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CALIFORNIA STATE WATER RESOURCES CONTROL BOARD

In the Matter of Adoption of Site Cleanup Requirements for Moonlite Associates, LLC and United Artists Theatre Circuit, Inc. for the Property Located at 2640 El Camino Real, Santa Clara County (Order No. R2-2013-0032)	UNITED ARTISTS THEATRE CIRCUIT, INC.'S PETITION FOR REVIEW (Water Code § 13320), REQUEST TO SUPPLEMENT THE RECORD (23 CCR 2052.6); AND, REQUEST FOR HEARING (23 CCR § 2052(b))

INTRODUCTION

United Artists Theatre Circuit, Inc. ("UATC") petitions the California State Water Resources Control Board ("State Board"), under California Water Code § 13320 and 23 C.C.R. § 2050, to review and modify the September 11, 2013, Cleanup and Abatement Order ("Order") issued by the San Francisco Bay Regional Water Quality Control Board ("Regional Board"), naming UATC as a party responsible for remediating property located at 2640 El Camino Real, Santa Clara, Santa Clara County (the "Site").

The Order requires UATC, a former owner and lessee of the Site, and Moonlite Associates LLC ("Moonlite"), the current Site owner, to remediate perchlorethylene ("PCE") contamination caused by a tenant that conducted dry-cleaning operations at the Site. As set out in this Petition and UATC's accompanying Statement of Points and Authorities, the Regional Board acted inappropriately and improperly when it concluded that UATC "caused or permitted" a discharge under Water Code Section 13304(a): (1) without substantial evidence that UATC's tenant dry cleaner discharged PCE while UATC owned or leased the Site; and (2) without substantial evidence that UATC knew or should have known of such a discharge even if one did occur. Furthermore, the Regional Board erred in naming UATC as a "discharger" despite the fact that a federal court discharged UATC's liability at the Site when UATC emerged from bankruptcy in 2001. Finally, the Regional Board acted inappropriately and improperly by failing to name the City of Santa Clara ("City") as an additional discharger liable for remediating the Site under Section 13304(a). Accordingly, the State Board should reverse the Regional Board's decision to name UATC as a discharger and should modify the Order to name the City as an additional responsible party.

I. PETITIONER'S NAME, ADDRESS, TELEPHONE NUMBER AND E-MAIL ADDRESS

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II. REGIONAL BOARD ACTION OF WHICH UATC SEEKS REVIEW

UATC petitions the State Board to review the Regional Board's conclusion that UATC is liable for remediating the Site under Water Code Section 13304(a), as set out in the Order and supporting Revised Cleanup Staff Report, a copy of which is attached hereto as Exhibit 1. In particular, and as described in detail in the Statement of Points and Authorities set out below, UATC seeks review of the Regional Board's conclusions (as well as the factual and legal determinations underlying these conclusions) that:

1. UATC's tenant discharged PCE at the Site while UATC owned or leased the Site between 1962 and September 1978;

2. Former landowners and landlords, such as UATC, may be held liable under Section 13304(a) for "permitting" a discharge even if there is not substantial evidence that such landowners or landlords knew or should have known of the discharge;

3. UATC had the knowledge requisite to be liable under Section 13304(a);

4. UATC had the legal authority to prevent a discharge of PCE at the Site;

5. UATC's bankruptcy did not release UATC from liability for remediating the Site under Section 13304(a);

6. PCE was not discharged from the Santa Clara sanitary sewer system servicing the Site; and,

7. The City of Santa Clara is not liable under Section 13304(a) for remediating PCE contamination at the Site.

III. DATE ON WHICH REGIONAL BOARD ACTED

The Regional Board issued the Order on September 11, 2013.

IV. STATEMENT OF REASONS THAT THE REGIONAL BOARD'S ACTION WAS INAPPROPRIATE AND IMPROPER

The Regional Board's conclusion that UATC is liable for remediating the Site under Water Code Section 13304(a) was not supported by substantial evidence in the record and was based on erroneous interpretations of the law. In particular, and as set out in detail in the Statement of Points and Authorities below, the Regional Board action was inappropriate and improper because the Regional Board:

1. lacked substantial evidence for concluding that a dry cleaner discharged PCE at the Site while UATC owned and leased the Site between 1962 and September 1978;

2. misapplied the law when it concluded that UATC could be held liable under Section 13304(a) as a former owner and sublessor of the Site for remediating any discharge by its tenant (if, in fact one occurred) without substantial evidence that UATC knew or should have known of the discharge;

3. lacked substantial evidence to conclude that UATC had the knowledge requisite to be liable under Water Code Section 13304(a);

4. lacked substantial evidence to conclude that UATC had the legal authority to prevent a discharge of PCE at the Site;

5. erroneously concluded that UATC's 2001 bankruptcy did not release UATC from liability for remediating the Site under Water Code Section 13304(a); and

6. lacked substantial evidence for concluding that PCE was not discharged from the Santa Clara sanitary sewer system servicing the Site; and

7. improperly concluded that the City of Santa Clara was not liable for remediating PCE contamination at the Site under Water Code Section 13304(a).

V. THE MANNER IN WHICH UATC IS AGGRIEVED

UATC is aggrieved by the Order because UATC's interests have been and will be adversely affected by the Order's imposition on UATC of Site assessment and remediation obligations despite the Regional Board's inappropriate and improper conclusion that UATC is a liable party under Water Code Section 13304(a).

VI. STATE BOARD ACTION REQUESTED BY UATC

UATC requests that the State Board take the following actions:

A. UATC seeks an order from the State Board that modifies the Regional Board's Order :

(1) to remove UATC as a named party responsible for remediating the Site; and

(2) to name the City of Santa Clara as a party responsible for remediating the Site.

B. UATC also requests permission under 23 CCR § 2050.6 to present additional evidence to the State Board that was not presented to the Regional Board. The supplemental evidence that UATC seeks to present to the State Board consists of the averments set forth in the declaration by Dr. Carey Peabody of Erler & Kalinowski, Inc. ("EKI"), attached hereto as Exhibit 2, and the documents attached to the declaration. The evidence could not previously have been submitted to the Regional Board because it responds to factual assertions and arguments first made by the Regional Board's cleanup staff ("Cleanup Staff") and Moonlite just days before or at the Regional Board hearing on September 11, 2013 (the "Hearing"), during which the Regional Board adopted the Order.

The California Water Code provides broad authority to the State Board to consider any "relevant evidence" that was not in the record before the Regional Board, "which, in the judgment of the state board, should be considered to effectuate and implement the policies of [the Water Quality Division of the Water Code]." Cal. Water Code § 13320(b). To implement

this provision, the State Board has provided by regulation that it may, in its discretion, accept supplemental evidence offered by petitioners before the State Board that was not presented to the regional board or improperly excluded from the record by the regional board. 23 CCR § 2050.6. The State Board has explicitly asserted that this regulation is intended to allow supplementation of the record before the State Board "where a regional board introduces evidence without affording a proper opportunity for interested parties to evaluate and contest that evidence." Final Statement of Reasons (Draft), Proposed Amendments to the Cal. Code of Regs. Title 23, State Water Resources Control Board Chapter 6: Rules Governing Review by State Board of Action or Failure to Act by Regional Board, 21–22 (2003).

These are the precise circumstances at issue here. As described in greater detail in the Statement of Points and Authorities below and in Dr. Peabody's declaration, one week before the Hearing, the Cleanup Staff provided the Regional Board with a package of materials that included the Cleanup Staff's responses to comments submitted by UATC and other interested parties on a Tentative Order issued by the Cleanup Staff, as well as a Revised Tentative Order and Revised Cleanup Staff Report that were ultimately adopted as the Regional Board's Order with only minor, non-substantive revisions. The Revised Tentative Order and Revised Staff Report included not only new arguments responding to UATC's objections to being named as a discharger under Section 13304(a) but also additional factual information that was not previously in the record. For example, the Revised Staff Report relied on groundwater elevation data maintained by the Santa Clara Valley Water District to contest UATC's conceptual model of how PCE was discharged at the Site, but the Cleanup Staff to this date has not included the data itself in the record on the grounds that it is confidential. Similarly, in order to raise new arguments in response to UATC's comments on the Tentative Order, the Revised Staff Report relied on stream-gauge data that the Cleanup Staff had not previously cited.

At the Hearing, both the Cleanup Staff and Moonlite presented these and additional arguments and data to the Regional Board. In particular, the Cleanup Staff presented a slide deck to the Regional Board that included new plots of PCE soil gas and groundwater plumes at the Site in comparison to nearby sewer lines. Moonlite referred to additional data from the San Jose Index Well in the Santa Clara Subbasin in order to echo the Cleanup Staff's new arguments challenging UATC's conceptual model of how PCE was discharged at the Site. Moonlite also presented an entirely new plume-length calculation that purported to support the conclusion that PCE was discharged at the Site while UATC was affiliated with the Site.

The evidence UATC seeks to introduce in response to these new arguments is set out with specificity in Dr. Peabody's declaration. It includes EKI's analysis of:

1. the Santa Clara Valley Water District and San Jose Index Well groundwater elevation data as it compares to data from shallow groundwater monitoring wells near the Site;

2. the Saratoga Creek stream-gauge data;

3. Moonlite's plume-length calculation; and

4. the Cleanup Staff's plots of soil gas and groundwater plumes in the slide deck presented to the Regional Board at the Hearing.

UATC lacked a proper opportunity in the week preceding the Hearing to evaluate and contest the additional evidence included in the Revised Tentative Order, Revised Cleanup Staff Report, and Cleanup Staff's responses to UTAC's comments. And UATC lacked any opportunity at all to evaluate and contest the additional evidence presented by the Cleanup Staff and Moonlite at the Hearing. The evidence that UATC seeks to present to supplement the record responds squarely to the data and arguments that were introduced into the record by the Cleanup Staff and Moonlite at or just prior to the Hearing. Supplementation is accordingly not only proper under 23 CCR § 2050.6 but necessary for the State Board to resolve this Petition on the basis of a complete record.

