWRCB Order No. WQ 84-6); *In the Matter of the Petition of Zoecon Corp.*

³ The applicable evidentiary standard, in the first instance, to evaluate whether a discharger caused or permitted the discharge to waters of the state is the preponderance of the evidence standard. Though Fox Capital articulates the relevant legal standard is the "substantial evidence" standard citing to Order No. WQ 85-7 *In the Matter of the Petition of Exxon Company, U.S.A., et al*, this is the applicable standard *upon review by the State Water Board* and upon a petition for a writ of mandamus as discussed in *Topanga Association for a Scenic Community v. County of Los Angeles* (1974) 11 Cal.3d 506, 514-515. Substantial evidence means "credible and reasonable evidence." Order No. WQ 93-14 *In the Matter of the Petition of Sanmina Corp.* Regardless of whether the substantial evidence or preponderance standard applies, the weight of the evidence indicates that it is more likely than not that the Dischargers named on this Order caused or permitted the discharges of waste to waters of the state.

(SWRCB Order No. WQ 86-02); *In the Matter of the Petition of Vallco Park, Ltd.* (SWRCB Order No. WQ 86-18)).

- 32. The State Water Resources Control Board (State Water Board) has found prior landowners responsible for cleanup if they owned or were in possession of the site at the time of the discharge, had the knowledge of the activities which resulted in the discharge, and had the legal ability to prevent the discharge. (See SWRCB Order Nos. WQ 86-16, 91-7, 92-13). The State Water Board has held that "[a] landowner is ultimately responsible for the condition of his property, even if he is not involved in the day-to-day operations. If he knows of a discharge on his property and has sufficient control of the property to correct it, he should be subject to cleanup order under Water Code section 13304." (In the Matter of Arthur Spitzer, Order No. 89-8).
- 33. The coin operated dry cleaning unit used PCE as a cleaning solvent and was present at the Site from 1972 to about 1979/1980. During this time there were two prior landowners, Connolly Development, Inc. and Century Properties Equity Fund 73. Connolly Development, Inc., formed in 1966, purchased the property to develop the Site. Connolly Development, Inc. owned the Site starting around 1972 and up until it sold the Site in September 1974 to Century Properties Equity Fund 73. Century Properties Equity Fund 73 then leased the Site in September 1974⁴, including a lease back to Connolly Development Inc. for at least one year, and later sold it on December 19, 1985.
- 34. Here, Connolly Development Inc. is being named as discharger because of their ownership and lease of the property, and knowledge of the coin operated dry cleaning unit at the Site during their ownership and lease. As owner of the property, Connolly Development had knowledge and control over the activities occurring at the Site that caused the discharge, which include the re-filling of the drum that contained the solvents, and the legal ability to prevent the discharge. As the owner of the Site, Connolly Development had control over leasing out retail space, managing and maintaining common areas such as sidewalks, parking areas, delivery areas.
- 35. Century Properties Equity Fund 73, a Limited Partnership, was also the owner of the Site at the time the self-service, coin-operated, dry cleaning machine existed in the laundromat at the Site. Like Connolly Development, as the owner of the Site, Century 73 had knowledge of and control over the activities occurring at the Site that caused the discharge and had the legal ability to prevent the discharge. Even if the discharge occurred during the time that Connolly Development owned the property, under established Water Board precedent, Century 73 would be considered to have been in possession during the time of the discharge because

⁴ See Fox Comments on Proposed Order, September 8, 2016, Exhibit F.

"the discharge continues as long as pollutants are being emitted at the site." (SWRCB WQ Order 89-8, p. 14.)

- 36. Fox Capital Management Corporation was the general partner of Century Properties Equity Fund 73 and subsequently changed its name to Fox Capital Management Corporation in or around 1986. As Century Properties Equity Fund 73's general partner, it is liable for all obligations of the limited partnership, including the environmental contamination from the operation of the partnership. As a general partner, Fox Capital Management Corporation, formerly Fox & Carskadon Financial Corporation, also had knowledge of and control over the activities occurring at the Site that caused the discharge.
- 37. This order also names Bobby Pages, Inc., who operated the dry cleaning unit at the Site and subleased the site to other dry cleaner operators.⁵ During the relevant period (1972 through 1979/1980) the dry cleaning unit was present at the Site, there were four operators. Robert and Berniece Prupas (dba as Bobby Page's, Inc.) leased the Site from Connolly Development, Inc. on or around October 11, 1972. Bobby Page's Inc. leased the Site from Connolly Development in March 1973. Kjell and Kerstin Hakansson subleased the Site from Bobby Page's Inc. on November 1973 to 1976. Leroy and Mary Lou Baisley then became assignees of the Hakansson sublease with Bobby Page's Inc. from July 1976 to 1996. The Order does not name Mrs. Hakansson or Mrs. Prupas because these individuals have little to no assets other than their primary residences and Mr. Hakansson, Mr. Prupas, and Mr. and Mrs. Baisley are deceased.
- 38. This Order is being issued to Seven Springs Limited Partnership, Connolly Development, Fox Capital Management Corporation, and Bobby Pages, Inc, which are collectively referred to as "Dischargers."

