STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

EXECUTIVE OFFICER SUMMARY REPORT
MEETING DATE: April 11, 2018

**ITEM:** **7**

**SUBJECT:** **Sang Lee, Suk Lee, Eugene Zambetti, Estate of Julia Zambetti, Estate of Peter Zambetti, and Frank L. Burrell, for the Hillview Cleaners site located at 14440 Big Basin Way, Saratoga, Santa Clara County –** Adoption of Site Cleanup Requirements

**CHRONOLOGY:** The Board has not previously considered this item.

**DISCUSSION:** The attached Revised Tentative Order (Appendix A) would establish cleanup levels for a contaminated dry cleaner site in Saratoga (Site) and would require the named dischargers to implement their cleanup plan for the Site. The key issue for the Board in this matter is whether to name the dry cleaner operators and the property owner as dischargers. The Revised Tentative Order and the Response to Comments (Appendix C) provide the Cleanup Team's rationale for naming all the parties.

*Separate Functions:* To help ensure the fairness and impartiality of this enforcement proceeding, the functions of those Board staff members who are on the cleanup team (Cleanup Team) have been separated from those who will provide advice to the Board (Advisory Team). The Cleanup Team includes David Barr, John Wolfenden, Stephen Hill, Lisa Horowitz McCann, and Tamarin Austin. The Advisory Team includes Marnie Ajello, Adriana Constantinescu, and me.

*Background:* The Site is located in the Saratoga Village Center on Big Basin Way, a short distance west of Saratoga Los Gatos Road in Saratoga (see Appendix D). Three different dry cleaners have operated at this location under the name of Hillview Cleaners from 1955 to the present. The dry cleaners used the cleaning solvent tetrachloroethene (PCE) in their operations until 2011. According to the Revised Tentative Order, these operations resulted in PCE discharges to the soil, soil gas, and groundwater beneath the Site, PCE detections in indoor air at the former dry cleaner location and three downgradient buildings, and PCE detections in nearby Saratoga Creek. Legal actions involving the property owner and the operators have been ongoing for 13 years. The operators' insurer has funded investigation activities and two pilot tests at the Site as part of the litigation proceedings. The legal matter has been in mediation for several years, and the parties are attempting to agree on a settlement to fund the Site cleanup.

*Prior Interim Cleanup Actions:* In 2007, the dischargers implemented an

unsuccessful pilot test of chemical oxidation. In 2012, the dischargers implemented a successful pilot test of enhanced bioremediation. Based on this success, the dischargers' cleanup plan proposes full-scale enhanced bioremediation and vapor intrusion mitigation measures. The dischargers have stated that they submitted the cleanup plan through mediation and that their cleanup plan is not an admission of their liability.

*Tentative Order Comments:* The Cleanup Team circulated a tentative order for public comment last November and received comments from five parties: Frank Burrell (property owner), Estates of Peter and Julia Zambetti (former operators), Eugene Zambetti (former operator), Sang and Suk Lee (current operators), and the owners of an affected downgradient property (Appendix B). The Cleanup Team's Response to Comments is contained in Appendix C. Some of the parties' comments have been incorporated into the Revised Tentative Order.

*Naming Issue:* The key issue before the Board is whether or not to name the dry cleaner operators and the property owner as dischargers. All three operators and the property owner object to being named as a discharger. By contrast, the Cleanup Team concludes that there is substantial evidence to name each party. Below, the Advisory Team summarizes the arguments with respect to each party:

The Frank L. Burrell Trust has owned the Site since 1955. Between 1955-2011, the Site operated as a dry cleaner and used PCE. (The Site continues to operate as a dry cleaner, but no longer uses PCE.)

As trustee for the Frank L. Burrell Trust, Frank Burrell argues that he never operated the dry cleaner and did not discharge PCE and therefore should not be named as a discharger.

The Cleanup Team points to a 1986 State Water Board order concluding that property owners of source properties are dischargers because "there is an actual movement of waste from soils to ground water and from contaminated to uncontaminated ground water at the site which is sufficient to constitute a 'discharge.' " Since 1986, it has been this Board's practice to name current property owners as dischargers.

The Estates of former operators Peter and Julia Zambetti, who ran a dry cleaning business at the Site from 1955-1983, argue that Peter and Julia Zambetti are deceased and therefore cannot be ordered to clean up the Site. The Estates also assert that there is no substantial evidence that they discharged PCE.

The Cleanup Team argues that naming the Zambetti estates is consistent with California's Probate Code and Regional and State Water Board precedent. The evidence to name the Zambetti estates as dischargers includes:

- The Zambettis' ownership and operation of the dry cleaner business beginning in 1955.

- The Zambettis' history of solvent (PCE) usage beginning in 1955.
- The physical evidence of PCE at and downgradient from the Site.
- Common industry-wide operational practices that are known to cause spills.
- The inefficiencies of older dry cleaning equipment from the 1950s through the 1990s that caused older dry cleaners to use more solvent and release a greater percentage of the solvent used.

Eugene Zambetti, the son of Peter and Julia Zambetti, operated the business at the Site from 1976-1983. He argues that he was only peripherally involved with running the dry cleaner business and therefore should not be named as a discharger.

The Cleanup Team argues that deposition testimony, declarations, and other documentation identify Eugene Zambetti as the owner of the dry cleaner business and lessee of the Site. The evidence of discharges during his tenure is the same as the evidence of dicharges for Peter and Julia Zambetti.

Current operators Sang Bae Lee and Suk Lee have owned the dry cleaning business since 1983. They argue that there is no substantial evidence that they discharged PCE.

The Cleanup Team argues that the evidence for the Zambettis discharging PCE also applies to the Lees, except the Lees' PCE usage began in 1983.

*Timing Issue:* Another significant issue is when the cleanup order should be issued. Mr. Burrell argues that any Board issuance of a cleanup order should be delayed for half a year, to allow additional time for the parties to settle their litigation, which will in turn fund the cleanup.

The Cleanup Team argues against any further delay. The litigation started 13 years ago, the cleanup order provides a cleanup "roadmap" that can help focus settlement discussions, and a cleanup order is needed due to the Site's significant and unabated contamination.

*Board Hearing*: I anticipate that most if not all of the commenting parties will wish to provide oral testimony. The Advisory Team will provide recommendations for the sequencing of the parties' testimony and time limits on that testimony.

**RECOMMEN-DATION:** I will have a recommendation following the hearing.

File No. 43S0558

Appendices:
A. Revised Tentative Order
B. Comments Received
C. Response to Comments
D. Location Map

APPENDIX A

REVISED TENTATIVE ORDER

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD**
**SAN FRANCISCO BAY REGION**

**REVISED TENTATIVE ORDER**

**ADOPTION OF SITE CLEANUP REQUIREMENTS for:**

**SANG LEE, INDIVIDUALLY AND DOING BUSINESS AS HILLVIEW CLEANERS;**
**SUK LEE, INDIVIDUALLY AND DOING BUSINESS AS HILLVIEW CLEANERS;**
**EUGENE ZAMBETTI, INDIVIDUALLY AND DOING BUSINESS AS HILLVIEW CLEANERS;**
**ESTATE OF JULIA ZAMBETTI, DECEASED, INDIVIDUALLY AND DOING BUSINESS AS HILLVIEW CLEANERS;**
**ESTATE OF PETER ZAMBETTI, DECEASED, INDIVIDUALLY AND DOING BUSINESS AS HILLVIEW CLEANERS; AND**
**FRANK L. BURRELL, TRUSTEE of the FRANK L. BURRELL 1937 TRUST**

for the property located at:

14440 BIG BASIN WAY
SARATOGA
SANTA CLARA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region (hereinafter Regional Water Board), finds that:

1. **Site Location**: Hillview Cleaners (Hillview) is a dry cleaner facility that occupies a tenant space at the east end of Saratoga Village Center, 14440 Big Basin Way, Saratoga. Saratoga Village Center is on a 1.38-acre parcel (Source Property). The Source Property is a short distance west of the intersection of Big Basin Way and Saratoga - Los Gatos Road. Saratoga Creek is about 650 feet north of the Source Property. The Site consists of the Source Property and the downgradient properties and locations that overlie a groundwater and soil gas pollutant plume extending from the Source Property to Saratoga Creek. The Site is located in a mixed commercial and residential district. Saratoga's zoning in the area of the Source Property is commercial-historic, which conditionally allows residential use as part of a mixed use.

2. **Site History**: The Source Property is a retail/commercial shopping center constructed in the 1950s. The Frank L. Burrell 1937 Trust owns the Source Property. Hillview has operated at the Source Property from 1955 to the present. Hillview used tetrachloroethene (PCE), a solvent used in dry cleaning, from 1955 – 2011. Peter and Julia Zambetti operated Hillview from 1955 – 1983. Eugene Zambetti, the son of Peter and Julia Zambetti, operated Hillview from 1976 until the sale of the dry cleaner business in April

1983. Sang Lee and Suk Lee have operated Hillview Cleaners from April 1983 to the present. The evidence that Peter and Julia Zambetti, Eugene Zambetti, and Sang Lee and Suk Lee discharged PCE includes the history of solvent usage beginning in 1955, the physical evidence of PCE at the Site and downgradient from it, common industry-wide operational practices, and the inefficiencies of older dry cleaning equipment from the 1950s through the 1990s. The Response to Comments further discusses this evidence (see attachment).

3. **Named Dischargers**: Frank L Burrell, as trustee of the Frank L. Burrell 1937 Trust, is named as a discharger because he is the current owner of the Source Property on which there is an ongoing discharge of pollutants, he has knowledge of the discharge or the activities that caused the discharge, and he has the legal ability to control the discharge.

   Peter and Julia Zambetti are named as dischargers because of substantial evidence that they owned and operated the dry cleaners and leased the Source Property between 1955 and 1976 (Peter) and 1955 and 1983 (Julia), a time when pollutants discharged to soil and groundwater at the Source Property, as evidenced by the use of PCE during operation of the dry cleaner, testimony concerning releases of PCE, the presence of PCE in soil beneath the Source Property, and the presence of PCE in soil gas and groundwater at and down-gradient of the Source Property.

   Eugene Zambetti is named as a discharger because of substantial evidence that he owned the dry cleaners and leased the Source Property at a time between 1976 and 1983, a time when pollutants discharged to soil and groundwater at the Source Property, as evidenced by the use of PCE during operation of the dry cleaner, testimony concerning releases of PCE, the presence of PCE in soil beneath the Source Property, and the presence of PCE in soil gas and groundwater at and down-gradient of the Source Property.