C. Finally, UATC requests that the State Board conduct a hearing on this Petition to consider the supplemental evidence offered by UATC and any additional evidence and argument necessary to resolve the Petition.

VII. STATEMENT OF POINTS AND AUTHORITIES

A statement of points and authorities in support of this Petition is set out below.

VIII. STATEMENT THAT PETITION HAS BEEN SENT TO THE REGIONAL BOARD AND OTHER RESPONSIBLE PARTIES

UATC has simultaneously served a copy of this Petition, and all supporting documentation, by e-mail on the State Board, the Executive Officer of the Regional Board, counsel for Moonlite, and counsel for the City.

IX. STATEMENT THAT SUBSTANTIVE ISSUES AND OBJECTIONS WERE RAISED BEFORE THE REGIONAL BOARD

With the exception of the specific analysis set out in the declaration by Dr. Peabody (attached hereto as Ex. 2), UATC raised before the Regional Board all of the substantive issues and objections raised in this Petition, as reflected in UATC's comments on the Tentative Order prepared by the Cleanup Staff (which comments are attached hereto as Exhibit 3), UATC's testimony at the Hearing, a transcript of which is attached hereto as Exhibit 4, and as otherwise reflected in the record. As explained in Section VI above, UATC was unable to raise certain of the matters set out in Dr. Peabody's declaration before or during the Hearing because they respond to evidence and testimony first presented by the Cleanup Staff and Moonlite at the

Hearing or the week immediately before the Hearing. At the Hearing, UATC specifically objected to the introduction of this new evidence.[1]

Respectfully submitted this 11th day of October, 2013.

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[1] Regional Board Hearing Transcript, Agenda Item No. 7 at 23:18–25:21, 120:18–121:11; 61:17–62:14; 67:15–22 (Sep. 11, 2013), attached hereto as Ex. 4.

STATEMENT OF POINTS AND AUTHORITIES IN SUPPORT OF UATC'S PETITION FOR REVIEW

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INTRODUCTION

The cleanup and abatement order ("Order") naming United Artists Theatre Circuit, Inc. ("UATC") as a "discharger" that is liable for cleaning up dry-cleaner contamination at a property UATC formerly owned and leased (the "Site")[2] is unique and unprecedented. It hangs on a thin, one-sided record supplied to the San Francisco Bay Regional Water Quality Control Board ("Regional Board") by the current Site owner, Moonlite Associates, LLC ("Moonlite Associates" or "Moonlite"), with little corroboration or independent investigation to support it. It relies on misstatements of both fact and law and mischaracterizations of the technical analysis of scientific experts. It rejects sound scientific analysis in favor of "anything-is-possible" conjecture and speculation. And it adopts a new precedent under which innocent former landowners will be subject to draconian cleanup liability solely because their property was used for a commercial purpose and, decades later, contamination not previously associated with that commercial use is found on the property.

Without facts and technical analysis to support the Order, the Regional Board lacked substantial evidence for naming UATC as a discharger under California Water Code Section 13304(a). Moreover, even if UATC would otherwise be liable for cleaning up the Site, any such liability was discharged when UATC went through bankruptcy in 2001. Indeed, because of UATC's bankruptcy, to hold UATC liable, the Regional Board had to find that UATC reasonably should have known by 1978 (when UATC's affiliation with the Site ended) that its tenant had contaminated the Site with perchloroethylene ("PCE"), while simultaneously concluding that the Regional Board should not reasonably have known by 2001 that UATC's tenant had contaminated the Site with PCE. The State Board should reverse these utterly inequitable and incompatible findings.

For these reasons, which are set out in detail in this Petition, the State Board should overturn the Regional Board's decision to name UATC as a discharger responsible for cleaning up the Site.

FACTUAL BACKGROUND

A. Site History

UATC (and entities affiliated with UATC) owned the Site from the mid-1940s until November 1975, when UATC sold the Site to Hanson Holdings, Inc. ("Hanson").[3] After the

[2] The Site is located at 2640 El Camino Real in Santa Clara, California.

[3] UATC, "Former Moonlite Cleaners, 2640 El Camino Real, Santa Clara, Santa Clara County, UATC's Technical Report on Site History" at 2 (Apr. 12, 2012), enclosed with Letter from S. Reisch to B. Wolfe (Apr. 12, 2012). In the interests of efficiency, UATC has not attached to this Petition any document that was posted on the State Water Resources Control Board GeoTracker database (http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T10000000901), as of September 11, 2013, the date on which the Regional Board issued the Order. We understand that all such documents are part of the administrative record in this matter.

sale, UATC leased the Site back from Hanson.[4] In September 1977, after several other Site ownership changes, Sherman, Clay of Delaware, Inc. ("Sherman, Clay")—an entity related to the current owner, Moonlite Associates—bought the Site.[5] About a year later, UATC and Sherman, Clay terminated the 1975 lease, effective September 1, 1978.[6] In 1983, Sherman, Clay transferred the Site to Moonlite, which continues to own the Site today.[7]

Evidence in the record suggests that a dry cleaner began operating at the Site in mid-1962, when the City of Santa Clara (the "City") issued a Certificate of Occupancy certifying that the City had inspected a "44' wide section – Cleaners & Laundry" at the Site and approving occupancy of the property.[8] It is undisputed that dry cleaning occurred at the Site (though perhaps not continuously) until at least October 1996, approximately 18 years after UATC vacated the Site.

Little is known about dry-cleaning practices at the Site. In May 1961, the California State Fire Marshal issued a permit to "Moonlight Cleaners" authorizing it to run a "clothes cleaning establishment" at the Site.[9] The permit allowed Moonlite Cleaners to install a Hoffman Master-Jet Cleaning Unit, Hoyt SF-130 Reclaimer, Per Combo Filter-Still-Cooker, and a Vaper-Mat Model 800. It also placed a handful of conditions on Moonlite Cleaners' operations. For example, it required "[a]ll processes consisting of washing, extracting, and deodorizing solvent-cleaned garments [to] take place in equipment approved for that purpose by the State Fire Marshal." Moonlite Cleaners had to ensure that exhaust fans on the cleaning and reclaiming equipment operated automatically when the equipment doors were open so that vapors would be exhausted to the outside of the building through ventilation ducts. The permit also required Moonlite Cleaners to use an enclosed piping system to transfer reclaimed solvent from the "muck-reclaimer" to the "cleaning system." Although the permit refers to "solvent," it does not mention the type of solvent.

In June 1961, the City of Santa Clara approved a one-page application for a building permit at the Site, which requested permission to install partitions in the Moonlite Cleaners'

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4 *Id.* at 3 and Exhibit 3-A attached thereto.

5 *Id.* at 3–4 and Exhibit 3-E attached thereto.

6 *Id.* at 4 and Exhibit 3-F attached thereto.

7 *Id.* at 4 and Exhibit 3-G attached thereto.

8 City of Santa Clara, Building Department, "Certificate of Occupancy No. 1032," enclosure to Letter from L. Gualco to N. King (Dec. 18, 2012).

9 State Fire Marshal letter to Moonlight [sic] Cleaners (May 11, 1961), enclosure to Letter from L. Gualco to N. King (Dec. 18, 2012). For simplicity, we use the name "Moonlite Cleaners" to refer collectively to all of the dry-cleaning businesses that operated at the Site. According to Moonlite, at least nine different individuals operated that business. *See* Letter from L. Gualco to N. King, "Former Moonlite Cleaners, 2640 El Camino Real, Santa Clara, California" at Tab 11 (Mar. 30, 2011).

space, a minor improvement with an estimated value of $1,000.[10] The application identifies "United Calif Theater" as the Site owner but is signed by a construction contractor.[11]

Scarcely any other documentation about Moonlite Cleaners or its operations is identified or relied upon in the Order. The Regional Board points to no records whatsoever to shed light on how Moonlite Cleaners actually conducted its operations either before or after UATC's lease of the Site terminated in September 1978—records about the volume of business the dry cleaner conducted, how it received and disposed of the "solvent" it used, or how much solvent the dry cleaner used or the frequency of solvent deliveries, or any documentation of landlord, City, or fire marshal inspections or spill responses at the Site. Moreover, the Regional Board has not identified evidence from any witnesses with direct knowledge of Moonlite Cleaners' operations.

The absence of pre-September 1978 records (such as a lease) regarding the Site is attributable in part to the fact that many of UATC's historic records were destroyed in 2006, several years after UATC was sold to a new owner, as part of an established document-retention program.[12] There is nothing in the record, however, that explains the absence of information from the (more recent) post-September1978 period. There is also little information in the record about how the City operated and maintained the sewer system that serviced the Site, despite evidence that the sewer system is a source of the PCE contamination. The City submitted a Site History Technical Report to the Regional Board cleanup staff ("Cleanup Staff") on April 13, 2012, which responded to the Cleanup Staff's request for certain information and records.[13] Although the City enclosed nearly two hundred pages of inspection and maintenance records for the sewer system in the vicinity of the Site, the earliest dated inspection documented by those records occurred in March 1995.[14]

B. UATC's Bankruptcy

On September 5, 2000—22 years after UATC's involvement with the Site ended—UATC and other affiliated entities commenced chapter 11 bankruptcy cases in the United States

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[10] "Application for Building Permit" (June 27, 1961), enclosure to Letter from L. Gualco to N. King (Dec. 18, 2012). This amount is equivalent to just under $8,000 today. *See* Bureau of Labor Statistics, Consumer Price Index Inflation Calculator *available at* http://www.bls.gov/data/inflation_calculator.htm.

[11] "Application for Building Permit" (June 27, 1961), enclosure to Letter from L. Gualco to N. King (Dec. 18, 2012).

[12] UATC, "Former Moonlite Cleaners, 2640 El Camino Real, Santa Clara, Santa Clara County, UATC's Technical Report on Site History" 1 (Apr. 12, 2012), enclosed with Letter from S. Reisch to B. Wolfe (Apr. 12, 2012).