AFFECTED BENEFICIAL USES

- 39. 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.
- 40. 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:

⁵ Bobby Page Dry Cleaners and Leid's Inc are not considered responsible parties. Bobby Page Dry Cleaners involvement with Bobby Page's Inc. was limited to the purchase of a Bobby Pages, Inc. franchise location in Carson City, Nevada.

⁶ Deposition of Mary Louise Baisley dated April 13, 2007,.

- 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."
- 41. The 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:

Tetrachloroethylene (PCE) Trichloroethylene (TCE) Cis-1,2 Dichloroethylene (cis-1,2-DCE) 1,1 Dichloroethylene (1,1-DCE) 5 μg/L (MCL) 5 μg/L (MCL) 6 μg/L (MCL) 6 μg/L (MCL)

LEGAL REQUIREMENTS - AUTHORITY

- 42. This Order conforms to, and implements policies and requirements of, the Porter-Cologne Water Quality Control Act (Division 7, commencing with Water Code section 13000) including: (1) Water Code sections 13267 and 13304; (2) applicable state and federal regulations; (3) all applicable provisions of Statewide Water Quality Control Plans adopted by the State Water Resources Control Board (State Board) and the Water Quality Control Plan for the Lake Tahoe Basin, (Basin Plan) adopted by the Water Board; (4) State Board policies and regulations, including State Board Resolution No. 68-16 (Statement of Policy with Respect to Maintaining High Quality of Waters in California), and Resolution No. 92-49 (Policies and Procedures for Investigation and Cleanup and Abatement of Discharges under Water Code section 13304) ("Resolution 92-49"); CCR Title 23, Section 3890 et. seq., and (5) relevant standards, criteria, and advisories adopted by other state and federal agencies.
- 43. California Water Code (Water Code) section 13304, subdivision (a) states in part:

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...

44. 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.

- 45. Water Code section 13267, subdivision (b) authorizes the Water Board to require technical and monitoring reports to investigate the guality of waters of the state within its region. The technical and monitoring reports required by this Order are necessary to ensure the investigation and cleanup and abatement of chlorinated hydrocarbons in groundwater at the Site. As part of the investigation into the guality of groundwater within the Lake Tahoe Hydrologic Unit, the Water Board is requiring the Dischargers to produce a report that evaluates the lateral and vertical extent of chlorinated hydrocarbons originating from the Site. The Dischargers are also required to provide the Water Board with a corrective action plan that describes the necessary methods and remediation technology to achieve the restoration of groundwater to background levels. Every guarter, the Dischargers will be required to conduct groundwater sampling and remediation system monitoring and submit a technical report describing the groundwater monitoring and remediation system performance 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 aguifer for beneficial uses.
- 46. 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.
- 47. 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. Specifically, chlorinated hydrocarbon contamination in groundwater continues to discharge from the Site despite current remediation efforts.
- 48. The level of wastes in groundwater at the Site constitute a pollution as defined in Water Code section 13050, subdivision (I); Pollution means an alteration of the

-12-

> 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.

- 49. On-site soil gas and shallow groundwater data indicate chlorinated hydrocarbons still exist beneath the Site at concentrations affecting water quality and the existing SVE/AS system is not fully containing chlorinated hydrocarbons on-site. Additional remedial actions are necessary to control contaminant migration and cleanup the contaminated groundwater to background levels. The default cleanup level for PCE and its related breakdown products is background concentrations or non-detect (which is less than 0.5 μg/L PCE), unless the Water Board determines a different cleanup level based on an analysis of technical feasibility.
- 50. This new Order requires the Dischargers to conduct supplemental investigative and corrective actions to (1) define the lateral and vertical extent of chlorinated hydrocarbons in groundwater originating from the Site, (2) actively remediate chlorinated hydrocarbons identified in on-site soil, soil gas, and groundwater as well as all chlorinated hydrocarbons identified in soil gas and groundwater originating from the Site, (3) contain remaining chlorinated hydrocarbons on-site, and (4) conduct related monitoring and reporting actions. These actions are needed to initiate the process for protecting public health and restoring the drinking water aquifer for existing and potential beneficial uses.
- 51. 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) (Pubic 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 Dischargers to submit a work plan to investigate the full lateral and vertical extent of contamination originating from the Site and to propose remedial methods for controlling contaminant migration and achieving cleanup goals.
- 52. CEQA review at this time would be premature and speculative, as there is simply not enough information concerning the Dischargers' 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 Dischargers 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 handling any documents necessary for environmental review. If necessary, the Dischargers 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 pursuant to Water Code sections 13267 and 13304, 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:

1.0 Current Corrective Actions

1.1. The Dischargers shall continue to operate the existing SVE/AS system at the Site, in accordance with previously accepted work plans and proposals, until an alternate and/or additional remedial method is implemented or otherwise approved.