   Sang Lee and Suk Lee are named as dischargers because of substantial evidence that they operated the dry cleaners and leased the Source Property after 1983, a time when pollutants discharged to soil and groundwater at the Source Property, as evidenced by the use of PCE during operation of the dry cleaner, the presence of PCE in soil beneath the Source Property, and the presence of PCE in soil gas and groundwater at and down-gradient of the Source Property.

   The above parties are collectively referred to as the “Dischargers.”

   If additional information is submitted indicating that other parties caused or permitted any waste to be discharged on the Site where it entered or could have entered waters of the state, the Regional Water Board will consider adding those parties’ names to this order.

4. **Regulatory Status**: This Site is currently not subject to a Regional Water Board order.

5. **Site Hydrogeology**: The Site is located at the eastern edge of the Santa Cruz Mountains at an elevation of about 480 – 490 feet above sea level. The area of the Site is about where the Santa Clara Valley meets the Santa Cruz Mountains. The Site is located in the area the Santa Clara Valley Water District identifies as the Santa Clara Plain sub-basin. The sub-basin is identified as a groundwater recharge area for the deep regional groundwater aquifer underlying the Santa Clara Valley. The Site's location in the transition area from plain to mountains results in a complex hydrogeology. Three groundwater bearing zones have been identified at the Site. The shallow zone consists of a number of discontinuous perched water bearing zones found at different intervals between about 5 – 21 feet below ground surface. The middle zone is present between about 30 – 60 feet below ground surface. The deep zone begins at about 60 feet below ground surface and has been investigated to a depth of about 95 feet. These zones are inter-connected in some places. Groundwater flows generally north from the Source Property toward Saratoga Creek, which is about 650 feet away.

6. **Remedial Investigation**: A number of investigations have been performed since 1991 to investigate contamination at, adjacent to, and downgradient of the Source Property. The volatile organic compound (VOC) PCE has been detected in soil, groundwater, surface water, soil gas, and indoor air. PCE is the primary VOC detected. The PCE breakdown products trichloroethene (TCE), cis-1,2-dichloroethene (cis-1,2-DCE), and vinyl chloride have also been detected in groundwater.

   *Soil* Soil samples taken beneath the dry cleaner tenant space show PCE and its breakdown products were found at levels near the commercial land use ESLs in shallow soil (< 3 meters bgs). Soil investigation in this area has been limited by access contraints for drilling equipment. Two deep samples (25 feet bgs and 40.5 feet bgs) in boring EA-1 located in the area of elevated groundwater PCE concentrations adjacent to the east side of the dry cleaner tenant space exceeded the ESL. At the 45 foot depth, the sample was taken in soil that is saturated with groundwater and it was not possible to differentiate between PCE adhering to soil particles or PCE dissolved in groundwater.

   *Groundwater* A plume of VOC contaminated groundwater originates at the Source Property and flows north, passes beneath a number of properties and intersects Saratoga Creek about 650 feet away. The eastern edge of the groundwater contaminant plume is along Blaney Plaza and Saratoga Los Gatos Road. The western edge runs from the northwestern side of the Hillview tenant space through the parking lot in the front of the Source Property, across Big Basin Way, and along the west side of the Saratoga Village Center Shopping Center. Most of the contamination is in the middle groundwater zone in the interval between about 35 – 45 feet below ground surface. Very low levels of PCE (less than the drinking water standard) extend as deep as 85 – 95 feet below ground surface. Two areas of elevated PCE concentrations in middle zone groundwater are located beneath the parking lot at the front of the Source Property and beneath the parking lot to the east of the Source Property. PCE concentrations in samples from groundwater wells in these locations have been as high as 41,000 micrograms per liter

(µg/L). The current maximum groundwater PCE concentration is around 1,000 µg/L. The PCE drinking water standard is 5 µg/L.

*Surface Water* Saratoga Creek intersects the groundwater contaminant plume and low levels of PCE (1 µg/L – 30 µg/L) have been detected in the Creek. Most PCE detections in the creek have been from 1 – 5 µg/L. Cis-1,2-DCE has also been detected in the creek at levels from 0.5 – 6 µg/L.

*Soil Gas* A soil gas plume exists from the Source Property northward to about Big Basin Way. The soil gas plume underlies the parking lots at the front of and east of the Source Property and the three buildings immediately northeast of the Source Property. The current maximum soil gas concentration level is about 6,000 µg/$m^3$ of PCE, which is greater than the residential ESL of 240 µg/$m^3$ and commercial ESL of 2,100 µg/$m^3$.

*Indoor Air* Indoor air sampling shows PCE at concentrations greater than the environmental screening level in two buildings immediately to the northeast of the Source Property. The maximum indoor air PCE concentration detected was 18 µg/$m^3$ in a basement, which is greater than the residential ESL of 0.48 µg/$m^3$ and commercial ESL of 2.1 µg/$m^3$.

7. **Risk Assessment**:

a. **Screening Levels:** A screening level evaluation was carried out to evaluate potential environmental concerns related to identified groundwater, soil, soil gas, indoor air, and surface water impacts. Chemicals evaluated in the risk assessment include PCE, TCE, cis-1,2-DCE, and vinyl chloride, the primary chemicals of concern identified at the Site.

As part of the assessment, Site data were compared to Environmental Screening Levels (ESLs) compiled by Regional Water Board staff for residential land use, which is allowed by Saratoga's zoning in the area of the Source Property. The presence of chemicals at concentrations above the screening levels indicates that additional evaluation of potential threats to human health and the environment is warranted. Screening levels for groundwater address the following environmental concerns: 1) drinking water impacts (toxicity and taste and odor), 2) impacts to indoor air, and 3) migration and impacts to aquatic habitats. Screening levels for soil address: 1) direct exposure, 2) leaching to groundwater and 3) nuisance issues. Screening levels for soil gas address inpacts to indoor air. Screening levels for surface water address impacts to the aquatic environment. Chemical-specific screening levels for other human health concerns (i.e., indoor air and direct exposure) are based on a target excess cancer risk of $1x10^{-6}$ for carcinogens and a target Hazard Quotient of 0.2 for noncarcinogens. Groundwater screening levels for the protection of aquatic habitats are based on promulgated surface water standards (or equivalent). Soil screening levels for potential leaching concerns are intended to prevent impacts to groundwater above target groundwater goals (e.g., drinking

water standards). Soil screening levels for nuisance concerns are intended to address potential odor and other aesthetic issues.

b. **Assessment Results:** Groundwater, soil, soil gas, indoor air, and surface water samples exceeded the ESLs. The soil gas and indoor air exceedances are due to volatilization of PCE and breakdown products from contaminated groundwater.

| Media / Constituent | Human health - direct | Leaching to ground-water | Indoor air | Aquatic life | Drinking water |
|---|---|---|---|---|---|
| **Soil:** | | | | | |
| PCE | | X | | | |
| **Soil Gas:** | | | | | |
| PCE | | | X | | |
| TCE | | | X | | |
| **Groundwater:** | | | | | |
| PCE | | | X | | X |
| TCE | | | | | X |
| Cis-1,2-DCE | | | | | X |
| **Indoor Air:** | | | | | |
| PCE | | | X | | |
| **Surface Water:** | | | | | |
| PCE | | | | | X |

* Note: an "X" indicates that ESL for that particular concern was exceeded

c. **Conclusion:** The Dischargers should address these screening level exceedances using a combination of remediation and risk management.

8. **Adjacent Sites**: Former Chevron gas station #97398 at 20472 Saratoga-Los Gatos Road is located 200 feet east-southeast from the Source Property and is cross gradient and slightly upgradient from the Source Property. The Chevron site has a history of PCE detections in groundwater up to 500 µg/L (e.g., monitoring well CV-RP-5), which is a much lower concentration than those detected at the Site. Based on the available data, PCE was likely released at the Chevron site in the area of a former underground waste oil tank. The northwestern edge of the Chevron PCE groundwater plume commingles with the northeastern edge of the Site PCE groundwater plume. The Chevron site was redeveloped in 1998 and a dry cleaner business, Kerful Cleaners, has operated at the Chevron site since then. The PCE detections in groundwater at the Chevron site predate the redevelopment of the Chevron site. PCE was detected in groundwater at the Chevron site as early as 1996 (e.g., monitoring well CV-RP-5). Santa Clara County Environmental Health issued a closure letter for the Chevron gas station on January 30, 2017. The Regional Water Board plans to send Chevron a site history requirement letter for the former underground waste oil tank.

9. **Interim Remedial Measures**: In 2007 the Dischargers implemented a pilot test of groundwater treatment using in-situ chemical oxidation with modified Fenton's reagent. There were problems with getting the treatment solution into the ground and the solution surfaced through monitoring wells. VOC levels in groundwater declined initially but later rebounded to pre-injection levels.

   In 2012 a pilot test of enhanced in-situ bioremediation (EISB) was performed using emulsified 3-D microemulsion, hydrogen release compound, and a solution containing Dehalococcoides, a bacteria species capable of breaking down PCE to the non-toxic end product ethene. The pilot test results were good and there was significant reduction in PCE levels in groundwater. There has been some rebound of VOC concentrations, however, the reduction in VOC concentrations is still in the range of 83-97% below historic concentrations in the monitoring wells in the treatment area.

10. **Feasibility Study**: The Dischargers' Remedial Action Plan (RAP) dated December 15, 2015, contains a feasibility study that screened nine groundwater treatment technologies and one vapor intrusion mitigation technology. The technologies were evaluated for effectiveness, implementibilty, and cost.

11. **Remedial Action Plan**: The RAP selects the following technologies: in-situ bioaugmented enhanced reductive dechlorination (ERD) (also known as enhanced in-situ bioremediation), in-situ chemical reduction (ISCR) using zero valent iron, and subslab depressurization. The RAP includes the following elements:

    - Remedial design implementation report to provide detailed design for the RAP elements
    - Bioaugmented ERD combined with ISCR in selected areas south of Big Basin Way
    - Contingency plan for a re-injection event over approximately 50% of the original injection area if needed based on post-injection monitoring results and performance criteria
    - Methane vent pipes in each ERD injection area
    - Vapor intrusion mitigation using subslab depressurization or related technologies
    - Vapor barriers and passive ventilation for new buildings over the plume (as needed)
    - Risk management plan
    - Institutional controls
    - Monitored natural attenuation for areas north of Big Basin Way
    - Groundwater monitoring until regulatory approval for no further monitoring is obtained

    The contingency plan in the RAP may be insufficient to reach case closure because additional ERD/ISCR injections may be needed. Therefore this order requires additional re-injections or other measures beyond those proposed in the RAP if post-injection monitoring results show that the current contingency plan is insufficient to reach case closure. The commercial cleanup levels in the RAP are inadequate to protect residential uses. Therefore, this Order contains residential cleanup levels.