[13] Letter from J. Hill to B. Wolfe, "Former Moonlite Cleaners, 2640 El Camino Real, Santa Clara, Santa Clara County, Site History Technical Report – City of Santa Clara" (Apr. 13, 2012); Letter from B. Wolfe to J. Hill, "Former Moonlite Cleaners, 2640 El Camino Real, Santa Clara, Santa Clara County, Requirement for Technical Report on Site History" (Mar. 13, 2012).

[14] Letter from J. Hill to B. Wolfe, "Former Moonlite Cleaners, 2640 El Camino Real, Santa Clara, Santa Clara County, Site History Technical Report – City of Santa Clara" at Ex. 1 (Apr. 13, 2012).

District Court for the District of Delaware (the "Bankruptcy Court").[15] On January 25, 2001, the Bankruptcy Court confirmed the debtors' joint plan of reorganization ("Bankruptcy Plan").[16]

The Bankruptcy Court order confirming the Bankruptcy Plan ("Bankruptcy Court Order") broadly discharged legal claims against the debtors, which included UATC. In particular the Bankruptcy Court Order provided that:

> The Plan shall bind all Holders of Claims and all Equity Interests, and all Claims against, and Equity Interests in, the Debtors and Debtors in Possession shall be satisfied, discharged and released in full, and the Debtors' liability with respect thereto shall be extinguished completely . . . and (iii) all Persons and Entities shall be precluded from asserting against the Debtors, the Debtors in Possession, the Estates, and the Reorganized Debtors, their successors and assigns, their assets and properties, any other Claims or Equity Interests based upon any documents, instruments, or any act or omission, transaction or other activity of any kind or nature that occurred prior to the Effective Date [of the Bankruptcy Plan].[17]

As a limited exception to the discharge provision, the Bankruptcy Court Order also provided:

> Notwithstanding any language to the contrary in the Plan or in this Order, nothing in the Plan or this Order shall be construed as releasing or relieving any entity of any liability to a governmental entity under any police or regulatory statute as the owner or operator of property that the entity owns or operates after the date of this Order.[18]

Thus, the Bankruptcy Court Order expressly carved out of its discharge provisions governmental entity claims relating to property that was still owned or operated by UATC "after the date of [the Bankruptcy Court Order]." There is no such carve-out for governmental entity claims relating to property, such as the Site, that was not owned or operated by UATC after the date of the Bankruptcy Court Order (*i.e.*, January 25, 2001).

C. The Claims Against UATC

According to Moonlite, in September 2004, Moonlite discovered PCE contamination in groundwater at the Site in excess of state standards.[19] The record does not reflect whether

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[15] *See* Docket for Case No. 00-03514 (PJW) (Jointly Administered) (Bankr. D. Del.) ("Chapter 11 Case"); Chapter 11 Case Docket No. 1 (Voluntary Petition under Chapter 11 filed on September 5, 2000).

[16] *See* Chapter 11 Case Docket No. 867 (Confirmation Order entered on January 25, 2001).

[17] Bankruptcy Court Order at 43 (emphasis added), attached as Ex. A to Letter from S. Reisch to N. King, "Moonlite Associates LLC's Claims Re: United Artists at 2640 El Camino Real, Santa Clara, California" (Dec. 29, 2011).

[18] Bankruptcy Court Order at 23 (emphasis added).

[19] *See* http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T10000000901 (Regulatory Activities).

Moonlite sampled groundwater at the Site because it had reason to know of a PCE release at the Site during its ownership or for some other reason. What is evident is that Moonlite conducted no further investigation or remediation of the Site in 2004, and did not report the contamination to the Regional Board or further investigate the contamination until March 2009, four and one-half years later.[20] The reason for this delay in reporting the Site contamination, as required by California law,[21] has never been explained.

On October 24, 2011, Moonlite sent a letter to the Cleanup Staff, asking the Regional Board to name UATC as a "discharger" responsible for cleaning up the Site and also asking the Regional Board to obtain information to support naming the City as a discharger as a result of PCE releases from its sewer system.[22] In response, UATC submitted a letter to the Regional Board asserting that UATC should not be named as a discharger, both because of the absence of any evidence of any PCE spills during UATC's ownership and tenancy and because UATC's liability, if any, was discharged in the 2001 bankruptcy.[23]

After additional correspondence with the Cleanup Staff about whether UATC should be named as a discharger, the Regional Board required UATC and the City to submit reports concerning the Site history.[24] UATC submitted its report on April 12, 2012, and the City followed suit the next day.[25] The Regional Board accepted and approved the City's report on July 25, 2012, and did the same with respect to UATC's report on August 31, 2012.[26] To UATC's knowledge, no site history report has ever been requested from, or submitted by, Moonlite Associates, despite its lengthy ownership of the Site, which included 19 years while dry-cleaning operations occurred at the Site.

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[20] Moonlite, "Request for Agency Oversight of a Brownfield Site" (Jan. 22, 2009).

[21] *See* Cal. Health & Saf. Code § 25359.4 (requiring that an unauthorized release of a reportable quantity of a hazardous substance be reported to the California Department of Toxic Substances Control within 30 days after the release is discovered).

[22] Letter from L. Gualco to N. King, "Former Moonlite Cleaners, 2640 El Camino, Santa Clara, California" (Oct. 24, 2011) attached to Ex. 3 hereto (UATC's Comments on the Cleanup Staff's Tentative Order) at Ex. A.

[23] Letter from S. Reisch to N. King, "Moonlite Associates LLC's Claims Re: United Artists at 2640 El Camino Real, Santa Clara, California" (Dec. 29, 2011).

[24] Letter from B. Wolfe to S. Reisch, "Former Moonlite Cleaners, 2640 El Camino Real, Santa Clara County, Requirement for Technical Report on Site History" (Mar. 13, 2012); Letter from B. Wolfe to J. Hill, "Former Moonlite Cleaners, 2640 El Camino Real, Santa Clara County, Requirement for Technical Report on Site History" (Mar. 13, 2012).

[25] Letter from S. Reisch to B. Wolfe, "Former Moonlite Cleaners, 2640 El Camino Real, Santa Clara, Santa Clara County, Technical Report on Site History" (Apr. 12, 2012); Letter from J. Hill to B. Wolfe, "Former Moonlite Cleaners, 2640 El Camino Real, Santa Clara, Santa Clara County, Site History Technical Report – City of Santa Clara" (Apr. 13, 2012).

[26] Letter from B. Wolfe to J. Hill, "Approval of Technical Report on Site History – Former Moonlite Cleaners 2640 El Camino Real, Santa Clara, Santa Clara County" (July 25, 2012); Letter from B. Wolfe to S. Reisch, "Approval of United Artist[s] Theat[re] Circuit, Inc. Technical Report on Site History, Former Moonlite Cleaners, 2640 El Camino Real, Santa Clara, Santa Clara County" (Aug. 31, 2012).

In August 2012, the Cleanup Staff shared a draft letter with Moonlite partially approving and partially rejecting a feasibility study and pilot study work plan Moonlite had prepared concerning remediation of the Site.[27] The Cleanup Staff's draft letter contested the conceptual site model described in Moonlite's work plan, which concluded that a significant release of PCE occurred near the Site from the City's sewer system.[28] Shortly after the Cleanup Staff shared the draft letter with Moonlite, Moonlite formally withdrew its request that the City be named as a discharger, and the Cleanup Staff and City agreed to withdraw and, according to Moonlite, "delete" the draft letter objecting to Moonlite's work plan.[29] Moonlite simultaneously promised to provide the Cleanup Staff "additional information relevant to the naming of United Artists as a former owner of the [Site]" and reiterated its request that the Cleanup Staff name UATC as a discharger at the Site.[30]

The Cleanup Staff acceded to Moonlite's request. In an e-mail dated October 9, 2012, the Cleanup Staff notified Moonlite and UATC that the Regional Board was "planning on moving forward with issuing an order that names Moonlite and [UATC] as dischargers."[31] The Cleanup Staff also informed UATC that they were declining to pursue a claim against the City of Santa Clara because the City purportedly had been conscientious in maintaining its sewer lines in the area and the PCE discharges violated a 1975 City ordinance.[32] In addition, the Cleanup Staff took the position that contamination at the Site is primarily attributable to a release in the vicinity of Moonlite Cleaners' dry-cleaning equipment and not from a leaking sewer line.[33]

On November 20, 2012, the Cleanup Staff met with representatives of UATC and Moonlite to discuss UATC's objections to being named as a discharger. At the meeting, UATC presented a technical analysis prepared by groundwater hydrology experts from Erler & Kalinowski, Inc. ("EKI"), in which EKI concluded that it is unlikely that a PCE release occurred at the Site while UATC owned or leased the property (*i.e.*, before September 1978). UATC also

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[27] Draft Letter from N. King to B. Mehrens, "Partial Approval of Feasibility Study/Pilot Study Work Plan and Request for Reports, Former Moonlite Cleaners, 2640 El Camino Real, Santa Clara, Santa Clara County" (Aug. 2012), attached to Ex. 3 hereto (UATC's Comments on the Cleanup Staff's Tentative Order) at Ex. B.

[28] *Id.*

[29] Letter from L. Gualco to N. King, "Former Moonlite Cleaners, 2640 El Camino Real, Santa Clara, California" (Aug. 28, 2012).

[30] *Id.*

[31] E-mail from N. King to S. Reisch and L. Gualco, "Moonlite Cleaners" (Oct. 9, 2012), attached to Ex. 3 hereto (UATC's Comments on the Cleanup Staff's Tentative Order) at Ex. C.

[32] The Cleanup Staff did not explain how an ordinance issued in 1975 could provide a basis for declining to name the City as a discharger for releases that Cleanup Staff contends occurred between 1962 and 1975.