2.0 Lateral and Vertical Extent Investigation

- 2.1. 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 chlorinated hydrocarbons in groundwater originating from the Site. The Work Plan must propose methods to define the lateral and vertical extent of chlorinated hydrocarbons out to 0.5 µg/L. Work Plan shall describe the dynamic and iterative investigation strategy and decision logic to be used to define the lateral and vertical extent of chlorinated hydrocarbons originating from the Site. The description of the dynamic and iterative work strategy shall include the decision logic to be used to 1) identify the full geometry of the chlorinated hydrocarbon plume, 2) evaluate potential preferential pathways such as utility backfills, 3) conduct future investigation work (i.e. identify and address data gaps), and 4) change or adapt site investigation techniques to address data gaps. This Work Plan shall also include a description of the drilling, sampling, and well construction (if applicable) methods that will be used to isolate potential perched water bearing zones and minimize the potential for vertical migration of contaminants into deeper water bearing units.
- 2.2. Within 30 days of Work Plan acceptance by Water Board staff, implement the Site investigation for determining the lateral and vertical extent of chlorinated hydrocarbons in groundwater originating from the Site. Notify Water Board staff at least 3 working days before implementing the investigation.
- 2.3. **Every six months** after investigation implementation until task completion, submit technical reports to the Water Board summarizing the groundwater

investigation activities conducted in accordance with the accepted Work Plan. The technical reports should also describe anticipated future work or any potential changes to the investigation strategy. At a minimum, the technical reports must include the following:

- 2.3.1. A narrative description of work performed and information obtained.
- 2.3.2. Boring logs, monitoring well construction summaries (if applicable), and analytical data.
- 2.3.3. Site map(s) showing the location of all borings (i.e. soil sampling points and depth discrete groundwater sampling points) and site monitoring wells. All figures must be drawn to scale, be in color, and label relevant features, such as roads, relevant property boundaries, etc. If appropriate, the site maps should also show the location of all identified preferential pathways (e.g. utility backfills) and relevant municipal/private water supply wells.
- 2.3.4. An isoconcentration map showing all sampling locations and data points with boundary lines of chlorinated hydrocarbons in groundwater drawn out to 0.5 μg/L. Question marks shall indicate areas where boundaries are unknown.
- 2.3.5. Description of the geology encountered within the investigation area footprint. Include geologic cross sections extending from the Site to the limits of groundwater sampling that show depth discrete groundwater sampling results.
- 2.3.6. 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.
- 2.3.7. Description and schedule of anticipated future work.

3.0 Groundwater Monitoring and Reporting

- 3.1. **By June 15, 2017, and quarterly thereafter,** submit a digital technical report to the Water Board describing groundwater monitoring and remediation system performance results for the prior quarter. The report must contain the following information:
 - 3.1.1. Either a table of contents or an attachment list.
 - 3.1.2. 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 μ g/L for volatile organic compounds.

- 3.1.3. A narrative description and analysis of all information provided.
- 3.1.4. Potentiometric surface map for groundwater elevations in all monitoring wells. Show the ground water flow direction as an arrow on the map with the calculated horizontal hydraulic gradient.
- 3.1.5. Maps showing the location of all site monitoring wells and the most recent sampling results. Include isoconcentration lines on maps of the dissolved chlorinated hydrocarbon plume out to 0.5 μg/L, 5 μg/L, 50 μg/L, and 500 μg/L for PCE, TCE, and DCE, respectively.
- 3.1.6. Tabulate water analytical results and groundwater elevations for each well over time.
- 3.1.7. Description of groundwater elevation trend from previous monitoring events.
- 3.1.8. Discussion of contaminant concentration trend in monitoring wells from previous monitoring events.
- 3.1.9. 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 downtime.
- 3.1.10. Discussion of whether the dissolved chlorinated hydrocarbon plume is migrating, stable, or reducing in size and concentration. Describe the basis for all conclusions.
- 3.1.11. Submittal of laboratory analytical data, groundwater information, and monitoring well locations in Electronic Data Format to the State Water Resources Control Board Geotracker Database.
- 3.1.12. Identification of corrective actions planned during the next quarterly reporting period.
- 3.1.13. All figures shall be in color.
- 3.2. Within 24 hours of due dates, the Dischargers shall upload all technical documents, such as work plans, 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.