12. **Basis for Cleanup Levels**

a. **General**: State Water Board Resolution No. 68-16, "Statement of Policy with Respect to Maintaining High Quality of Waters in California," applies to this discharge. It requires maintenance of background levels of water quality unless a lesser water quality is consistent with maximum benefit to the people of the State, will not unreasonably affect present and anticipated beneficial uses, and will not result in exceedance of applicable water quality objectives. This order and its requirements are consistent with Resolution No. 68-16.

State Water Board Resolution No. 92-49, "Policies and Procedures for Investigation and Cleanup and Abatement of Discharges Under Water Code Section 13304," applies to this discharge. It directs the Regional Water Boards to set cleanup levels equal to background water quality or the best water quality which is reasonable, if background levels cannot be restored. In this instance, background levels cannot be restored, based on the nature of the contamination, the limitations of available cleanup methods, and the Regional Water Board's experience with many other similarly-impacted sites. The cleanup levels established in this order are consistent with the maximum benefit to the people of the State, will not unreasonably affect present and anticipated beneficial uses of such water, and will not result in exceedance of applicable water quality objectives. This order and its requirements are consistent with the provisions of Resolution No. 92-49, as amended.

b. **Beneficial Uses**: The Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) is the Board's master water quality control planning document. It designates beneficial uses and water quality objectives for waters of the State, including surface waters and groundwater. It also includes programs of implementation to achieve water quality objectives. The Basin Plan was duly adopted by the Water Board and approved by the State Water Resources Control Board, Office of Administrative Law and the U.S. EPA, where required.

Regional Water Board Resolution No. 89-39, "Sources of Drinking Water," defines potential sources of drinking water to include all groundwater in the region, with limited exceptions for areas of high TDS, low yield, or naturally-high contaminant levels. Groundwater underlying and adjacent to the Site qualifies as a potential source of drinking water.

The Basin Plan designates the following potential beneficial uses of groundwater underlying and adjacent to the Site:

o Municipal and domestic water supply
o Industrial process water supply
o Industrial service water supply

o Agricultural water supply
o Freshwater replenishment to surface waters

The Santa Clara Valley Water District releases water from the State Water Project into Saratoga Creek about 1.75 miles downstream from the Site so that it can percolate into the creek bed for groundwater recharge. The nearest Santa Clara Valley Water District groundwater extraction well is over a mile away from the Site.

The existing and potential beneficial uses of Saratoga Creek in the vicinity of the Site include:

o Municipal and domestic supply *
o Agricultural supply *
o Industrial process water supply *
o Industrial service water supply *
o Groundwater recharge
o Water contact and non-contact recreation
o Wildlife habitat
o Cold freshwater and warm freshwater habitat
o Fish migration and spawning
o Preservation of rare and endangered species

*based on groundwater recharge

c. **Basis for Groundwater Cleanup Levels**: The groundwater cleanup levels for the Site are based on applicable water quality objectives and are the more stringent of EPA and California primary maximum contaminant levels (MCLs). Cleanup to this level will protect beneficial uses of groundwater and will result in acceptable residual risk to humans.

d. **Basis for Soil Cleanup Levels**: The soil sampling depth beneath the Hillview tenant space was limited by constraints on the equipment that could be used inside the building. Soil cleanup levels are included in this order in the event that additional soil sampling finds areas of elevated PCE in vadose zone soil under the building. The soil cleanup levels for the Site are intended to prevent leaching of contaminants to groundwater and will result in acceptable residual risk to humans in a residential-use scenario.

e. **Basis for Soil Gas Cleanup Levels**: The soil gas cleanup levels for the Site are intended to prevent vapor intrusion into occupied buildings and will result in acceptable residual risk to humans in a residential-use scenario.

f. **Basis for Indoor Air Cleanup Levels:** The indoor air cleanup levels for the Site are intended to prevent unhealthy levels of VOCs in indoor air as a result of

vapor intrusion and will result in acceptable residual risk to humans in a residential-use scenario.

13. **Future Changes to Cleanup Levels**: If new technical information indicates that the established cleanup levels are significantly over-protective or under-protective, the Regional Water Board will consider revising those cleanup levels.

14. **Risk Management**: The Regional Water Board considers the following human health risks to be acceptable at remediation Sites: a cumulative hazard index of 1.0 or less for non-carcinogens and a cumulative excess cancer risk of $10^{-6}$ to $10^{-4}$ or less for carcinogens. The screening level evaluation for this Site found contamination-related risks in excess of these acceptable levels. Active remediation will reduce these risks over time. However, risk management measures are needed at this Site during and after active remediation to assure protection of human health. Risk management measures include engineering controls (such as vapor intrusion mitigation) and instititutional controls (such as deed restrictions that prohibit certain land uses).

    The following risk management measures are needed at this Site:

    a. A deed restriction that notifies future owners of sub-surface contamination at the Source Property, prohibits the use of shallow groundwater beneath the Source Property as a source of drinking water until cleanup levels are met, and requires that all uses and development of the Source Property shall be consistent with any applicable Board order or risk management plan;
    b. Vapor intrusion mitigation; and
    c. Risk management plan for soil for the Source Property.

15. **Reuse or Disposal of Extracted Groundwater**: Regional Water Board Resolution No. 88-160 allows discharges of extracted, treated groundwater from Site cleanups to surface waters only if it has been demonstrated that neither reclamation nor discharge to the sanitary sewer is technically and economically feasible.

16. **Basis for 13304 Order**: Water Code section 13304 authorizes the Regional Water Board to issue orders requiring Dischargers to cleanup and abate waste where the Dischargers have caused or permitted waste to be discharged or deposited 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.

17. **Basis for 13267 Technical Reports:** Water Code section 13267 authorizes the Regional Water Board to require Dischargers to provide technical or monitoring reports. The burden of these reports, including costs, bears a reasonable relationship to the need for the report and the benefits to be obtained from the reports. Specifically, the reports required herein are necessary to ensure the protection of human health and the environment.

18. **Cost Recovery**: Pursuant to Water Code section 13304, the Dischargers are hereby notified that the Regional Water Board is entitled to, and may seek reimbursement for, all reasonable costs actually incurred by the Regional Water Board to investigate unauthorized discharges of waste and to oversee cleanup of such waste, abatement of the effects thereof, or other remedial action, required by this order.

19. **California Safe Drinking Water Policy:** It is the policy of the State of California that every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes. This order promotes that policy by requiring discharges to meet maximum contaminant levels designed to protect human health and ensure that water is safe for domestic use.

20. **CEQA**: This action is an order to enforce the laws and regulations administered by the Regional Water Board. As such, this action is categorically exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to section 15321 of the Resources Agency Guidelines.

21. **Notification**: The Regional Water Board has notified the Dischargers and all interested agencies and persons of its intent under Water Code section 13304 to prescribe Site cleanup requirements for the discharge, and has provided them with an opportunity to submit their written comments.

22. **Public Hearing**: The Regional Water Board, at a public meeting, heard and considered all comments pertaining to this discharge.

**IT IS HEREBY ORDERED**, pursuant to sections 13304 and 13267 of the Water Code, that the Dischargers (or their agents, successors, or assigns) shall clean up and abate the effects described in the above findings as follows:

A. **PROHIBITIONS**

1. The discharge of wastes or hazardous substances in a manner that will degrade water quality or adversely affect beneficial uses of waters of the State is prohibited.

2. Further significant migration of wastes or hazardous substances through subsurface transport to waters of the State is prohibited.

3. Activities associated with the subsurface investigation and cleanup that will cause significant adverse migration of wastes or hazardous substances are prohibited.

B. **REMEDIAL ACTION PLAN AND CLEANUP LEVELS**

1. **Implement Remedial Action Plan**: The Dischargers shall implement the remedial action plan described in Finding 11. Implementation of the RAP also includes development and implementation of vapor intrusion mitigation measures and a risk management plan and implementation.

2. **Groundwater Cleanup Levels**: The following groundwater cleanup levels shall be met in all wells identified in the attached Self-Monitoring Program:

| Constituent | Level (ug/l) | Basis |
|---|---|---|
| PCE | 5 | MCL |
| TCE | 5 | MCL |
| Cis-1,2-DCE | 6 | MCL |
| Vinyl Chloride | 0.5 | MCL |

MCL = maximum contaminant level

3. **Soil Cleanup Levels**: The following soil cleanup levels shall be met in vadose-zone soils.

| Constituent | Level (mg/kg) | Basis |
|---|---|---|
| PCE | 0.42 | Leaching to groundwater |
| TCE | 0.46 | Leaching to groundwater |
| Cis-1,2-DCE | 0.19 | Leaching to groundwater |
| Vinyl chloride | 0.001 | Leaching to groundwater |

4. **Soil Gas Cleanup Levels**: The following soil gas cleanup levels shall be met in vadose-zone soils.

| Constituent | Level ($ug/m^3$) | Basis |
|---|---|---|
| PCE | 240 | Human health – vapor intrusion |

| | | |
|---|---|---|
| TCE | 240 | Human health – vapor intrusion |
| Cis-1,2-DCE | 4,200 | Human health – vapor intrusion |
| Vinyl Chloride | 4.7 | Human health – vapor intrusion |

5. **Indoor Air Cleanup Levels**: The following indoor air cleanup levels shall be met in occupied residential buildings.

| Constituent | Level ($ug/m^3$) | Basis |
|---|---|---|
| PCE | 0.48 | Human health – inhalation |
| TCE | 0.48 | Human health – inhalation |
| Cis-1,2-DCE | 8.3 | Human health – inhalation |
| Vinyl Chloride | 0.0095 | Human health – inhalation |

The following indoor air cleanup levels shall be met in occupied commercial buildings.

| Constituent | Level ($ug/m^3$) | Basis |
|---|---|---|
| PCE | 2.1 | Human health – inhalation |
| TCE | 3.0 | Human health – inhalation |
| Cis-1,2-DCE | 35 | Human health – inhalation |
| Vinyl Chloride | 0.16 | Human health – inhalation |

C. **TASKS**

1. **REMEDIAL DESIGN IMPLEMENTATION REPORT**

COMPLIANCE DATE: May 11, 2018

Submit a technical report acceptable to the Executive Officer containing a remedial design implementation report. The report shall specify a detailed design for all RAP elements in Finding 11.

2. **COMPLETION OF REMEDIAL ACTIONS**

COMPLIANCE DATE: October 31, 2018

Complete tasks in the Task 1 report and submit a technical report acceptable to the Executive Officer documenting their completion. For ongoing actions, such as ERD/ISCR injections and vapor intrusion mitigation, the report shall document start-up as opposed to completion.