[33] Draft Letter from N. King to B. Mehrens, "Partial Approval of Feasibility Study/Pilot Study Work Plan and Request for Reports, Former Moonlite Cleaners, 2640 El Camino Real, Santa Clara, Santa Clara County" (Aug. 2012) attached to Ex. 3 hereto (UATC's Comments on the Cleanup Staff's Tentative Order) at Ex. B.

asserted that it should not be named as a discharger because the Regional Board lacked substantial evidence that (a) a PCE release occurred before September 1978; (b) UATC knew or reasonably should have known by September 1978 of any discharge at the Site; and, (c) UATC had the legal ability to prevent the discharge. In addition, UATC explained that any claim the Regional Board might have against UATC was discharged in UATC's 2001 bankruptcy.

In the following months, Moonlite and UATC exchanged additional correspondence with the Cleanup Staff about whether the Regional Board had an adequate basis for naming UATC as a discharger. In March 2013, UATC submitted a written report prepared by EKI to the Cleanup Staff setting forth EKI's conclusion that the distribution of PCE in the subsurface at the Site is consistent with a post-September 1978 release and that there is no evidence of a pre-September 1978 release at the Site.[34]

Nonetheless, in a Tentative Order and Cleanup Staff Report issued on June 25, 2013, the Cleanup Staff recommended to the Regional Board that both Moonlite and UATC be named as dischargers liable for cleaning up PCE contamination at the Site.[35] The Regional Board scheduled a hearing on the Tentative Order for September 11, 2013 (the "Hearing"). Regional Board staff members who were not otherwise involved in the case and were designated as an advisory team ("Advisory Staff") submitted comments on the Tentative Order on July 22, 2013. UATC submitted comments on the Tentative Order on July 28, 2013, and Moonlite submitted comments the next day.

A week before the Hearing, the Cleanup Staff provided to the Regional Board a package of materials concerning this matter, including all of the comments received on the Tentative Order, the Cleanup Staff's responses to those comments, and a Revised Cleanup Staff Report ("Revised Staff Report") and Revised Tentative Order. The Revised Staff Report and Revised Tentative Order included not only new arguments responding to UATC's objections to being named as a discharger but also additional factual information that was not previously in the record. For example, the Revised Staff Report included a new section that made numerous assertions about PCE loss associated with various types of dry-cleaning equipment and practices without citation or any other explanation of where the Cleanup Staff obtained the information.[36] It cited new stream-gauge data in order to make new arguments contesting EKI's technical analysis. It also relied upon data maintained by the Santa Clara Valley Water District from deep production wells near the Site,[37] but did not include the data itself in the record on the grounds

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[34] EKI, "Review of Environmental Data: Former Moonlite Cleaners, 2640 El Camino Real, Santa Clara, California" (Mar. 12, 2013) (hereinafter "EKI Report"), enclosed with Letter from S. Reisch to N. King (Mar. 12, 2013) and attached to Ex. 3 hereto (UATC's Comments on the Cleanup Staff's Tentative Order) at Ex. D.

[35] *See* Tentative Order: Adoption of Site Cleanup Requirements for Moonlite Associates, LLC, and United Artist[s] Theat[re] Circuit, Inc. for the Property Located at 2640 El Camino Real, Santa Clara, Santa Clara County (hereinafter "Tentative Order") and Cleanup Staff Report attached thereto (June 24, 2013), attached hereto as Exhibit 5.

[36] Revised Staff Report at 3, attached as Ex. 1 hereto.

[37] Revised Staff Report at 8–9.

that it was confidential.[38] After reviewing the Revised Staff Report, EKI requested this data from the Santa Clara Valley Water District but did not receive the data until after the Hearing.[39]

At the Hearing, the Cleanup Staff, UATC, and Moonlite each provided testimony to the Regional Board. After discussion, and based on the advice of the Advisory Staff counsel, some of which was delivered during a closed session, the Regional Board voted to adopt the Revised Tentative Order without substantive modification.[40]

ARGUMENT

I. STANDARD OF REVIEW

The State Board may affirm the Regional Board's decision to name an entity as a "discharger" only if that decision is supported by "substantial evidence." *See In re Exxon Co.*, Cal. State Water Res. Control Bd. Order No. WQ 85-7 at 10–11 (Aug. 22, 1985); William R. Attwater, Memorandum to Regional Board Executive Officers Regarding Responsible Party Orders, (Dec. 2, 1992). Substantial evidence means "credible and reasonable evidence which indicates the named party has responsibility." *In re Exxon Co.*, WQ 85-7 at 12.

Furthermore, the State Board has broad authority to reverse a regional board's decision to issue a cleanup and abatement order where the State Board finds that the regional board acted inappropriately or improperly when it issued the order. Cal. Water Code § 13320(c) ("Upon finding that the action of the regional board, or the failure of the regional board to act, was inappropriate or improper, the state board may direct that the appropriate action be taken by the regional board, refer the matter to another state agency having jurisdiction, take the appropriate action itself, or take any combination of those actions."); *see also In re Dep't of Fish & Game*, Cal. State Water Res. Control Bd., WQ 80-1 at 13 (Jan. 24, 1980) ("Water Code 13320 clearly indicates that we are to exercise an independent review of Regional Board actions and that we can consider any relevant evidence necessary to effectuate and implement the policies of the State's water quality laws.").

II. THE REGIONAL BOARD LACKED SUBSTANTIAL EVIDENCE AND ACTED IMPROPERLY AND INAPPROPRIATELY WHEN IT NAMED UATC AS A DISCHARGER.

The Porter-Cologne Water Quality Control Act authorizes regional water quality control boards to issue cleanup and abatement orders to "[a]ny person . . . who has caused or permitted, causes or permits, or threatens to cause or permit any waste to be discharged or deposited where

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[38] *See* Regional Board Hearing Transcript, Agenda Item No. 7 at 25:3–21 (Sep. 11, 2013), attached as Ex. 4 hereto (hereinafter "Tr.").

[39] C. Peabody Decl. ¶ 8, attached as Ex. 2 hereto.

[40] *See* Tr. 129:12–15; 138:8 (adopting the Tentative Order with no changes other than correcting a few typographical errors).

it is, or probably will be, discharged into the waters of the state and creates, or threatens to create, a condition of pollution or nuisance. . . ." Cal. Water Code § 13304(a) (emphasis added).

Under State Board precedent, former owners and landlords who have not "caused" a discharge of waste, such as UATC, may be found to have "permitted" a discharge under Water Code Section 13304(a) only if there is substantial evidence that they:

1. owned or possessed the relevant property at the time of the discharge;

2. knew or should have known of the discharge; and

3. had the legal ability to prevent the discharge.

See In re Stuart, Cal. State Water Res. Control Bd. WQ 86-15 at 6 n.3 (Sept. 18, 1986); *In re Exxon*, WQ 85-7 at 3. As explained below, the Regional Board has failed to produce substantial evidence in support of all three of these critical elements.

A. The Regional Board's Conclusion that a Discharge Occurred While UATC Owned or Leased the Site Was Based on Conjecture, Inaccurate Information, and Flawed Reasoning.

The Order flatly asserts that "UATC is named as a discharger because it owned the site during the time of the PCE discharges . . . ."[41] In truth, the Regional Board does not know when the PCE discharge at the Site occurred. Having failed to make any effort to locate or interview percipient witnesses or prepare its own independent technical analysis for dating the PCE release, the Regional Board can only speculate as to how a PCE release at the Site "could have" or "would have" occurred.[42] As a result, and contrary to State Board precedent, the Regional Board found UATC liable under Section 13304 merely because UATC long ago owned commercial property that is now contaminated.

1. <u>The Regional Board conducted an incomplete and inadequate investigation.</u>

The Regional Board's investigation into the timing of the PCE release at the Site was fundamentally flawed. Despite Moonlite's admission of liability, and notwithstanding the fact that Moonlite would have been a logical source of information regarding both the condition of

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[41] Order at 2, attached hereto as Ex. 1.

[42] *See, e.g.*, Revised Staff Report at 7–8 ("PCE released on the floor of the dry cleaner <u>would have</u> slowly seeped into the concrete floor, or through cracks or perforations in the concrete floor;" and "PCE <u>could have</u> been bound up for years to decades in the soil immediately beneath the concrete slab and above any sewer lines"); Revised Staff Report at 11 ("UATC <u>would have</u> had several different leases with several different operators at Moonlite Cleaners for operation of the dry cleaning business;" and "[t]hese leases <u>would have</u> given UATC legal control over Moonlite Cleaners' activities and <u>would have</u> given UATC the legal ability to prevent the discharge.") (emphasis added).

the Site as of September 1978 and any discharges of PCE that occurred after September 1978,[43] the Regional Board never required Moonlite to submit a site history report. Indeed, the Regional Board:

- Never required Moonlite to provide written responses to basic questions about dry-cleaning operations conducted at the Site during the 19 years that Moonlite and affiliated companies owned it;
- Did not ask whether Moonlite possessed evidence of a release of PCE during its ownership of the Site;
- Did not ask how PCE was handled by Moonlite's tenants;
- Did not ask whether Moonlite ever inspected the Site during its ownership;
- Did not ask Moonlite to provide leases with its former dry-cleaner tenants;
- Did not ask Moonlite for records of how PCE was transported to or from the Site or used at the Site, for records of the dry-cleaning equipment Moonlite's tenants used at the Site, or for records of Site renovations or modifications;
- Did not ask Moonlite why dry-cleaning operations at the Site ceased and the dry-cleaner tenant moved to a different location; and
- Did not ask Moonlite for documents to provide evidentiary support for a "timeline" Moonlite voluntarily provided to the Regional Board, including how Moonlite knew when specific dry cleaners began and ceased operating at the Site.

The Regional Board's investigation of whether PCE leaked from City sewers was also merely perfunctory. For the reasons explained below, understanding whether the PCE contamination at the Site may have resulted from leaking sewers is relevant to determining how and when PCE was discharged at the Site. Yet, the Regional Board did not investigate, and the City provided almost no information whatsoever regarding, the City's maintenance of the sewer system while dry cleaning occurred at the Site between 1962 and 1996, and in particular, what steps the City took to maintain the sewer system following the Loma Prieta earthquake in October 1989. In addition, the Regional Board did not require the City to collect and analyze samples from around the sewer system, even though, according to Moonlite, the Cleanup Staff had previously indicated that such samples would aid in determining whether a release from the

[43] While evidence of a large post-1978 release would not, by itself, eliminate the possibility of an earlier release, it would have provided important context for the Regional Board's evaluation of the origin of PCE contamination at the Site.

sewer system had occurred.[44] Instead, it appears from the record that the Cleanup Staff stopped investigating possible releases from the sewer (and the City as a potential discharger) after Moonlite Associates formally withdrew its request that the City be named as a party responsible for remediating the Site.