4.0 Corrective Action Plan (CAP)

- 4.1. Within 90 days of the due date of the final investigation technical report required in Order 2.3, submit a CAP to cleanup or abate contamination originating from the Site. The CAP shall evaluate at least three cost-effective remedial technologies, state the selection basis for the recommended technology, and provide a schedule to implement the recommended alternative.
- 4.2. Within 30 days of CAP acceptance by Water Board staff, implement the accepted remedial alternative. Notify Water Board staff at least 3 working days before implementing the accepted remedial alternative.

General Provisions

1. Modifications and Extension Requests

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.

2. 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.

3. 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 μ g/L. 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.

4. 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, Work Plans, etc., shall be submitted in digital form to the South Lake Tahoe office of the Lahontan Regional Water Quality Control Board and El Dorado County Department of Environmental Management:

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

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

5. 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.

6. 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.

7. 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.

8. 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.

9. 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.

10. 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:

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

SUMMARY OF ORDERS AND DUE DATES

Order No.	Item	Due Date
2.1	Lateral and Vertical Extent Investigation Work Plan	Within 75 days of Order date
2.2	Notification of Site Investigation Implementation	Within 30 days of work plan acceptance
2.3	Investigation Summary Reports	Every 180 days following investigation implementation until task completion
3.1	Groundwater Monitoring and Remedial Summary Reports	June 15, 2017 and quarterly thereafter
4.1	Interim Corrective Action Plan	Within 60 days of Order date
4.2	Notification of Interim Corrective Action Implementation	Within 30 days of Interim Corrective Action Plan acceptance
5.1	Corrective Action Plan	Within 90 days of final investigation summary report required in Order 2.3
5.2	Notification of Corrective Action Plan Implementation	Within 30 days of Corrective Action Plan acceptance

Ordered by:

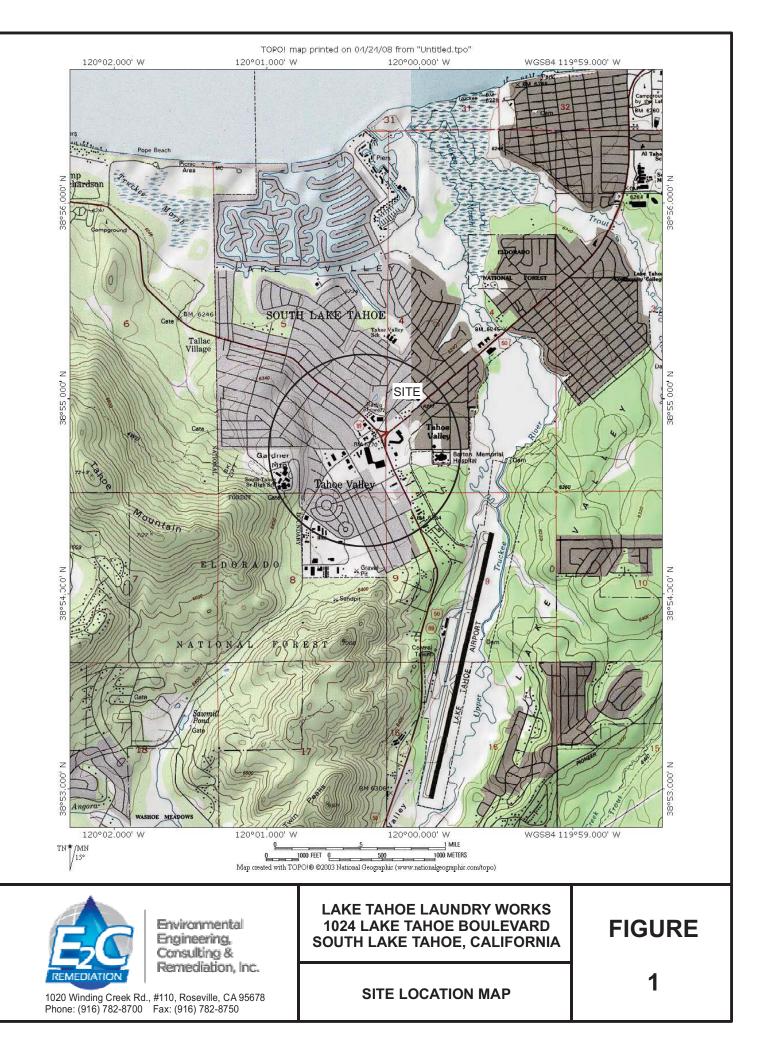
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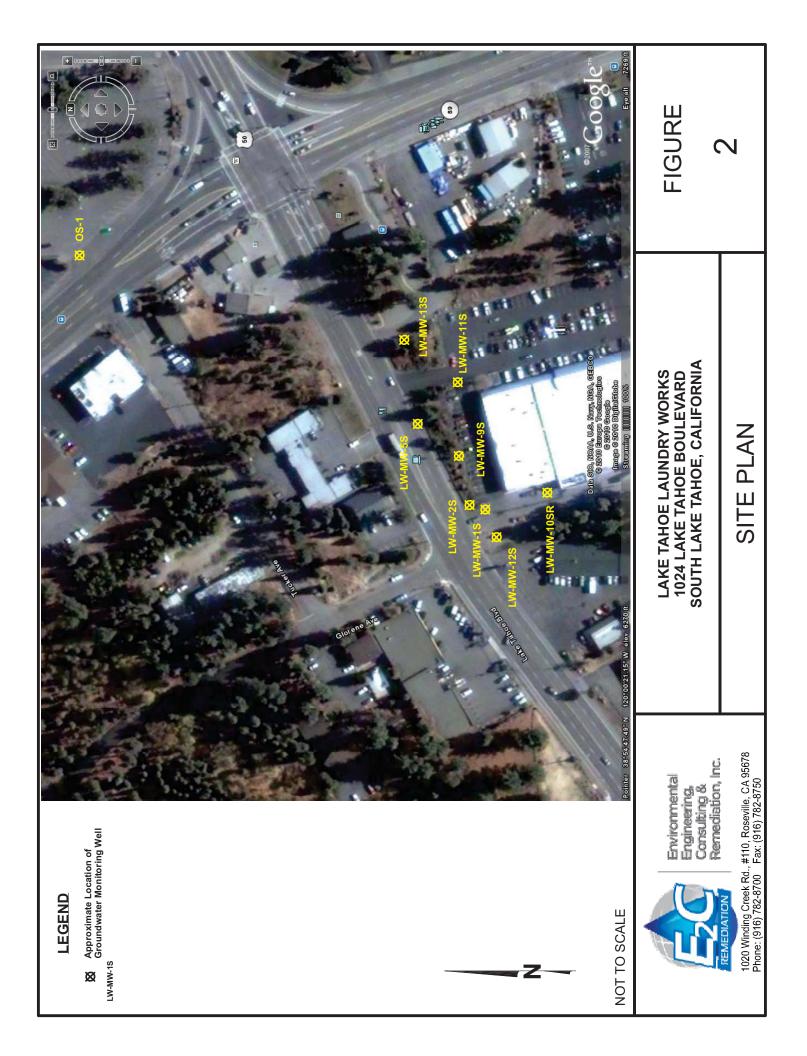
Dated: May 12, 2017