3. **WORKPLAN FOR ADDITIONAL RE-INJECTIONS AND/OR EXPANDED REMEDIATION SYSTEM (IF NEEDED)**

COMPLIANCE DATE: 60 days after workplan required by the Executive Officer

Submit a workplan acceptable to the Executive Officer for additional in-situ groundwater treatment that will substantially move the case towards case closure. The workplan shall describe all significant implementation steps and shall include an implementation schedule. The Executive Officer will require this workplan if post-injection monitoring results show that injections to date are insufficient to reach case closure in a reasonable timeframe.

4. **IMPLEMENTATION OF ADDITIONAL RE-INJECTIONS AND/OR EXPANDED REMEDIATION SYSTEM (IF NEEDED)**

COMPLIANCE DATE: 90 days after Executive Officer approval of the Task 3 workplan

Complete tasks in the Task 3 workplan and submit a technical report acceptable to the Executive Officer documenting their completion. For ongoing actions, such as ERD/ISCR injections, the report shall document system start-up as opposed to completion.

5. **OPERATION AND MAINTENANCE PLAN FOR ALL VAPOR INTRUSION MITIGATION ELEMENTS OF THE RAP**

COMPLIANCE DATE: August 29, 2018

Submit a technical report acceptable to the Executive Officer containing an operation and maintenance plan for all vapor intrusion mitigation elements of the RAP. The plan shall apply to all structures that are affected by vapor intrusion due to Hillview PCE discharges. The plan shall include responsible entities, performance goals and measures, operation and maintenance activities, monitoring, sampling and analysis, inspections, contingency plan, and reporting. The plan shall consider the guidelines in the Regional Water Board's October 2014 Interim Framework for Assessment of Vapor Intrusion at TCE-Contaminated Sites in the San Francisco Bay Region.

6. **OPERATION AND MAINTENANCE PLAN IMPLEMENTATION REPORT**

COMPLIANCE DATE: November 30, 2018, and every year thereafter

Implement the approved operation and maintenance plan for all vapor intrusion mitigation elements of the RAP and submit a technical report acceptable to the Executive Officer documenting its implementation over the previous 12-month period ending. The report may be combined with a self-monitoring report, provided that the report title clearly indicates its scope. The report may propose changes to the operation and maintenance plan, although those changes shall not take effect until approved by the Regional Water Board or the Executive Officer.

7. **RISK MANAGEMENT PLAN**

COMPLIANCE DATE: July 31, 2018

Submit a technical report acceptable to the Executive Officer containing a risk management plan for demolition, soil excavation, disposal activities, and redevelopment at the Source Property.

8. **PROPOSED DEED RESTRICTION**

COMPLIANCE DATE: 60 days prior to the Dischargers requesting case closure

Submit a proposed deed restriction acceptable to the Executive Officer whose goal is to limit Source Property occupants' exposure to Site contaminants to acceptable levels. The proposed deed restriction shall notify future owners of sub-

surface contamination at the Source Property, prohibit the use of shallow groundwater beneath the Source Property as a source of drinking water until cleanup levels are met, and require that all uses and development of the Source Property shall be consistent with any applicable Board order or risk management plan. The proposed deed restriction shall incorporate by reference the risk management plan. The proposed deed restriction shall name the Regional Water Board as a beneficiary and shall anticipate that the Regional Water Board will be a signatory. Frank L. Burrell as trustee of the Frank L. Burrell 1937 Trust shall be responsible for this task.

9. **RECORDATION OF DEED RESTRICTION**

COMPLIANCE DATE: 60 days after Executive Officer approval of the proposed deed restriction

Record the approved deed restriction and submit a technical report acceptable to the Executive Officer documenting that the deed restriction has been duly signed by all parties and has been recorded with the appropriate County Recorder. The report shall include a copy of the recorded deed restriction. Frank L. Burrell as trustee of the Frank L. Burrell 1937 Trust shall be responsible for this task.

10. **FIVE-YEAR STATUS REPORT**

COMPLIANCE DATE: May 1, 2023, and every five years thereafter

Submit a technical report acceptable to the Executive Officer evaluating the effectiveness of the approved remedial action plan. The report shall include:

a. Summary of effectiveness in controlling contaminant migration and protecting human health and the environment
b. Comparison of contaminant concentration trends with cleanup levels
c. Comparison of anticipated versus actual costs of cleanup activities
d. Performance data (e.g., groundwater volume extracted, chemical mass removed, mass removed per million gallons extracted)
e. Cost effectiveness data (e.g., cost per pound of contaminant removed)
f. Summary of additional investigations (including results) and significant modifications to remediation systems
g. Additional remedial actions proposed to meet cleanup levels (if applicable) including time schedule

If cleanup levels have not been met and are not projected to be met within a reasonable time, the report shall assess the technical practicability of meeting cleanup levels and may propose an alternative cleanup strategy.

11. **PROPOSED CURTAILMENT**

COMPLIANCE DATE: 60 days prior to proposed curtailment

Submit a technical report acceptable to the Executive Officer containing a proposal to curtail remediation. Curtailment includes system closure (e.g., well closure), system suspension (e.g., cease extraction but wells retained), and significant system modification (e.g., major reduction in extraction rates, closure of individual extraction wells within extraction network). The report shall include the rationale for curtailment. Proposals for final closure shall demonstrate that cleanup levels have been met or that the Site qualifies for low-threat closure based on State Water Board Resolution 92-49 as amended and any associated Regional Water Board guidance.

12. **IMPLEMENTATION OF CURTAILMENT**

COMPLIANCE DATE: 60 days after Executive Officer approval of proposed curtailment

Implement the approved curtailment and submit a technical report acceptable to the Executive Officer documenting completion of the tasks identified in the proposed curtailment report.

13. **EVALUATION OF NEW HEALTH CRITERIA**

COMPLIANCE DATE: 90 days after evaluation report required by Executive Officer

Submit a technical report acceptable to the Executive Officer evaluating the effect on the approved remedial action plan of revising one or more cleanup levels in response to revision of drinking water standards, maximum contaminant levels, or other health-based criteria.

14. **EVALUATION OF NEW TECHNICAL INFORMATION**

COMPLIANCE DATE: 90 days after evaluation report required by Executive Officer

Submit a technical report acceptable to the Executive Officer evaluating new technical information which bears on the approved remedial action plan and cleanup levels for this Site. In the case of a new cleanup technology, the report should evaluate the technology using the same criteria used in the feasibility study. Such technical reports shall not be required unless the Executive Officer determines that the new information is reasonably likely to warrant a revision in the approved remedial action plan or cleanup levels.

15. **Delayed Compliance**: If the Dischargers are delayed, interrupted, or prevented from meeting one or more of the completion dates specified for the above tasks, the Dischargers shall promptly notify the Executive Officer, and the Regional Water Board may consider revision to this order.

D. **PROVISIONS**

1. **No Nuisance**: The storage, handling, treatment, or disposal of polluted soil or groundwater shall not create a nuisance as defined in Water Code section 13050, subdivision (m).

2. **Good O&M**: The Dischargers shall maintain in good working order and operate as efficiently as possible any facility or control system installed to achieve compliance with the requirements of this order.

3. **Cost Recovery**: The Dischargers shall be liable, pursuant to Water Code section 13304, to the Regional Water Board for all reasonable costs actually incurred by the Regional Water Board to investigate unauthorized discharges of waste and to oversee cleanup of such waste, abatement of the effects thereof, or other remedial action, required by this order. If the Site addressed by this order 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. Any disputes raised by the Dischargers over reimbursement amounts or methods used in that program shall be consistent with the dispute resolution procedures for that program.

4. **Access to Site and Records**: In accordance with Water Code section 13267, subdivision (c), the Dischargers shall permit the Regional Water Board or its authorized representative:

    a. Entry upon premises in which any pollution source exists, or may potentially exist, or in which any required records are kept, which are relevant to this order.

    b. Access to copy any records required to be kept under the requirements of this order.

    c. Inspection of any monitoring or remediation facilities installed in response to this order.

    d. Sampling of any groundwater or soil that is accessible, or may become accessible, as part of any investigation or remedial action program undertaken by the Dischargers.

5. **Self-Monitoring Program**: The Dischargers shall comply with the Self-Monitoring Program as attached to this order and as may be amended by the Executive Officer.

6. **Contractor / Consultant Qualifications**: All technical documents shall be signed by and stamped with the seal of a California registered geologist, a California certified engineering geologist, or a California registered civil engineer.

7. **Lab Qualifications**: All samples shall be analyzed by State-certified laboratories or laboratories accepted by the Regional Water Board using approved U.S. EPA methods for the type of analysis to be performed. Quality assurance/quality control (QA/QC) records shall be maintained for Regional Water Board review. This provision does not apply to analyses that can only reasonably be performed onSite (e.g., temperature).

8. **Document Distribution**: An electronic version of all correspondence, technical reports, and other documents pertaining to compliance with this order shall be provided to the Regional Water Board and to the Santa Clara Valley Water District. The Executive Officer may modify this distribution list as needed.

   Electronic copies of all correspondence, technical reports, and other documents pertaining to compliance with this order shall be uploaded to the State Water Board's GeoTracker database within five business days after submittal to the Regional Water Board. Guidance for electronic information submittal is available at:
   http://www.waterboards.ca.gov/water_issues/programs/ust/electronic_submittal

9. **Reporting of Changed Owner or Operator**: The Dischargers shall file a technical report on any changes in contact information, Site occupancy or ownership associated with the property described in this order.

10. **Reporting of Hazardous Substance Release**: If any hazardous substance is discharged in or on any waters of the State, or discharged or deposited where it is, or probably will be, discharged in or on any waters of the State, the Dischargers shall report such discharge to the Regional Water Board by calling (510) 622-2369.

    A written report shall be filed with the Regional Water Board within five working days. The report shall describe: the nature of the hazardous substance, estimated quantity involved, duration of incident, cause of release, estimated size of affected area, nature of effect, corrective actions taken or planned, schedule of corrective actions planned, and persons/agencies notified.

This reporting is in addition to reporting to the California Emergency Management Agency required pursuant to the Health and Safety Code.

11. **Periodic SCR Review**: The Regional Water Board will review this order periodically and may revise it when necessary.

I, Bruce H. Wolfe, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on *Month Day, Year*.

_____
Bruce H. Wolfe
Executive Officer

**Compliance Notice:** Failure to comply with the requirements of this order may subject you to enforcement action, including but not limited to imposition of administrative civil liability under Water Code sections 13268 or 13350, or referral to the Attorney General for injunctive relief or civil or criminal liability.