The Regional Board's failure to pursue a thorough investigation of the Site and to scrutinize the information provided by Moonlite and the City directly impacts the validity of its conclusion that PCE was discharged at the Site before September 1978 and its related assertion that leaks from aging sewers are not a primary cause of contamination at the Site.

2. The Regional Board's conclusion that a discharge occurred while UATC owned or leased the Site was based on conjecture, not substantial evidence.

In the absence of a diligent investigation into dry-cleaning operations at the Site, the Order and Revised Staff Report instead rely on generalities, unsupported assumptions, and flawed logic to find that PCE was released at the Site while UATC owned or leased it. In particular, the Order and Revised Staff Report conclude that PCE was released at the Site between 1962 and September 1978 based on: (a) circumstantial evidence of solvent usage at the Site beginning in the early 1960s and "common industry-wide practices" in the 1960s and 1970s assumed to have been followed at the Site; (b) inefficiencies of older dry-cleaning equipment used in the 1960s; and (c) "physical evidence" of PCE at the Site and down-gradient from the Site.[45] As explained below, none of the information relied upon by the Regional Board supports its conclusion as to the timing of PCE discharges at the Site.

(a) Use of PCE and "Common Industry-Wide Practices"

Instead of preparing a technical analysis or considering other Site-specific evidence to determine the date of the PCE discharge, the Regional Board relies on circumstantial evidence of PCE use at the Site[46] and lists "[e]xamples of common release mechanisms from dry-cleaner operations" identified in a 2007 Santa Clara Valley Water District study ("2007 Study") to support its conclusion that a PCE discharge occurred at the Site before September 1978.[47]

It is important to recognize that what the Revised Staff Report calls "common industry-wide practices" is actually a list of all of the possible ways that PCE could enter groundwater from dry-cleaning operations. The practices listed include dumping PCE directly onto soil, discharging PCE into leaking sanitary sewers, storing PCE-saturated spent cartridge filters

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[44] Letter from L. Gualco to N. King, "Former Moonlite Cleaners, 2640 El Camino Real, Santa Clara, California" 3 (Oct. 24, 2011), attached to Ex. 3 hereto (UATC's Comments on the Cleanup Staff's Tentative Order) at Ex. A.

[45] Order at 2; Revised Staff Report at 3.

[46] Although the Revised Staff Report contains a considerable discussion emphasizing the basis for its conclusion that PCE was used at the Site in the 1960s and 1970s, Revised Staff Report at 2–3, the critical question is not whether PCE was used at the Site but when it was discharged at the Site.

[47] Revised Staff Report at 4.

behind dry-cleaning businesses, and spilling PCE onto concrete floors through which the PCE then seeped. By citing this disparate and wide-ranging list, the Regional Board merely demonstrates that it really does not know which of these practices caused PCE to be discharged into the environment at the Site.

And because the Regional Board does not know how PCE was discharged at the Site, it also does not know when the discharge occurred. While some of the cited industry-wide practices might be expected to result in discharges to the environment at the outset of a dry-cleaning operation, others suggest that a discharge would not have occurred for many years (e.g., PCE leaks from sewers might be expected to occur only as the sewers age). Accordingly, merely enumerating possible discharge scenarios does not establish that any particular scenario occurred at the Site, and it certainly does not provide substantial evidence of when a discharge occurred.

(b) Inefficiencies of Older Equipment

The Revised Staff Report also cites the 2007 Study as evidence that "older dry cleaners used more solvent and released a greater percentage of solvent used due to relative inefficiencies of the older equipment compared to newer equipment."[48] But even if that assertion were true, it provides no information about whether UATC's dry-cleaner tenant actually discharged PCE into the subsurface. The Revised Staff Report offers no evidence, for example, of how UATC's tenant operated and maintained the equipment in use at the Site before September 1978, or whether it was more or less reliable than other dry-cleaning equipment.

The Revised Staff Report also claims, again relying on the 2007 Study, that "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 practice[s] for that time period."[49] However, as EKI points out, the higher PCE loss rate in the 1960s was caused by greater air emissions, not greater discharges to the subsurface.[50]

In truth, the historical record suggests that some dry cleaners released PCE into the environment and others did not. The Revised Staff Report disregards data in the 2007 Study that indicate that at least one quarter of historic dry-cleaning operations have <u>never</u> caused PCE contamination.[51] The Revised Staff Report also ignores the 2007 Study's conclusion that sewer releases, and not the inefficiency of older equipment, are the principal source of PCE groundwater contamination.[52] The Regional Board has identified no defensible basis for focusing on some aspects of the 2007 Study and ignoring others. Because the general

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48 *Id.*

49 *Id.*

50 EKI, "Comments on Cleanup Staff Report Accompanying Moonlite Tentative Order" at 5 (July 29, 2013) ("EKI Comments"), attached to Ex. 3 hereto (UATC's Comments on the Cleanup Staff's Tentative Order) as Attachment A.

51 *See* Santa Clara Valley Water District, "Study of Potential for Groundwater Contamination from Past Dry Cleaner Operations in Santa Clara County" at 6 (2007) ("2007 Study").

52 *See* 2007 Study at 6.

conclusions of the 2007 Study contradict the Regional Board's position at least as much as they support it, the 2007 Study does not provide substantial evidence of a pre-September 1978 discharge at the Site.

(c) Physical Evidence at the Site and Down-gradient from It

The Order and Revised Staff Report also claim that "physical evidence at the Site and downgradient from it" supports the conclusion that "PCE discharges occurred during UATC's ownership and control of the Site [between] 1962 and 1978 and afterwards when Moonlite Associates took ownership."[53] First, to state the obvious, the mere presence of PCE at the Site and down-gradient from the Site provides no basis for pinpointing when PCE was released at the Site. If Moonlite Associates' tenants spilled PCE at the Site and UATC's tenant did not, there would still be physical evidence of PCE at and down-gradient from the Site, even though no release occurred between 1962 and September 1978.

Moreover, the Order and Revised Staff Report never identify what specific physical evidence ostensibly supports the conclusion that a pre-September 1978 PCE release occurred. The Cleanup Staff never prepared their own technical analysis to determine the timing of the PCE release at the Site. Aside from responding to EKI's conclusions, the Cleanup Staff did not analyze whether historic groundwater conditions are consistent with present-day observations about the PCE plume, and they did not consider whether the plume length and location are consistent with a pre-September 1978 discharge. As a result, what the Regional Board meant when it cited to "physical evidence" that supports naming UATC remains a mystery to this day.

Finally, and most importantly, the expert analysis EKI presented to the Regional Board on behalf of UATC thoroughly debunks the Regional Board's claim that there is physical evidence that supports the conclusion that a PCE release occurred at the Site before September 1978. In particular, EKI's analysis shows that the direction in which the PCE plume has migrated beneath the Site indicates that the PCE release at the Site reached shallow groundwater sometime in the early-to-mid-1990s, approximately 15 years after UATC's lease of the Site terminated. Building upon an analysis first presented by Moonlite Associates' consultant,[54] EKI explained both in its report and at the Hearing that groundwater data from the Site and the surrounding area indicate that the direction of shallow groundwater flow beneath and around the Site changed in approximately the early-to-mid-1990s.[55] During the 1960s and 1970s, groundwater elevations around the Site were below the Saratoga Creek streambed (which is at 62 feet above mean sea level ("msl")). Under those conditions, Saratoga Creek was a losing stream, meaning that surface water from the Creek flowed into the surrounding groundwater (i.e., from the higher elevation in the Creek to the lower elevation away from the Creek). Because Saratoga Creek flows to the north along the east side of the Site, exfiltration from the Creek caused shallow

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53 Order at 2; Revised Staff Report at 4.

54 West Environmental Services and Technologies, "Site Investigation Report, 2640 El Camino Real, Santa Clara, California" at 28 (Oct. 5, 2011).

55 EKI Report at 6–7.

groundwater to flow in a northwesterly direction during this period.[56] In the early-to-mid-1990s, as a result of well-documented efforts to recharge the deeper aquifer,[57] groundwater elevations rose above the Saratoga Creek streambed. Under these conditions, Saratoga Creek became a gaining stream, meaning that shallow groundwater infiltrated into Saratoga Creek. This caused shallow groundwater to begin flowing in a northeasterly direction, toward the stream (again, from the higher elevation to the lower).[58] Thus, because groundwater flowed in a northwesterly direction until the early-to-mid 1990s, a release that reached groundwater before that time (e.g., in the 1960s or 1970s) would have resulted in a northwesterly trending PCE plume.[59] But that is not what groundwater monitoring data from the Site show. Rather, a PCE plume trends from the Site to the northeast.[60] That northeasterly trending plume is consistent with a release that reached shallow groundwater after the groundwater gradient shifted to the northeast.

EKI has separately calculated when a release would have had to occur for it to reach groundwater in the early-to-mid 1990s or after, when the groundwater flow direction at the Site switched to the northeast. Those calculations show that it would have taken approximately six years for a release of wastewater containing dissolved PCE at the Site to reach groundwater, meaning that the plume observed today would have resulted from a wastewater release that occurred in approximately the late 1980s or after.[61] EKI also concluded that a northwesterly trending plume would still be detectable today if a release had occurred before September 1978, despite the early-to-mid-1990s shift in gradient to the northeasterly direction.[62]

In short, EKI has established that the existence of a northeasterly trending plume at the Site is indicative of a release in the late 1980s or after and conversely, that the absence of a northwesterly trending plume shows that a pre-September 1978 release did not occur.