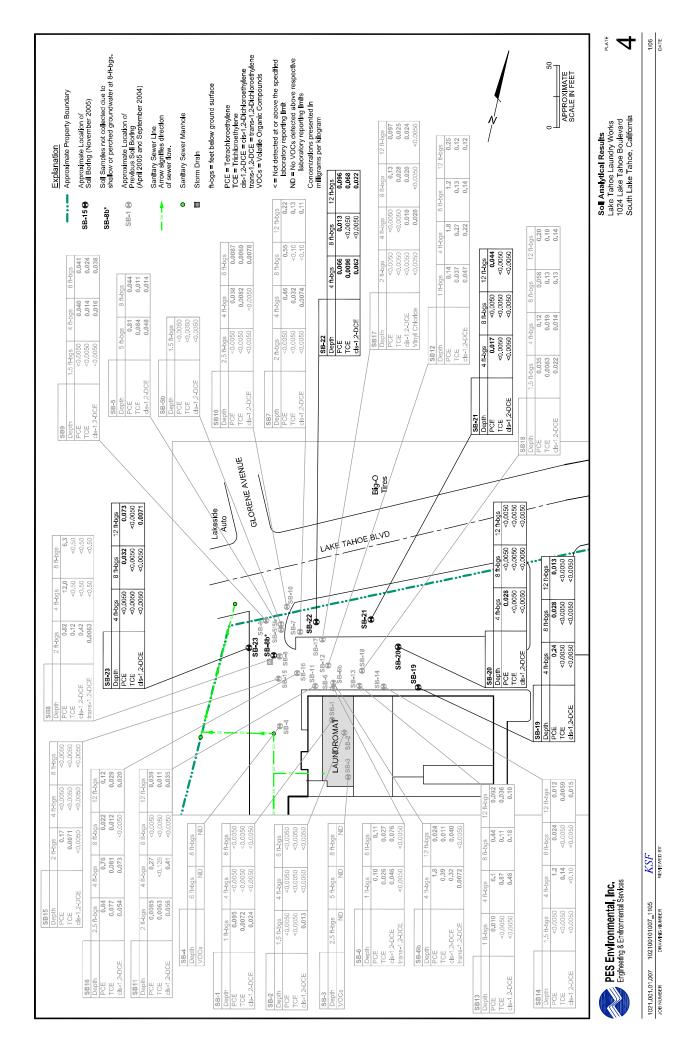
PATTY Z. KOUYOUMDJIAN EXECUTIVE OFFICER

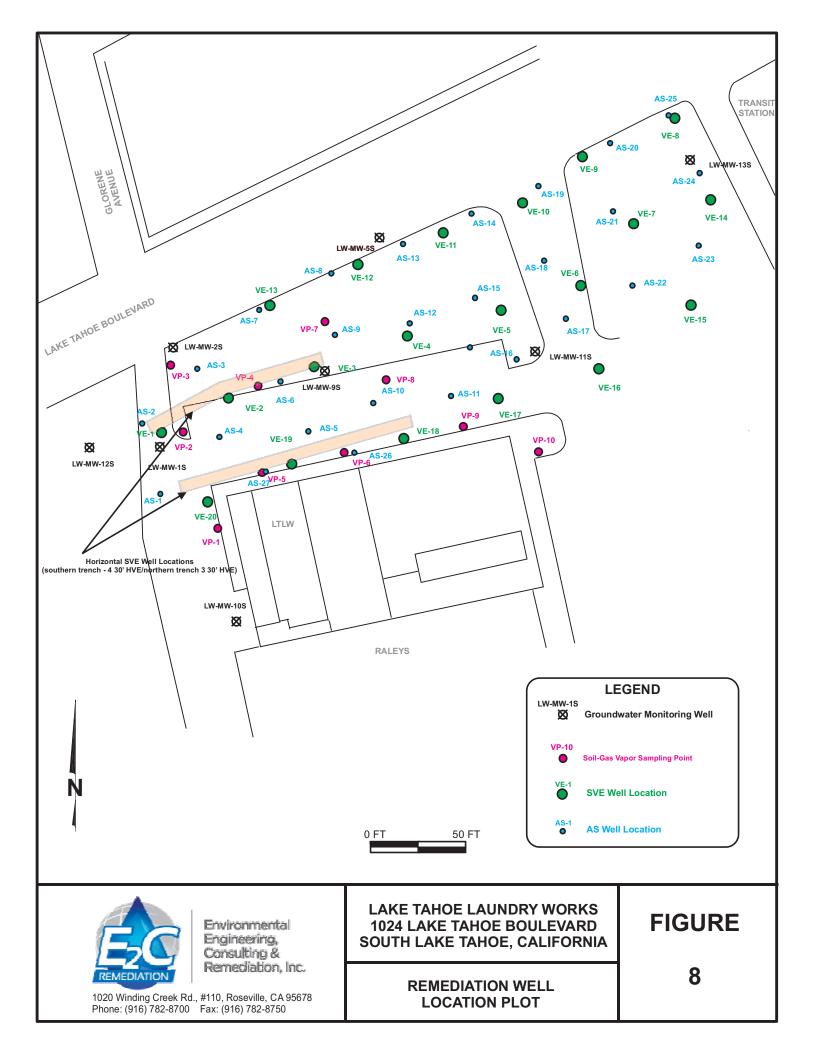
Attachments: 1. Site Location Map

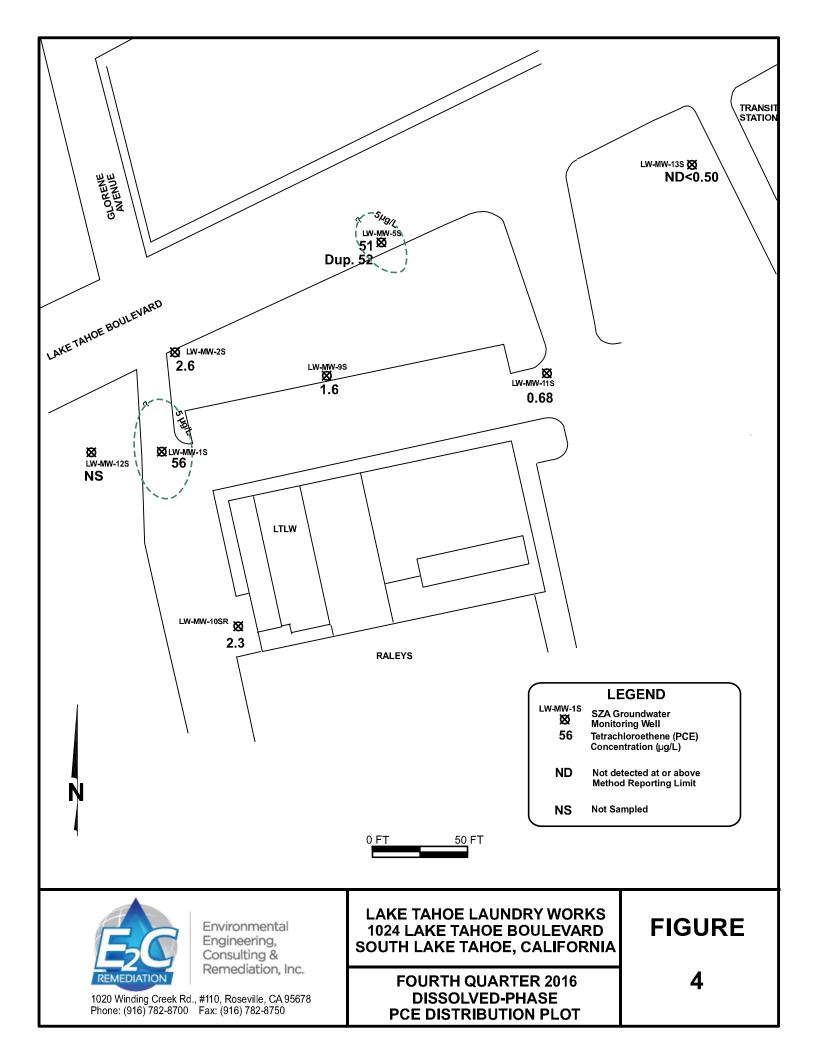
- 2. Site Plan
- 3. Soil Analytical Results
- 4. Remediation Well Location Plot
- 5. Fourth Quarter 2016 Dissolved Phase PCE Distribution Plot
- 6. Third Quarter 2016 Shallow Soil Vapor PCE Distribution Plot
- 7. Fourth Quarter 2016 Shallow Soil Vapor PCE Distribution Plot
- 8. Map of Municipal Supply Wells Impacted by PCE