Attachments: Site Map
Self-Monitoring Program
March 26, 2018, Response to Comments

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD**
**SAN FRANCISCO BAY REGION**

**SELF-MONITORING PROGRAM for:**

**SANG LEE, INDIVIDUALLY AND DOING BUSINESS AS HILLVIEW CLEANERS;**
**SUK LEE, INDIVIDUALLY AND DOING BUSINESS AS HILLVIEW CLEANERS;**
**EUGENE ZAMBETTI, INDIVIDUALLY AND DOING BUSINESS AS HILLVIEW CLEANERS;**
**ESTATE OF JULIA ZAMBETTI, DECEASED, INDIVIDUALLY AND DOING BUSINESS AS HILLVIEW CLEANERS;**
**ESTATE OF PETER ZAMBETTI, DECEASED, INDIVIDUALLY AND DOING BUSINESS AS HILLVIEW CLEANERS; AND**
**FRANK L. BURRELL, TRUSTEE of the FRANK L. BURRELL 1937 TRUST**

for the property located at

14440 BIG BASIN WAY
SARATOGA
SANTA CLARA COUNTY

1. **Authority and Purpose**: The Regional Water Board requires the technical reports identified in this Self-Monitoring Program pursuant to Water Code sections 13267 and 13304. This Self-Monitoring Program is intended to document compliance with Regional Water Board Order No. R2-2018*XXXX* (site cleanup requirements).

2. **Monitoring**: The Dischargers shall measure groundwater elevations semi-annually in all monitoring wells, and shall collect and analyze representative samples of groundwater according to the following table:

| Well Identification | Location | Approximate Screen Interval | Sampling Frequency | Analyses |
|---|---|---|---|---|
| Shallow Zone | | | | |
| HV1 | Inside Hillview Cleaners | 4 to 19 | A | 8260 |
| MW-3 | Crossgradient | 25 to 35 | None | |
| SGI-MW-8 | Every 2 Years | 20 to 30 | Every 2 Years | 8260 |
| Middle Zone | | | | |

| | | | | |
|---|---|---|---|---|
| BP-MW-3 | Former BP Service Station | 7 to 45 | A | 8260 |
| BP-EX-4 | Former BP Service Station | 19 to 39 | None | |
| SGI-MW-12 | North Side of Big Basin Way | 20 to 45 | Every 2 Years | 8260 |
| SGI-MW-13 | West of Former BP Service Station | 20 to 45 | None | |
| SGI-MW-14 | West of Former BP Service Station | 20 to 45 | None | |
| SGI-MW-15 | West of Former BP Service Station | 20 to 45 | None | |
| SGI-MW-16 | East of Former BP Service Station | 20 to 45 | None | |
| BP-E-3 | Former BP Service Station | 20 to 35 | None | |
| MW-4 | Downgradient | 25 to 35 | None | |
| CV-RP-7 | Sidewalk near Starbucks | 32 to 54 | Every 2 Years | 8260 |
| MW-2 | Northeast Side | 30 to 50 | Semi-Annually | 8260 |
| BP-E-4 | Former BP Service Station | 30 to 45 | Semi-Annually | 8260 |
| CV-DR-4 | Dental Property | 30 to 50 | Every 2 Years | 8260 |
| CV-DR-2 | Upgradient | 33 to 53 | Semi-Annually | 8260 |
| CV-DR-3 | East of CV-DR-2 | 30 to 50 | Annually | 8260 |
| MW-17 | Northeast Side | 34 to 44 | Semi-Annually | 8260<br>Bio-parameters |
| MW-1 | Immediately Downgradient | 35 to 55 | Annually | 8260 |
| CV-RP5 | Upgradient | 35 to 60 | Semi-Annually | 8260 |

| | | | | |
|---|---|---|---|---|
| INJ-01A | Immediatley Downgradient | 38 to 48 | Semi-Annually | 8260<br>Bio-parameters |
| INJ-05A | Immediately Downgradient | 38 to 48 | None | |
| INJ-06A | Crossgradient | 38 to 48 | None | |
| SGI-MW-9 | Immediately Downgradient | 41 to 51 | Semi-Annually | 8260 |
| MW-6 | Crossgradient | 45 to 55 | None | |
| MW-7 | Downgradient | 45 to 65 | Every 2 Years | 8260 |
| BP-DW-1 | Former BP Station | 48 to 58 | Semi-Annually | 8260 |
| MW-18 | Northeast Side | 48.5 to 53.5 | Semi-Annually | 8260<br>Bio-parameters |
| New Well | Near SGI-MW-12 but deeper | 50 to 60 | SemiAnnually | 8260 |
| INJ-01B | Immediately Downgradient | 52 to 62 | Semi-Annually | 8260<br>Bio-parameters |
| INJ-05B | Immediately Downgradient | 52 to 62 | Semi-Annually | 8260 |
| INJ-06B | Immediately Downgradient | 52 to 62 | Semi-Annually | 8260 |
| CV-MW-2A | Former Chevron Property | | Annually | 8260 |
| Deep Zone | | | | |
| BP-DW-2 | Former BP Service Station | 61 to 66 | Every 2 Years | 8260 |
| BP-DW-3 | Former BP Service Station | 56 to 61 | Every 2 Years | 8260 |
| BP-DW-4 | Former BP Service Station | 85 to 95 | Every 2 Years | 8260 |
| SGI-MW-10 | Immediately Downgradient | 73 to 83 | Annually | 8260 |

| Saratoga Creek Surface Water Sampling Locations | | | | |
|---|---|---|---|---|
| BM-4 | Upstream Location West of Bridge | NA | Semi-Annually | 8260 |
| BM-2 | Just Upstream of Storm Drain Outfall | NA | Semi-Annually | 8260 |
| BM-5 | Just Downstream of Storm Drain Outfall | NA | Semi-Annually | 8260 |
| BM-6 | Downstream Location East of Bridge | NA | Semi-Annually | 8260 |

Key: SA = Semi-Annually (January and July)
A = Annually (July)
8260 = EPA Method 8260 or equivalent
Bio-parameters - bioremediation parameters (wells in immediate vicinity of injections) – sulfate, ferrous iron, total organic carbon, methane, ethene

The Dischargers shall sample any new monitoring or extraction wells semi-annually and analyze groundwater samples for the same constituents as shown in the above table. The Dischargers may propose changes in the above table; any proposed changes are subject to Executive Officer approval.

3. **Annual Monitoring Reports**: The Dischargers shall submit annual monitoring reports to the Regional Water Board no later than November 30 of each year. The reports shall include:

a. Transmittal Letter: The transmittal letter shall discuss any violations during the reporting period and actions taken or planned to correct the problem. The letter shall be signed by the Dischargers' principal executive officer or his/her duly authorized representative, and shall include a statement by the official, under penalty of perjury, that the report is true and correct to the best of the official's knowledge.

b. Groundwater Elevations: Groundwater elevation data shall be presented in tabular form, and a groundwater elevation map shall be prepared for each monitored water-bearing zone. Historical groundwater elevations shall be included in the report each year.

c. Groundwater Analyses: Groundwater sampling data shall be presented in tabular form, and an isoconcentration map shall be prepared for one or more key contaminants for each monitored water-bearing zone, as appropriate. The report shall indicate the analytical method used, detection limits obtained for each reported constituent, and a summary of QA/QC data. Historical groundwater

sampling results shall be included in the report each year. The report shall describe any significant increases in contaminant concentrations since the last report, and any measures proposed to address the increases. Supporting data, such as lab data sheets, need not be included (however, see record keeping - below).

d. Groundwater Extraction: If applicable, the report shall include groundwater extraction results in tabular form, for each extraction well and for the Site as a whole, expressed in gallons per minute and total groundwater volume for the quarter. The report shall also include contaminant removal results, from groundwater extraction wells and from other remediation systems (e.g., soil vapor extraction), expressed in units of chemical mass per day and mass for the quarter. Historical mass removal results shall be included in the report each year.

e. Status Report: The report shall describe relevant work completed during the reporting period (e.g., Site investigation, interim remedial measures) and work planned for the following year.

4. **Violation Reports**: If the Dischargers violate requirements in the Site Cleanup Requirements, then the Dischargers shall notify the Regional Water Board office by telephone as soon as practicable once the Dischargers have knowledge of the violation. Regional Water Board staff may, depending on violation severity, require the Dischargers to submit a separate technical report on the violation within five working days of telephone notification.

5. **Other Reports**: The Dischargers shall notify the Regional Water Board in writing prior to any Site activities, such as construction or underground tank removal, which have the potential to cause further migration of contaminants or which would provide new opportunities for Site investigation.

6. **Record Keeping**: The Dischargers or their agent shall retain data generated for the above reports, including lab results and QA/QC data, for a minimum of six years after origination and shall make them available to the Regional Water Board upon request.

7. **SMP Revisions**: Revisions to the Self-Monitoring Program may be ordered by the Executive Officer, either on his/her own initiative or at the request of the Dischargers. Prior to making SMP revisions, the Executive Officer will consider the burden, including costs, of associated self-monitoring reports relative to the benefits to be obtained from these reports.

APPENDIX B

COMMENTS RECEIVED

ONLINE ONLY AT

https://www.waterboards.ca.gov/sanfranciscobay/board_info/agendas/2018/April/4-11-18.pdf

# APPENDIX C

# RESPONSE TO COMMENTS

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD**
**SAN FRANCISCO BAY REGION**

Cleanup Staff's Response to Comments on Tentative Order for Site Cleanup Requirements
14440 Big Basin Way, Saratoga, Santa Clara County
March 26, 2018
File No. 43S0558 (DIB)

This document provides Cleanup Staff's response to comments received on the Tentative Order (TO) for the Site Cleanup Requirements for the subject Site. On November 16, 2018, Cleanup Staff distributed the Tentative Order for comment. We received comments from the following entities:

- Frank L. Burrell, III as Trustee of Frank L. Burrell 1937 Trust (property owner)
- Estates of Peter and Julia Zambetti (former dry cleaner owner and operator)
- Eugene Zambetti (former dry cleaner lessor/owner)
- Sang Bae Lee and Suk Lee (current dry cleaner owner and operator)
- Property owner of 14420/14422 Big Basin Way (adjacent property)

Subsequently, Cleanup Staff asked Eugene Zambetti for additional information to rebut the evidence provided in Mr. Burrell's submission concerning Mr. Zambetti's involvement in the dry cleaner business. In response, Mr. Zambetti's attorney replied with an email and attachments. Because Cleanup Staff specifically asked for the additional information and considered it in drafting the revised TO, we have included that correspondence in the agenda materials to ensure that the Board has all relevant evidence before it.