* * *

To properly name UATC as a discharger under Water Code Section 13304, the Regional Board has the burden of producing substantial evidence that a release occurred while UATC owned or leased the Site. But the generalities on which the Regional Board relies provide no basis at all for deciding that a release did or did not occur before September 1978. Accordingly, and because the Regional Board fails to produce any independent technical analysis, eyewitness testimony, or other Site-specific evidence about when the release occurred, there is not substantial evidence for its conclusion that a release occurred while UATC owned or leased the

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56 *Id.*

57 Tr. 18:24–19:2, 66:18–19; Revised Staff Report at 8.

58 *See* EKI Report 7–8; UATC Presentation: "2640 El Camino Real Santa Clara, California – Regional Board Hearing 11 September 2013" at Slides 6–12 (Sep. 11, 2013), attached hereto as Exhibit 6 (hereinafter "UATC Presentation").

59 EKI Report 7–8.

60 *Id.* at 10–11.

61 EKI Report at 10–11.

62 EKI Report at 11.

Site. The State Board should therefore reverse the Regional Board's decision to name UATC as a discharger.

3. The current theories presented by Cleanup Staff in response to EKI's technical analysis are fatally undermined by inaccuracies in and misinterpretations of the underlying data.

Although the Cleanup Staff have consistently rejected EKI's analysis, their basis for doing so has varied over time, as EKI has repeatedly pointed out fallacies in the Cleanup Staff's shifting analysis.[63] The Regional Board's current basis for objecting to EKI's technical analysis is no more convincing than prior iterations. As explained below, each of the current theories advanced by the Regional Board, as well as an additional theory advocated by Moonlite's consultant and accepted by at least one Regional Board member, is based upon unsubstantiated assertions, mischaracterizations, and material omissions, all of which cast yet more doubt on the reliability of the Order's conclusions.

(a) The Suspended-PCE Theory

According to the Cleanup Staff, PCE was likely spilled directly on the dry-cleaner floor and, after seeping through the floor, "could have been" suspended in the soil immediately underneath the concrete floor for years to decades, such that a pre-September 1978 release could have led to the observed northeast-trending PCE plume.[64] However, the assumption that PCE contamination resulted from a surface release is based solely on conjecture, and the Cleanup Staff's description of how such a release would have behaved is contrary to established science. As to the likelihood of a surface spill causing the current PCE plume, both EKI and Moonlite Associates' consultant, West Environmental Services and Technologies ("West") have explained that the concentration and location of the PCE contamination indicates that it resulted from a leaking sewer instead.[65] If PCE had been spilled on the surface at the Site, it would have been released as a dense non-

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[63] For example, the Cleanup Staff initially argued that the rising groundwater table and resulting changes in the groundwater gradient identified by EKI would have had little effect on the flow direction of the plume because, in the Cleanup Staff's view, groundwater flow at the Site was controlled by north-trending ancestral Saratoga Creek stream deposits and "deep production wells." *See, e.g.*, Cleanup Staff Report at 4 (June 24, 2013), attached hereto as Ex. 5. EKI pointed out that the actual geologic data show there is no evidence of channelized sediments at the Site that would counteract groundwater gradients, and that unidentified production wells screened in a different aquifer would not affect horizontal groundwater flow in the shallow groundwater above the clay layer. EKI Comments at 2–3, attached to Ex. 3 hereto (UATC's Comments on the Cleanup Staff's Tentative Order) at Attachment A.

[64] Revised Staff Report at 7.

[65] EKI Report at 10; West, "Feasibility Study/Pilot Study Work Plan, 2640 El Camino Real, Santa Clara, California" 28–29 (Mar.12, 2012); West, "Feasibility Study/Pilot Study Work Plan, 2640 El Camino Real, Santa Clara, California" 8, 25 (Sep. 20, 2012); West, "Site Characterization Report, 2640 El Camino Real, Santa Clara, California" 27–28 (Feb.11, 2011); West, "Site Investigation Report, 2640 El Camino Real, Santa Clara, California" 29–31 (Oct. 5, 2011).

aqueous phase liquid ("DNAPL").[66] According to EPA guidance, groundwater that has been impacted by a DNAPL release would exhibit PCE concentrations above one percent effective solubility.[67] But PCE groundwater concentrations at the Site are below that threshold, with a maximum of about 0.51 percent of PCE's effective solubility.[68] The concentrations of PCE at the Site are therefore indicative of a release of PCE in the dissolved phase, in wastewater from the sewer system, rather than a surface release. Moreover, the presence at the Site of methylene blue active substances and compounds unrelated to dry-cleaning activities (e.g., acetone, toluene, and cyclohexane), the existence of offsets and holes in the sewer as documented in a video inspection conducted by West, and the location of significant concentrations of PCE just below City sewers indicate that sewer releases, rather than the surface spills posited by the Cleanup Staff, were the primary source of PCE in groundwater at the Site.[69] As noted above, EKI's site-specific travel-time calculations show that PCE in the dissolved phase would have reached groundwater in approximately six years, not the "decades" posited by the Revised Staff Report.

In any event, even if PCE were released as a DNAPL, it would have reached groundwater in even less than six years, because DNAPL migrates more quickly than dissolved PCE.[70] Indeed, if PCE had migrated through the concrete floor, several feet of PCE would have had to accumulate before it would pass through the clay beneath the building.[71] If that had happened, the PCE would have migrated quickly downward to groundwater, as opposed to sitting above the groundwater for decades.[72]

Thus, even if a surface release of PCE were the source of the present PCE plume, which is doubtful, the Revised Staff Report's assertion that it would have taken decades for a surface release to reach groundwater is not scientifically possible. Either (1) PCE released at the surface never reached groundwater because not enough DNAPL was released to push it through the clay that exists beneath the dry-cleaner site, or (2) sufficient DNAPL was released such that its weight, due to the force of gravity, would have pushed the DNAPL to groundwater much faster than several decades.[73] And, if DNAPL had migrated to groundwater as a result of a pre-September 1978 release, remnants of a northwesterly trending plume still would be evident. Again, the absence of such a plume demonstrates that a pre-1979 release did not occur.

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66 EKI Report at 10.

67 *Id.*

68 EKI Report at 10 n.3.

69 West, "Site Investigation Report, 2640 El Camino Real, Santa Clara, California" 22–23; 29–30 (Oct. 5, 2011); EKI Report at 9–10; UATC Presentation at Slides 25, 26.

70 *See* Tr. 68:20–69:1; UATC Presentation at Slide 23.

71 *See* EKI Comments at 6–7, attached to Ex. 3 hereto (UATC's Comments on the Cleanup Staff's Tentative Order) as Attachment A.

72 *Id.*

73 If sufficient PCE DNAPL were released to push through the clay but in an amount insufficient to reach groundwater, a PCE vapor plume would form in the vadose zone. These dense vapors would cause groundwater contamination. *See* UATC Presentation at Slide 24; Tr. 69:2–4; 70:6–21.

(b) The No-Shallow-Groundwater Theory

The Regional Board's second theory is that the absence of a northwesterly trending PCE plume is explained by the lack of shallow groundwater at the Site in the 1960s and 1970s. But the Regional Board's analysis is based on an obviously erroneous interpretation of groundwater elevation data from three deep production wells located about one-half mile from the Site.

According to the Regional Board, these data show that the groundwater table at the Site was so deep in the 1960s and 1970s that there would have been no shallow groundwater for a discharge of PCE to contaminate, and thus a northwesterly trending plume would not have been created.[74] In particular, at the Hearing, the Cleanup Staff represented that these data, which were never introduced into the record, show that "[f]or most of UATC's period of ownership, there was no shallow groundwater and the creek was completely disconnected from deep groundwater."[75] According to the Cleanup Staff, even in 1978, "the creek was about 80 feet above groundwater," meaning that "even if the PCE release extended to 40 feet deep as it does now, the groundwater was still far below the contamination zone, and PCE was not yet migrating in groundwater."[76] Moonlite endorsed this contention, citing additional data from an ostensibly "nearby" San Jose Index Well to echo the Cleanup Staff's claim that groundwater elevations were too low in the 1960s and 1970s for a northwest-trending PCE plume to form.[77]

At the Hearing, EKI objected that the mysterious data upon which the Regional Board and Moonlite relied to demonstrate the absence of shallow groundwater at the Site were from wells that were not representative of Site conditions because they were screened in a different, deeper aquifer.[78] As explained in EKI's declaration, EKI's Hearing testimony is supported by a simple comparison between (1) the data from the three deep production wells; and (2) the data from shallow aquifer monitoring wells at gas stations formerly located near the Site—a Mobil station about 2,500 feet from the Site, a Chevron station about 700 feet from the Site, and a Shell station about 1,100 feet from the Site.[79] For example, one of the deep production wells (Well 07S/01W-04E002) is about 650 feet from the monitoring wells at the former Mobil station.[80] Data from a representative monitoring well at the Mobil station show groundwater present in the shallow aquifer in early 1985 at depths of about 22–23 feet bgs.[81] Contemporaneous data from the neighboring deep production well (upon which the Regional Board relies) show groundwater elevations at 112

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74 Revised Staff Report at 8–9.

75 Tr. 18:3–18:4; 25:3–21; *see also* Cleanup Staff Presentation: "Item #7 – Adoption of Site Cleanup Requirements for UATC and Moonlite Associates, 2640 El Camino Real, Santa Clara" at Slides 20–24 (Sep. 11, 2013), attached hereto as Exhibit 7 (hereinafter "Cleanup Staff Presentation").

76 Tr. 19:4–19:9.

77 Tr. 107:19–109:8; 111:16–113:7; 126:16–127:7; *see also* Moonlite Presentation: "Former Moonlite Cleaners, Santa Clara, California" at Slides 21–22 (Sep. 11, 2013), attached hereto as Exhibit 8 (hereinafter "Moonlite Presentation").