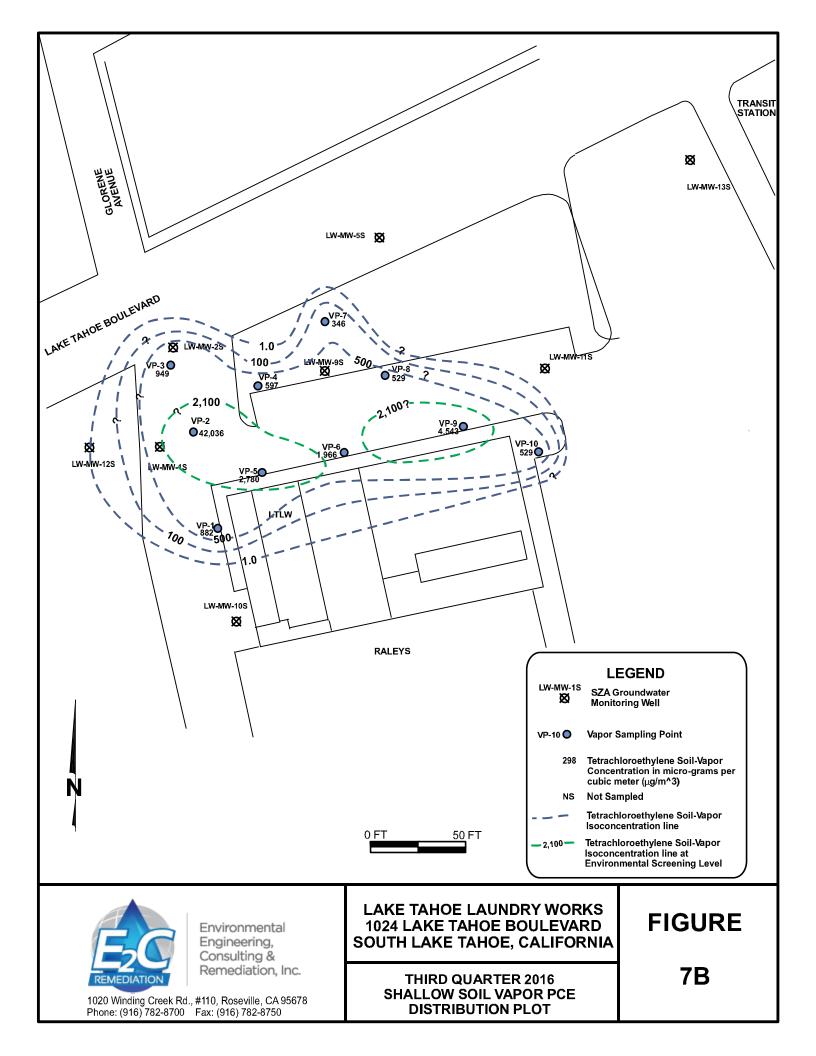


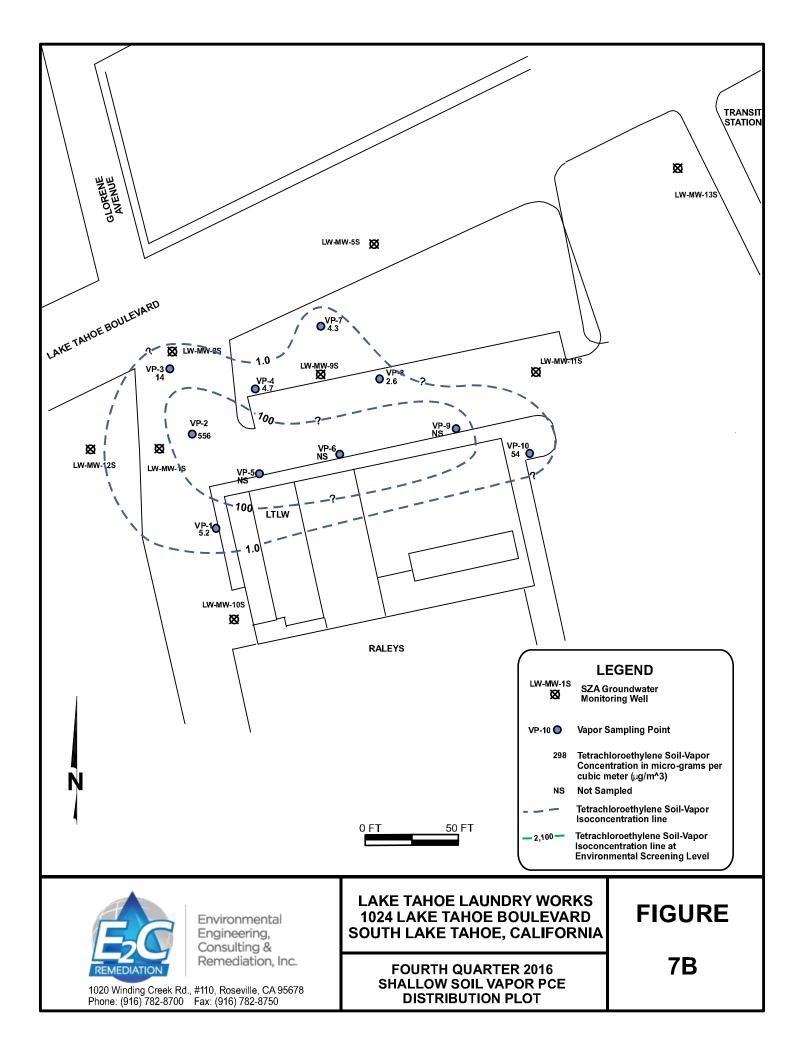












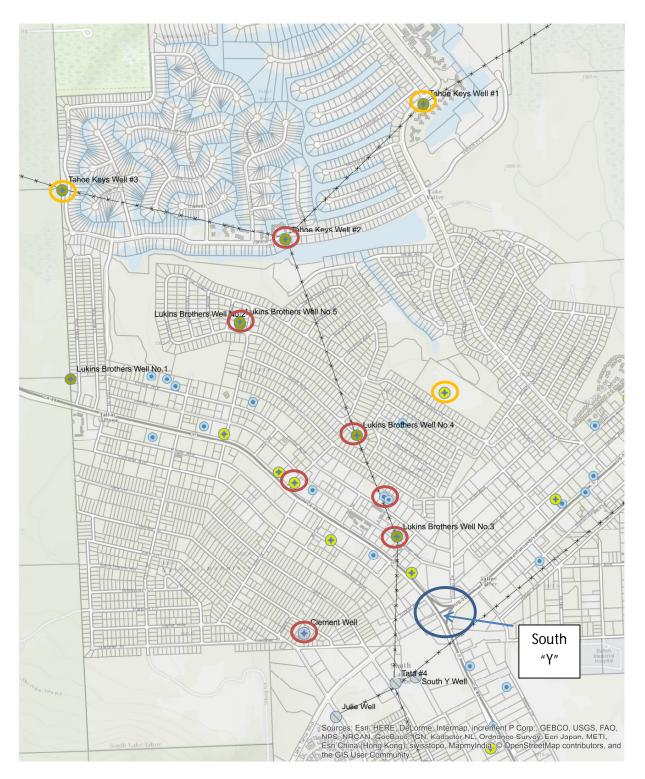


Figure 1. South "Y" Area drinking water wells impaired by PCE. Red circles indicate PCE detected above MCLs; Orange circles indicate PCE detected below MCLs.