Below is a summary of comments received and Cleanup Staff's responses to those comments.

## A. Paladin Law on behalf of Frank L. Burrell, III as Trustee of Frank L. Burrell 1937 Trust (property owner)

**1) *Comment:*** The TO hinders ongoing settlement negotiations, is delaying cleanup, and should not be adopted or should be delayed by 180 days. Clean up of the Site is currently being litigated in two actions. The parties to those actions have negotiated a settlement in principle that will resolve both actions and will facilitate the funding and implementation of the approved Remedial Action Plan (RAP) for the Site. The various settlement documents are very close to being completed and executed, and Petitioner believes that the settlement is the best hope for a cleanup and regulatory closure of the Site. The TO, with its threat of administrative civil penalties against the parties to that action, adds another layer of complexity to those settlement negotiations and, in the end, hinders rather than helps those negotiations. The TO is delaying site cleanup because the parties have had to comment on the TO. The TO should either not be adopted or should be delayed by 180 days.

***Response:*** Cleanup Staff disagrees. The TO is essential to requiring implementation of cleanup. The litigation has been ongoing for 13 years. While we acknowledge that the Dischargers have completed considerable work (i.e., the investigation, two pilot studies of cleanup technologies,

and development of a conceptual RAP), the TO is now needed to require implementation of the RAP and provide for an enforcement mechanism if the cleanup is not completed. In our experience, issuance of a TO helps to accelerate settlement negotiations, not slow them down, because the TO provides a concrete roadmap of future expectations that may be used to guide discussions of finances. The Dischargers have already commented on the TO, so there is no additional time commitment to move forward. We are not willing to recommend further delaying the TO because of the delays already encountered and because the Site is highly polluted. Also see response to comment 2 below. Thus, no change was made to the TO.

**2) *Comment:*** The schedule and deadlines in the TO are inconsistent with the intent of the submitted RAP, which was to support the Parties' ongoing mediation efforts to fund the approved remedial actions and not to establish inflexible deadlines.

***Response:*** Cleanup Staff agrees that the TO's schedule and deadlines are more specific than the approved RAP, which lacks any implementation schedule. However, an implementation schedule is necessary to assure timely cleanup of this significantly-polluted site. Findings 6 and 7 of the TO describe the current magnitudes of pollutant concentrations compared to environmental screening levels (ESLs). The discharges from Hillview Cleaners have impacted multiple properties and there is an unabated source of contamination migrating to Saratoga Creek. The Santa Clara Valley Water District has commented that a vigorous and robust cleanup of contaminated groundwater is necessary at this Site. The Dischargers did not submit an implementation schedule with their conceptual RAP. Therefore the TO includes an enforceable schedule to implement the RAP. Thus, no change was made to the TO.

**3a) *Comment:*** The TO is vague and ambiguous on which buildings and locations of contamination are a concern.

***Response:*** Cleanup Staff generally agrees. Finding 1 has been revised to further describe the Site. Finding 6 of the TO describes the extent of pollution. The cleanup levels in Section B apply to all areas of the Site where cleanup levels are exceeded.

***3b) Comment:*** The TO is vague and ambiguous on its determination that conditions at the Site are a nuisance.

***Response***: Cleanup Staff disagrees. Findings 6 and 7 of the TO describe the current magnitudes of pollutant concentrations compared to ESLs. Thus, no change was made to the TO.

***3c) Comment:*** The TO is vague and ambiguous on which buildings have PCE in indoor air at concentrations greater than ESLs.

***Response:*** Cleanup Staff agrees. Finding 6 has been revised to reflect that there are two such buildings.

***3d) Comment:*** The TO is vague on its basis for naming Burrell as property owner as a discharger in a Water Code § 13304 order.

***Response:*** Cleanup Staff disagrees. Mr. Burrell is named as a discharger because he is the trustee of the Frank L. Burrell, 1937 Trust, the owner of the property on which there was and continues to be discharge of waste, and had and has knowledge of the activities that caused the discharge, and had and has the legal ability to control the discharge. As the current owner, he has the ability to control ongoing migration of the PCE plume. *In the Matter of the Petition of Zoecon Corporation* (Order No. WQ 86-2) addresses the issue of responsibility of landowners. On page 4 of that Order, that State Water Board concluded, "there is an actual movement of waste from soils to ground water and from contaminated to uncontaminated ground water at the site which is sufficient to constitute a 'discharge' by the petitioner…." Thus, Mr. Burrell is properly identified as a discharger. Thus, no change was made to the TO.

**3e) Comment:** The TO is vague as to why its issuance is necessary, urgent, or appropriate at this time. The contamination is already trending down both on and offsite.

***Response:*** Cleanup Staff disagrees. See response to comment 1 and 2 above. Thus, no change was made to the TO.

***4) Comment:*** The Tentative Order does not contain, attach, enclose, or cite to evidence to support its findings of fact.

***Response:*** Cleanup Staff disagrees. The findings in the TO contain sufficient detail and are supported by the documents contained in GeoTracker as the record for this Site. Thus, no change was made to the TO.

***5) Comment:*** The Tentative Order does not cite sufficient legal authority specifically citing finding 19 regarding the California Safe Drinking Water Policy, "by way of example."

***Response:*** Cleanup Staff disagrees. In 2012, Governor Brown signed Assembly Bill 685 that added section 106.3 to the Water Code to recognize the human right to water. Thus, no change was made to the TO. To the extent there are additional sections that are contested on this basis, Cleanup Staff has no ability to respond if they are not identified.

***6) Comment:*** The Tentative Order undercuts the potential for low-threat closure.

***Response:*** Comment noted. Cleanup Staff has revised Task 10 of the TO on proposed curtailment to clarify that low-threat closure is an option based on State Water Board resolution 92-49 as amended and any associated Regional Water Board guidance.

***7) Comment:*** The Tentative Order fails to acknowledge Burrell's efforts to clean up the Site.

***Response:*** Comment noted. Findings 6 and 9 – 11 describe the work the Dischargers have completed. This includes Burrell's efforts. Thus, no change was made to the TO.

***8) Comment:*** The site history section of the TO is incomplete and inaccurate. Eugene Zambetti's involvement in running Hillview Cleaners was more extensive than outlined in the Tentative Order.

***Response:*** Cleanup Staff agrees. Finding 2 of the TO has been revised to state that Eugene Zambetti owned or leased Hillview Cleaners from 1976 – 1983 and incorporates this Response to Comments, which identifies substantial evidence for naming Eugene Zambetti.

***9) Comment:*** The Tentative Order fails to discuss the history of PCE releases at Hillview Cleaners.

***Response:*** Cleanup Staff disagrees that additional discussion is necessary. Findings 2 and 6 of the TO describe the dry cleaners' use of PCE and concentrations of PCE is soil, soil gas, groundwater, and indoor air. Finding 2 has been revised to elaborate on the PCE discharges. A further discussion is included below in the response to comments from the estates of Peter and Julia Zambetti. Additional detailed information concerning spills was provided in Mr. Burrell's comment letter and the deposition of Eugene Zambetti, but there is no need to identify every piece of evidence in the TO; the discussion in the TO and in this document provide substantial evidence to support that releases of PCE occurred at the Source Property and continue to migrate.

***10) Comment:*** A deed restriction is not necessary at this time and it should not prohibit sensitive uses such as residential because Burrell is trying to sell the Source Property for a mixed residential and commercial redevelopment.

***Response:*** Cleanup Staff agrees. To the extent that the Source Property still needs a deed restriction in the future, the compliance date for the deed restriction has been changed to 60 days prior to the Dischargers requesting case closure. See also our response to comment E.2 below.

Where hazardous materials are present in the subsurface on a source property, a deed restriction is reasonably necessary to protect present and future human health and safety or the environment. The proposed restriction on sensitive uses, such as residential, has been removed from finding 14 and task 8 for the following reasons:

- Saratoga's zoning conditionally allows residential uses at the Source Property.
- The TO has been revised to include residential cleanup levels.
- The TO requires implementation of the RAP including active remediation, vapor mitigation measures, and risk management measures, which collectively will be protective of residential uses.

## B. Crowell/Moring on behalf of the Estates of Peter and Julia Zambetti (former dry cleaner operator), Deceased, and Fireman's Fund Insurance Company

***1) Comment:*** Peter or Julia Zambetti are deceased and therefore cannot be ordered to clean up the Site.

***Response:*** Cleanup Staff disagrees. Fireman's Fund's reading of the Probate Code, focused on the ability to litigate and trigger insurance in litigation, is too narrow. Probate Code section 7001 provides that, "The decedent's property is subject… to the rights of beneficiaries, creditors, and other persons as provided by law." Section 9000 notes that claims arise from "[l]iability of the

decedent, whether arising in contract, tort, or otherwise." The CERCLA context advises: "If a decedent would have been a liable party under CERCLA were he presently alive, the plaintiff should be allowed to look to the decedent's assets, in the hands of the estate or the estate's beneficiaries, to satisfy that liability." (Canadyne-Georgia v. Bank of America, N.A. (2001) 174 F.Supp.2d 1337, 1354.) Prior actions of this Regional Water Board and the State Water Resources Control Board have identified estates of deceased as discharges. (See State Board Order 87-9 (Jeanne McBride, Public Administrator) [discussing naming of estates, conservators and administrators] and Dismissal of Petition of Estate of Joseph Giesen (Sept. 3, 2003) [upholding the San Diego Local Oversight Program's determination that the Estate was a responsible party where the deceased owned the property where the release occurred].)

Fireman's Fund cites to no authority contravening the Regional and State Boards practice of naming estates as dischargers. The naming of dischargers in the TO intentionally replicates the naming of parties in the dischargers' ongoing litigation regarding the Site, for purposes of triggering whatever trusts, estates, assets, and insurance are available to address the Site, and to avoid disputes over naming issues. We are unaware of any orders dismissing named parties from that lawsuit.

In addition, the evidence to name Peter and Julia Zambetti as dischargers includes:

- Their history of solvent usage beginning in 1955.
- The physical evidence of PCE at and downgradient from the Site.
- Common industry-wide operational practices that are known to cause spills.
- The inefficiencies of older dry cleaning equipment from the 1950s through the 1990s that caused older dry cleaners to use more solvent and release a greater percentage of the solvent used.

Thus, no change was made to the TO.

***2) Comment:*** There is no basis for the Regional Water Board to order Fireman's Fund to clean up the Site.

***Response:*** Comment noted. Fireman's Fund is not named as a discharger on the TO. Thus, no change was made to the TO.

***3) Comment:*** There is not substantial evidence that Peter and Julia Zambetti discharged pollutants at the Site. Testimony by Eugene Zambetti was ruled inadmissible because it was hearsay.