78 Tr. 58:8–17; 59:23–60:9; 66:9–14; 122:21–123:6.

79 Peabody Decl. ¶ 13.

80 Peabody Decl. ¶ 15.

81 Peabody Decl. ¶ 15.

feet bgs.[82] Thus, the groundwater elevation in the shallow aquifer was about 90 feet higher than the groundwater elevation measured in the deep production well located just 650 feet away.[83] The obvious implication is that the groundwater elevation data from production wells upon which the Regional Board relies are not representative of shallow groundwater elevations at the Site, likely because the shallow aquifer and deep aquifer are separated by low-permeability layers and are, consequently, hydraulically distinct.[84] Data from the Chevron and Shell stations confirm this conclusion.[85]

The groundwater elevation data from the San Jose Index Well to which Moonlite cited are also unrepresentative of Site conditions. The well is not "nearby" the Site but about 4 miles to the southeast.[86] It measures groundwater elevations in the deep aquifer within the Santa Clara Subbasin.[87] And the data, on their face, cannot possibly represent groundwater conditions at the Site. As recently as 1995, those data show groundwater elevations above 80 feet msl, which is above the ground surface at the Site.[88] Indeed, the Santa Clara Valley Water District Groundwater Management Plan from which Moonlite acquired the index well data specifically explains that the "groundwater elevations in the well are not indicative of actual elevations throughout the County . . . ."[89] Like the deep production well data that the Cleanup Staff referenced, the San Jose Index Well accordingly is not representative of shallow groundwater conditions at the Site. Thus, neither the deep production well data nor the San Jose Index Well data provide a basis for disputing EKI's conclusion that a pre-1978 release into shallow groundwater would have migrated in a northwesterly direction.

(c) Intermittent-Creek Theory

The Regional Board argues that Saratoga Creek was an intermittent creek during the 1960s and 1970s, only flowing on average one-half of each year, which in its view would not be enough to recharge groundwater and cause a northwest-trending plume.[90] To make this argument, the Regional Board relies on data from a stream gauging station located approximately nine miles south and upstream of the Site. The Regional Board provides no basis for concluding that the data collected at such a distance would be representative of Site conditions, and, in fact, the surface water catchment area for Saratoga Creek at the gauging station is just greater than one-half the size of

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82 Peabody Decl. ¶ 15.
83 Peabody Decl. ¶ 15.
84 Peabody Decl. ¶ 15.
85 Peabody Decl. ¶ 16.
86 Peabody Decl. ¶ 18.
87 Peabody Decl. ¶ 18.
88 Peabody Decl. ¶ 18.
89 Santa Clara Valley Water District, "Santa Clara Valley Water District Groundwater Management Plan," at 12–13 (July 2001) *available at* http://www.water.ca.gov/urbanwatermanagement/2010uwmps/Morgan%20Hill,%20City%20of/ELECTRONIC.Groundwater%20Management%20Plan.pdf.
90 Cleanup Staff's Response to Comments on Tentative Order for Site Cleanup Requirements, 2640 El Camino Real, Santa Clara, Santa Clara County at 10, 31 (Aug. 26, 2013), attached hereto as Exhibit 9 (hereinafter "Cleanup Staff's Response to Comments").

surface water catchment area for Saratoga Creek near the Site.[91] Put simply, a lot more water runs into the Creek at the Site than at the gauging station. Accordingly, the stream gauge data that the Cleanup Staff relied on are not representative of the conditions at the Site and do not support the Regional Board's argument. Moreover, the Cleanup Staff's claim that Saratoga Creek flowed on average only one-half of each year during the 1960s and 1970s is inaccurate. Monthly discharge data during the 1960s and 1970s from the gauging station show that Saratoga Creek flowed year round, with lower discharge rates in the summer than the winter.[92]

Even if one were to accept the Cleanup Staff's position that Saratoga Creek recharge was minimal during the 1960s and 1970s, the Cleanup Staff now acknowledge that some shift in groundwater flow direction occurred in the 1990s, stating that "[i]n the early 1990s as rising groundwater levels surpassed the surface water elevation in the creek, the northerly regional gradient shifted to the northeast near the creek, as is seen today."[93] Thus, while the Cleanup Staff reject EKI's argument that groundwater flow shifted from the northwesterly direction to the northeasterly direction, the Staff's own analysis indicates that groundwater flow at the Site shifted from north to northeast. This is a key concession, because there is also no evidence of a PCE plume in groundwater to the north. Thus, the Cleanup Staff's own analysis suggests that any PCE release must have reached groundwater after the early-to-mid 1990s, when groundwater flow shifted to the northeast.

(d) Inconsistent-Local-Groundwater Theory

The Revised Staff Report also argues that groundwater monitoring data from a nearby Chevron gas station show that groundwater flow directions varied in the early 1990s.[94] According to the Cleanup Staff,

> the timing of the release of PCE, either before or after 1978, cannot be predicted based solely on the lack of significant contamination in the subsurface to the northwest of the Site due to the uncertainty of the historic groundwater flow direction. As seen at the Chevron station site adjacent to the Moonlite Site, flow direction varied widely in the early and mid-1990s, contrary to EKI's hypothesis that groundwater flowed only to the northwest pre-1994.[95]

EKI reviewed the data behind this assertion and determined that it depends entirely on an obviously anomalous data point.[96] As EKI explained at the Hearing, the data from one of the three monitoring wells at the Chevron site (well C1) exhibit highly aberrant behavior.[97] In particular, during the early 1990s, the groundwater elevation data at well C1 are about five feet higher than the

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91 Peabody Decl. ¶ 22.
92 Peabody Decl. ¶ 23.
93 Revised Staff Report at 8.
94 *See* Revised Staff Report at 9.
95 *See* Cleanup Staff's Response to Comments at 26.
96 Tr. 61:17–65:5.
97 *Id.*

other nearby wells, and the groundwater elevation remains "stuck" at that level for several years, even as the elevations all around it continue to rise.[98] When the data are plotted with this anomalous well, they show numerous inconsistent groundwater gradients in the area around the Site.[99] Calculating the groundwater gradient without the anomalous data yields a generally north/northwest trend, a result consistent with EKI's technical analysis.[100] Moreover, as more wells were installed at the Chevron site after the early 1990s, the data clearly show a northwest trend.[101] Thus, contrary to the assertion in the Revised Staff Report, there is no evidence that groundwater flow varied, let alone flowed to the southwest, at the Site in the early 1990s.

(e) Moonlite's Plume-Length Calculation

At the Hearing, Moonlite presented a wholly new argument that the PCE plume's current length is consistent with a release in approximately 1963.[102] Moonlite based that assertion on a measured plume length of about 750 feet.[103] But that length is wrong. The data show the actual plume length to be 1,200 feet.[104] All other variables being equal, it would take 70 years for the plume to reach that length, which would mean the release occurred in 1939, an absurd conclusion.[105] Moonlite also estimated the release date using a plume-velocity value of 18.8 feet per year, which EKI previously estimated for the plume's center of mass. To determine the date of release based on the total plume length as opposed to the travel distance of the center of mass, however, a leading-edge velocity is necessary, which Moonlite did not calculate.[106] Moonlite's claim that the release can be dated to 1963 is thus based on multiple invalid parameters and is completely erroneous.

Further, Moonlite's time calculations assume that the entire PCE plume originated at the dry-cleaner operation at the Site. But Moonlite's consultant previously concluded that the sewer main leaked PCE at the location of the sewer siphon beneath Saratoga Creek along El Camino Real, 650 feet away from the building in which the dry cleaner operated.[107] In other words, the plume was not formed solely as a result of a PCE release from the sewer at the Site but rather as a result of sewer releases both at the Site and at the siphon. Because West's calculations incorrectly assume that the entire release occurred at the dry-cleaner building, they cannot be used to estimate the date of the PCE release.[108]

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98 *Id.*
99 *Id.*
100 *Id.*
101 *Id.*
102 Tr. 109:19–110:5.
103 *See* Moonlite Presentation at Slides 23, 29, 31.
104 Peabody Decl. ¶ 24.
105 Peabody Decl. ¶ 24.
106 Peabody Decl. ¶ 24.
107 West, "Site Investigation Report, 2640 El Camino Real, Santa Clara, California" 3, 31 (Oct. 5, 2011).
108 Peabody Decl. ¶ 25.

* * *

The flawed technical analysis presented by the Cleanup Staff and Moonlite clearly influenced the Regional Board's deliberations. At least one Regional Board member cited Moonlite's plume-length calculation as the "most compelling" reason for his conclusion that a PCE release occurred before September 1978, even though it was presented for the first time (and very briefly) at the Hearing, was unsubstantiated at the Hearing, and ultimately turned out to be completely inaccurate.[109] The same Regional Board member also explicitly relied on the Cleanup Staff's erroneous assertion that shallow groundwater elevations at the Site were too low for a northwest-trending PCE plume to have formed from a pre-September 1978 release.[110] Not only were both of these arguments by Moonlite and the Cleanup Staff independently wrong, they also could not possibly be right simultaneously, given that a plume that took 50 years to form (according to Moonlite) would have had to reach groundwater before September 1978, which could not have happened according to the Cleanup Staff.

Even if the criticisms of EKI's analysis endorsed by the Regional Board were legitimate, which they are not, the State Board should still set aside the Order. It is not UATC's burden to prove that no PCE release occurred at the Site before September 1978, and criticisms of EKI's analysis do not constitute substantial evidence of a pre-September 1978 PCE release.

Because the Regional Board's conclusion that PCE was released before September 1978 lacks a factual or scientific foundation, and instead is based on generalities and erroneous interpretations of the data, that conclusion is improper and inappropriate and should be reversed.

4. <u>There is no precedent for reaching conclusions as to the timing of a discharge without eyewitness testimony or technical evidence.</u>

After an extensive review, UATC has found no cleanup and abatement orders where the timing of a discharge was in dispute and the State Board made or upheld a finding on that issue based solely on the grounds that discharges of a detected chemical were common in the industry at issue. Instead, in the few cleanup and abatement orders where the timing of a discharge was directly in dispute, the State Board has relied on at least some direct evidence that the relevant contaminant was in fact spilled at the site in the relevant time period or on some technical evidence—such as a fate-and-transport analysis—to estimate the timing and location of the discharge.