***Response:*** Cleanup Staff finds substantial evidence that Peter and Julia Zambetti discharged PCE at the Site. The evidence includes the history of solvent usage beginning in 1955, the physical evidence of PCE at the Site and downgradient from it, common industry-wide operational practices, and the inefficiencies of older dry cleaning equipment from the 1950s through the 1990s, as described below. Thus, no change was made to the TO.

History of Solvent Usage

Peter and Julia Zambetti operated the Hillview Cleaners dry cleaner from 1955 to 1983. PCE was the most common dry cleaning solvent during that time (see for example the Santa Clara Valley Water District's *Study of Potential for Groundwater Contamination from Past Dry Cleaner Operations in Santa Clara County*, undated (circa 2007), posted on the Regional Water Board's website at: http://www.waterboards.ca.gov/sanfranciscobay/publications_forms/documents/SCVWD_dry_cleaner_study_2007.pdf).

Physical Evidence

The presence of elevated levels of PCE in the subsurface beneath and adjacent to Hillview Cleaners as described in finding 6 of the TO is evidence that significant releases of PCE occurred at the Site.

The layout of the Hillview Cleaners tenant space includes the following features that are conducive to PCE discharges:

- A below grade trench, located at the rear of the facility, creates a conduit for any spills or other releases of material to enter.
- The storm drain catch basin at the rear of the tenant space is below grade and un-lined. Any release of material at the rear of the property could enter the storm drain and percolate down into soil.
- The sewer lateral has breaks in it and during the time that the older dry cleaning machine was in use the lateral may have been one of the routes by which PCE entered soil and groundwater.

Testimony from depositions for the legal actions over the dischargers of PCE at the Site includes the following two instances of spills of PCE during Peter and Julia Zambetti's tenure:

- A burglary attempt caused a drum of PCE to tip over and spill.
- A hose disconnected during a PCE delivery and cause a PCE spill.

(See also comment letter from Mr. Burrell, which identifies releases in some detail.)

To the extent a court determined Eugene Zambetti's testimony hearsay and inadmissible, such a finding is irrelevant in a Regional Water Board proceeding because the Regional Water Board may consider all reasonably relevant evidence, including hearsay, and is not bound by technical rules of evidence. (Gov. Code § 11513; Cal. Code Regs., tit. 23, § 648.5.1.)

Industry-wide Operational Practices

The Site investigations indicate that there were substantial discharges of PCE. These discharges of PCE are consistent with common industry-wide operational practices for dry cleaners that operated from the 1950s to the 1990s. The prevalence and sources of dry cleaner discharges is discussed in the 2007 Santa Clara Valley Water District Study of Potential for Groundwater Contamination from Past Dry Cleaner Operations in Santa Clara County (Water District Study). Examples of common release mechanisms from dry cleaner operations include:

- PCE spilled onto the floor from dry cleaning equipment maintenance and operation, equipment failure, solvent transfer and storage, or drips from wet clothing with residual PCE;

- PCE spilled onto the floor then seeped through concrete or cracks and reached the soil and groundwater below;
- PCE soaked into concrete and then volatilizing into indoor air;
- Spent PCE dumped onto soil behind building;
- PCE-saturated spent cartridge filters stored behind building;
- Water containing PCE (e.g., from water/solvent separator) discharged to the floor drain with leakage from the sewer lateral to soil and groundwater; and
- PCE in soil and groundwater volatilizing and intruding into indoor air.

The concentrations and distribution of PCE in groundwater, soil gas, and indoor air at the Site indicate that the Hillview Cleaners' dry cleaning operations were no different than the dry cleaners discussed in the Water District Study that discharged PCE.

Inefficiencies of Older Dry Cleaning Equipment

As discussed on pages 43 – 47 and 142 – 148 of the Water District Study, older dry cleaners used more solvent and released a greater percentage of the solvent used due to relative inefficiencies of the older equipment compared to newer equipment. The year during which a dry cleaner began operations is a useful indicator of the potential amount of PCE mass released. In general, the earlier a dry cleaner operated the more likely it is that larger quantities of PCE were released to soil and groundwater due to older equipment and common PCE handling and disposal practiced for that time period. For example, Table 13 on page 47 of the Water District Study shows how typical dry cleaners from the 1960s used much more PCE per pound of clothes cleaned and had a much higher leakage rate than a typical dry cleaner from the 1990s.

## C. WHSB on behalf of the Eugene Zambetti (former dry cleaner operator)

***1) Comment:*** Eugene Zambetti should be removed as a named discharger in the TO because his role as an employee at the dry cleaner involved managerial responsibilities to assist his mother in running the business and his role was limited to a business function. Eugene did not handle dry cleaning chemicals or assist in the dry cleaning process.

***Response:*** Cleanup Staff disagrees. There is substantial evidence that Mr. Zambetti identified himself both in public and on legal documents as the owner and lessee of Hillview Cleaners and that he profited from the sale of Hillview Cleaners. See for example the below-referenced statements from Mr. Zambetti's 2011 deposition and the attachments to Burrell's comments. This evidence indicates Mr. Zambetti was in a position of authority over the operations at the business even if he never personally ran the machines or handled chemicals. Further, all the evidence concerning discharges and migration of PCE in the above section B.3 for Peter and Julia Zambetti also applies to Eugene Zambetti and is hereby incorporated into this section. Thus, no change was made to the TO.

Statements in Eugene Zambetti's deposition in 2011:

- 1965-1983 employed by Hillview Cleaners (Deposition of Eugene Zambetti (March 8, 2011) (Depo.), p. 10)
- Mr. Lee approached "my mother and myself" to buy the business. (Depo., p. 12.)

- "My mother and I decided to sell the business" (Depo., p. 14.)

Attachments to Burrells' comments:

- Exhibit E is a copy of a lease and lease extension signed by Eugene Zambetti, 1976-1981
- Exhibit F states Mr. Zambetti is the owner of Hillview Cleaner (1977)
- Exhibit F-2 identifies Zambetti as the owner who agrees to make sure equipment is operational (1983)
- Bill of sale in the same exhibit identifies Eugene Zambette as the seller or "secured party" (1983)
- Check for $33,500 made out to Eugene Zambetti as payment for Hillview Cleaners (1983) (Ex. F-2)
- Mr. Zambetti also signed the Assignment of Lease to Sang Bae Lee (March 27, 1983) (Exs. F-2 and G.)
- GZAMBETTI02520 shows a statement in Mr. Zambetti's own handwriting, offering "my professional dry cleaning opinion" about Mr. Lee's ability to continue the business (Ex. F-2)
- Mr. Zambetti signed an August 22, 2013 Declaration under penalty of perjury that he "sold the business to San B. Lee in 1983," which attaches the Bill of Sale (dated April 28, 1983) identifying Mr. Zambetti as the seller (Ex. F-2)Exhibit H is a cross-complaint filed on behalf of Eugene Zambetti that states, "Effective February 1, 1976, Cross-Complainants Eugene Zambetti and Julia Zambetti entered into a written lease with Bank of America, NT&SA, as trustee for the F/L Burrell Testamentary Trust No. 2, and continued to operate Hillview Cleaners on the Property through about April 1983.
- Exhibit I has Eugene Zambetti's Response to Form Interrogatory 2.11: "I also became the co-owner of the cleaners when my father retired."
- Exhibit J has Julia Zambetti's Response to Form Interrogatory 2.11 (provided by her son Eugene Zambetti): "From 1978-1983 I owned the Hillview Dry cleaners with my son, Eugene Zambetti."

In response to Cleanup Staff's request for clarification about Eugene Zambetti's role at the dry cleaner, WHSB provided an email attaching a copy of the probate documents associated with Julia and Peter Zambettis' estates. Cleanup Staff did not find the explanations and additional documentation compelling. Numerous State Board Orders find that landlords are dischargers, even where a lessee causes the physical discharges. (See, e.g., State Board Orders 84-6 (Harold and Joyce Logsdon) ["petitioners through their failure to act as responsible landowners permitted the discharges to occur"] and 86-18 (Vallco) [appropriate to name landowner even where they lacked day-to-day control of the property].) These orders examine the responsibility of ownership, and determine that responsibility lies with the landlord who had "actual knowledge of the condition and an opportunity and the ability to obviate it." (State Board Order 84-6.) By extension, the owner of a business has a similar responsibility to control the business activities, even if the owner himself never physically touches the chemical causing the discharge and pollution.

In this case, the evidence is that Eugene Zambetti held himself out as the proprietor of Hillview Cleaners in numerous documents in his name, in his handwriting, with his signature and/or under penalty of perjury. He entered into a lease agreement for purposes of a dry cleaning operation, he

was aware that chemicals were being used and entered into binding legal agreements that document his responsibility to abide by all municipal ordinances and state and federal statutes, and his agreement to avoid creating a nuisance. (Burrell Ex. E, lease agreement, p. 8, ¶ 20.) The majority of funds received for the sale of the business went to Eugene Zambetti. (See State Board Order 86-15 (John Stuart, DBA Stuart Petroleum) [upholding discharger identification where, "[a]t all times during the lease period, petitioner had an important legal interest in the property and derived income from it"].) For these reasons, the Cleanup Staff did not remove Eugene Zambetti from the dischargers identified in the TO.

***2) Comment:*** Remove cleanup levels for soil gas as they are redundant with the cleanup levels for soil, groundwater, and indoor air.

***Response:*** Cleanup Staff disagrees. Soil gas cleanup levels are needed for the following reasons:

- Soil gas is a separate media.
- Soil and groundwater may reach cleanup levels but a reservoir of soil gas may still exist in the soil above groundwater.
- Indoor air concentrations are driven by the concentrations of soil gas beneath a building. Soil gas may therefore be used as one line of evidence for when indoor monitoring may cease.
- Soil gas cleanup levels are one of the multiple lines of evidence along with soil, groundwater, and indoor air that can establish that a site is clean enough for low threat closure.

Thus, no change was made to the TO.

***3) Comment:*** The finding on future changes to cleanup levels should be amended to include a statement that "new technical information" includes, but is not limited to, a health and human risk assessment report that sets site specific cleanup levels in various media.

***Response:*** Cleanup Staff disagrees. New technical information is sufficiently broad enough to include a risk assessment without explicitly stating such. Thus, no change was made to the TO.

***4) Comment:*** Revise all the task compliance dates by 30 days to reflect the continued hearing date.

***Response:*** Cleanup Staff agrees. The compliance dates have been updated by adding one month to each task.

## D. Isola Law on behalf of Sang Bae Lee and Suk Lee (current dry cleaner operator)

***1) Comment:*** Sang Bae Lee and Suk Lee should be removed as named dischargers on the TO because there is no evidence they discharged waste into waters of the State.

***Response:*** Cleanup Staff disagrees. There is substantial evidence that Sang Bae Lee and Suk Lee discharged PCE at the Site. The evidence includes the history of solvent usage beginning in 1983, the physical evidence of PCE at the Site and downgradient from it, common industry-wide

operational practices, and the inefficiencies of older dry cleaning equipment from the 1950s through the 1990s. Thus, no change was made to the TO.

History of Solvent Usage

Sang Bae Lee and Suk Lee have operated the Hillview Cleaners dry cleaner from 1983 to the present. When Sang Bae Lee and Suk Lee purchased the dry cleaner from the Zambettis in 1983, their purchase also included the same dry cleaning equipment that was previously used by the Zambettis. In 1986, Sang Bae Lee and Suk Lee purchased and installed new dry cleaning equipment. From 1983 to 1986, Sang Bae Lee and Suk Lee used the same older dry cleaning equipment that the Zambettis used. PCE was the most common dry cleaning solvent during the 1980s (see for example the Santa Clara Valley Water District's *Study of Potential for Groundwater Contamination from Past Dry Cleaner Operations in Santa Clara County*, undated (circa 2007), posted on the Regional Water Board's website at: http://www.waterboards.ca.gov/sanfranciscobay/publications_forms/documents/SCVWD_dry_cleaner_study_2007.pdf).

Physical Evidence

The presence of elevated levels of PCE in the subsurface beneath and adjacent to Hillview Cleaners as described in finding 6 of the TO is evidence that significant releases of PCE occurred at the Site.

The layout of the Hillview Cleaners tenant space includes the following features that are conducive to PCE discharges:

- A below grade trench, located at the rear of the facility, creates a conduit for any spills or other releases of material to enter.
- The storm drain catch basin at the rear of the tenant space is below grade and un-lined. Any release of material at the rear of the property could enter the storm drain and percolate down into soil.
- The sewer lateral has breaks in it and during the time that the older dry cleaning machine was in use the lateral may have been one of the routes by which PCE entered soil and groundwater.

Industry-wide Operational Practices

The Site investigations indicate that there were substantial discharges of PCE. These discharges of PCE are consistent with common industry-wide operational practices for dry cleaners that operated from the 1950s to the 1990s. The prevalence of dry cleaner discharges is discussed in the 2007 Santa Clara Valley Water District Study of Potential for Groundwater Contamination from Past Dry Cleaner Operations in Santa Clara County (Water District Study). Examples of common release mechanisms from dry cleaner operations include:

- PCE spilled onto the floor from dry cleaning equipment maintenance and operation, equipment failure, solvent transfer and storage, or drips from wet clothing with residual PCE;
- PCE spilled onto the floor then seeped through concrete or cracks and reached the soil and groundwater below;
- PCE soaked into concrete and then volatilizing into indoor air;
- Spent PCE dumped onto soil behind building;

- PCE-saturated spent cartridge filters stored behind building;
- Water containing PCE (e.g., from water/solvent separator) discharged to the floor drain with leakage from the sewer lateral to soil and groundwater; and
- PCE in soil and groundwater volatilizing and intruding into indoor air.

The concentrations and distribution of PCE in groundwater, soil gas, and indoor air at the Site indicate that the Hillview Cleaners' dry cleaning operations were no different than the dry cleaners discussed in the Water District Study that discharged PCE.

Inefficiencies of Older Dry Cleaning Equipment

As discussed on pages 43 – 47 and 142 – 148 of the Water District Study, older dry cleaners used more solvent and released a greater percentage of the solvent used due to relative inefficiencies of the older equipment compared to newer equipment. The year during which a dry cleaner began operations is a useful indicator of the potential amount of PCE mass released. In general, the earlier a dry cleaner operated the more likely it is that larger quantities of PCE were released to soil and groundwater due to older equipment and common PCE handling and disposal practiced for that time period. For example, Table 13 on page 47 of the Water District Study shows how typical dry cleaners from the 1960s used much more PCE per pound of clothes cleaned and had a much higher leakage rate than a typical dry cleaner from the 1990s.

Based upon the evidence of the same equipment at the dry cleaner and the industry-wide practices documented in the Water District Study, corroborated by the distribution of PCE in the subsurface, it is reasonable to conclude that releases continued to occur during operations when the Lees operated the dry cleaners.

## E. Ed Firestone on behalf of the owners of the 14420/22 Big Basin Way property (adjacent property)

***1) Comment:*** There should be greater clarity in the definition of the Site to distinguish the Hillview Cleaners property from all offsite properties/areas, which are not part of the Site.

***Response:*** Cleanup Staff agrees. The TO has been revised to define the Site to consist of the Source Property and the downgradient properties and locations that overlie the groundwater and soil gas pollutant plume extending from the Source Property to Saratoga Creek.

***2) Comment:*** Revise the TO to include residential cleanup levels because the adjacent property contains a residential apartment.

***Response:*** Cleanup Staff agrees. Because Saratoga's zoning conditionally allows residential uses in the area of the Source Property as part of a mixed use development, and based upon Mr. Burrell's stated intention to sell the Source Property for a mixed residential and commercial redevelopment, findings 1 and 7 and the cleanup levels section of the TO have been revised to reflect residential use and cleanup levels. Residential soil gas cleanup levels apply at all areas of the Site because of the uncontrolled migration of soil gas in the subsurface between residential and commercial areas. Residential indoor air cleanup levels apply only in residential structures

due to the controlled construction of a residential structure. Commercial indoor air cleanup levels apply in commercial structures.

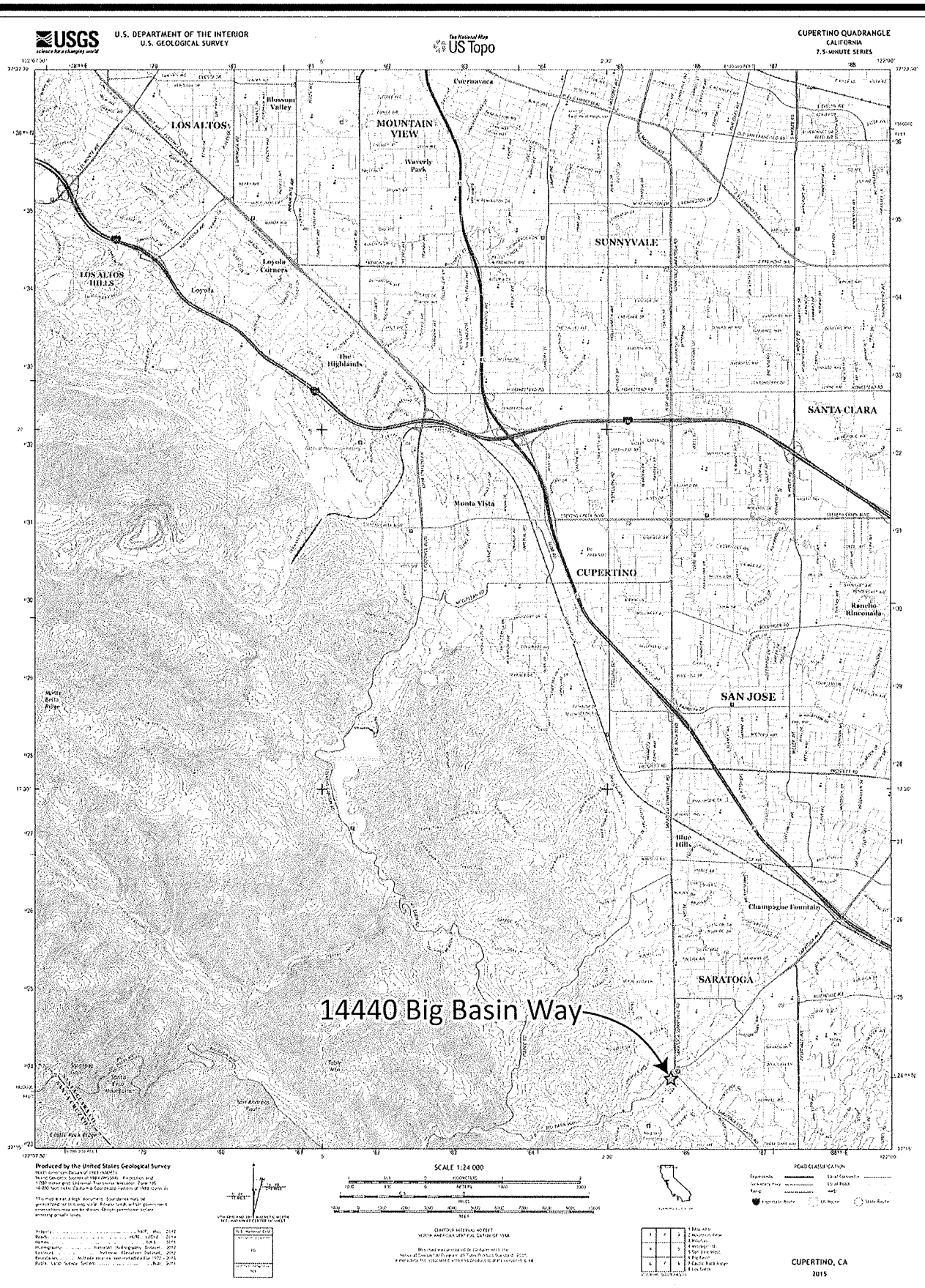
***3) Comment:*** Revise the TO to clarify that the Dischargers are required to complete the following items:

- Monitor and evaluate all downgradient structures that may be affected by vapor intrusion due to the release at the Hillview Cleaners Site.
- Mitigate or remediate concentrations of the primary chemicals of concern detected in indoor air in these structures to applicable and appropriate levels.
- Conduct post-remediation indoor air confirmation sampling.

***Response:*** Comment noted. The RAP and the TO already require these items. For further clarification, the description for task 5 (operation and maintenance (O&M) plan for vapor intrusion mitigation) has been expanded, and a new task 6 has been added for implementation reports on the O&M plan.

# APPENDIX D

# LOCATION MAP




| | | | | | |
|---|---|---|---|---|---|
| **EnviroAssets**, Inc.<br>www.EnviroAssets.com<br>V: (888) 748-8820<br>V: (510) 346-9500 F: (510) 346-9501 | Rev .No. / Date / Approved | Date: 12/18/2015<br>Drawn: MH<br>File Name: EA19924-15 | SITE LOCATION MAP<br>Hillview Cleaners<br>14440 Big Basin Way<br>Saratoga, California | Figure 1<br>Project EA177 |