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109 Tr. 130:24–131:17.

110 Tr. 130:15–130:24 ("[T]he West cross-section in Figure 2.3 shows groundwaters plus or minus 40 feet lower in the 1970's, so until groundwater had advanced to the point where it intersected with whatever material—whether it was DNAPL[] or aqueous phase in the groundwater, the staff's theoretical proposal that material was sifting through the groundwater, moving its way through clay, is an entirely reasonable proposition and fits the facts").

For example, in *In re Stinnes-Western Chem. Corp.*, Cal. State Water Res. Control Bd. Order No. WQ 86-16, 5–10 (Sept. 18, 1986), the State Board affirmed a cleanup and abatement order issued by the Regional Board to the current owner of a contaminated site and the successor-in-interest of the former owner of the site based on eyewitness declarations about the timing of a PCE spill and a technical calculation of solvent-plume velocity to determine the timeframe in which a discharge occurred. In *In re Wenwest*, Cal. State Water Res. Control Bd. Order No. WQ 92-13, 1992 WL 12622783 at *2 (Oct. 22, 1992), the State Board upheld a regional board's finding that discharges occurred while the site was owned by a former owner based on technical reports that, "considering the soil in the area and the distance the gasoline has travelled to reach the neighbor's well, discharges took place at least 12 years before it was detected by the neighbor," placing the discharge well within the period in which the site was owned by the former owner. Similarly, in *In re Sanmina Corp.*, Cal. State Water Res. Control Bd. Order No. WQ 93-14, 1993 WL 456494 at *4 (Oct. 19, 1993), the State Board found evidence sufficient to find the petitioner—a former tenant at the site—caused or permitted a discharge where the petitioner operated a manufacturing business in which volatile organic compounds ("VOCs") were typically used, documentary and testimonial evidence established that the petitioner stored or used VOCs, such compounds were detected beneath the petitioner's concrete "wet floor" at the facility, the petitioner had a history of repeated spills, and the contamination could not be attributed to an upgradient source. *See also In re Spencer Rental Serv.*, Cal. State Water Res. Control Bd. Order No. WQ 87-1 (Jan. 22, 1987) (lessee of contaminated site properly named as discharger despite claims that the contamination pre-dated his tenancy where contamination was detected directly beneath gasoline tank used by lessee, evidence showed that no such contamination was present when the tank was installed, and monitoring data was consistent with a more recent spill).

The Regional Board's conclusion in this case that a PCE release occurred while UATC owned or leased the Site is at odds with all of these precedents. Indeed, it creates a new and ill-considered precedent, for it follows from the Order naming UATC as a discharger that everyone who owned commercial or industrial property in the 1960s and 1970s is liable under Water Code Section 13304(a) so long as they or their tenants used chemicals that are later found on the property, and a regional board asserts, as it always will, that historical handling practices were generally worse than they are today. Such a broad threat of liability contradicts the express terms of the statute, which requires evidence that prior owners "caused or permitted" a discharge, and makes no sense because former property owners have no ability to control whether someone else later releases the same chemicals on their former property. The State Board should not use this case to expand the reach of Section 13304(a) beyond what the California State Legislature intended.

B. The Regional Board Misapplied the Law in Erroneously Concluding that UATC Had the Knowledge Requisite to be Liable as a Discharger.

Even if the State Board concludes, despite the dearth of supporting evidence, that a PCE discharge occurred while UATC owned or leased the Site, it cannot hold UATC liable for the cleanup of any such discharge unless it also finds that UATC knew or should have known of the

discharge and failed to prevent it. *In re Stuart*, WQ 86-15 at 6 n.3 (liability may attach under Section 13304 without proof of actual knowledge of contamination because the risk of leaking underground storage tanks was common knowledge in the oil industry in 1986); *In re Logsdon*, Cal. State Water Res. Control Bd. Order No. WQ 84-6 at 10 (July 19, 1984) (former landowners caused or permitted a tenant's discharge where they had "(1) actual knowledge of the dangerous condition and (2) an opportunity to obviate it"); *see also In re U.S. Dept. of Ag.*, Cal. State Water Res. Control Bd. Order No. WQ 87-5 at 3 n.1 (Apr. 16, 1987) (landowners are liable without actual knowledge of a discharge "where the activity permitted on the property might be expected, by a reasonable and prudent landlord, to result in a discharge.").[111] The theory behind the knowledge requirement recognized by these precedents is that the statutory predicate for imposing liability—i.e., that the landlord has "permitted" a nuisance—is met only if the landlord knows or should know that the nuisance exists or is threatened, has the authority to prevent it, and chooses not to. *See Stuart*, WQ 86-15 at 6.

Despite these clear and consistent precedents, the Regional Board contends that a former landlowner/ landlord can be deemed to "permit" a discharge if it merely has "knowledge of the activities that caused the discharge."[112] Based on that interpretation, the Revised Staff Report concludes that UATC knew or should have known that its tenant ran a dry-cleaning business on the Site using a solvent that posed "dangers" and required careful handling, and it then presumes, without explanation or justification, that UATC should have known of the "potential for unauthorized discharges."[113]

At the Hearing, legal counsel on the Advisory Staff also informed the Regional Board that it was unnecessary to "delve into the issues of exactly how much knowledge is known by the landowner or the lessor" because *Stuart* holds that "actual knowledge of the contamination need not be shown where it is reasonable for a person to be aware of the dangers generally inherent in the activity."[114] When a Regional Board member subsequently asked whether knowledge that "a potential danger was going to occur" could be inferred from "the pure fact that it was a dry cleaning business[,]"[115] the Advisory Staff responded that the State Board had also addressed that question in *Logsdon*, WQ 84-6, and concluded that:

> given the hazardous nature of the waste, the discharges are presumed dangerous. So you're sort of making that leap—in other words, they

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111 *See also Redevelopment Agency of the City of Stockton v. BNSF Railway Co.*, 643 F.3d 668, 675 (9th Cir. 2011) (liability for nuisance may attach if the possessor of land knows or should know of the artificial condition and the nuisance); *Resolution Trust Corp. v. Rossmoor Corp.*, 34 Cal. App. 4th 93, 102 (Cal. App. 1995) (to be liable for a nuisance, "[t]he defendant must be aware of the specific dangerous condition and be able to do something about it before liability will attach.").

112 Order at 2 (emphasis added); *see also* Revised Staff Report at 10; Tr. 12:3–13; Cleanup Staff Presentation at Slide 11.

113 Revised Staff Report at 11.

114 Tr. 41:22–42:1.

115 Tr. 43:20–24.

> are basically imputing knowledge to if you know that the chemical is being used, you kind of also know that bad things could happen.[116]

Several Regional Board members explicitly stated that, in deciding to name UATC as a discharger, they were influenced by this and other advice provided by the Advisory Staff about the knowledge requirement.[117]

The parties' dispute about the scope of the knowledge requirement under Section 13304 is not an idle legal debate. To the contrary, resolution of that dispute in UATC's favor would be dispositive of this case. As explained later in this petition, UATC has presented uncontested evidence that it had neither actual nor constructive knowledge of a PCE discharge before its interest in the Site terminated in September 1978. Thus, if the State Board upholds prior precedents and agrees that former-landowner liability under Section 13304 depends on actual or constructive knowledge of a discharge, then UATC is not liable under Section 13304, and the Regional Board's decision to name UATC as a discharger must be reversed.

Below we (1) explain in detail why applicable legal precedents support UATC's interpretation of the knowledge requirement, (2) address the assertions made in the Order and at the Hearing that actual or constructive knowledge of the discharge need not be shown, and (3) conclude by demonstrating that UATC lacked the requisite knowledge of the dry-cleaning discharge for liability to attach under Section 13304 of the Water Code.

1. *Logsdon* and *Stuart* hold that actual or constructive knowledge of the discharge, and not mere knowledge of a tenant's activities, is required for a prior landowner or landlord to be named a discharger under Section 13304.

While there is a difference of opinion among the parties as to what the *Logsdon* and *Stuart* precedents mean, there is no dispute that they govern this case.[118] Below we provide a detailed review of the facts and holdings in these cases that demonstrates that the Regional Board has misapplied these important precedents.

In *Logsdon*, the former owners of the contaminated property at issue argued that they did not permit their tenant, who operated a wood-treatment plant on the property, to discharge wood-preserving chemicals into state waters and that they did not know that their tenant was doing so. WQ 84-6 at 8. Relying upon California common-law principles governing landowner nuisance liability, the State Board rejected those claims and concluded that landowners could be liable under Section 13304(a) for dangerous conditions created by their tenants where they "had or should have had knowledge of the discharges of waste at the site." *Id.* at 11 (emphasis added).

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[116] Tr. 43:25–44:14.

[117] Tr. 134:9–134:16; 137:7–138:2.

[118] *See* Revised Staff Report at 10 (citing *Stuart*); Tr. 44:3 (Advisory Staff citing to and discussing *Logsdon*).

In finding that the petitioners could properly be named as dischargers under Section 13304, the State Board relied on overwhelming evidence that the petitioners had or should have had extensive knowledge of their tenant's discharges. For example, during the period that the petitioners owned and leased the property, the Central Valley Regional Water Quality Control Board had notified them that a report of waste-discharge requirements was necessary before wood-treatment operations began, one of the petitioners was a defendant in a regional board lawsuit involving discharges caused by a another wood-treatment business of which he was an officer, petitioners were named in permits that required compliance with regional board requirements, one of the petitioners was president of the tenant wood-treatment business, and there was evidence that he routinely visited the property. WQ 84-6 at 10–11. Moreover, before petitioners sold the property, regional board inspectors discovered toxic chemicals in a shallow unlined pond on the property and issued a cleanup and abatement order to the tenant wood-treatment business. *Id.* at 2–3, 8 (concluding that petitioners' sale of the property was not effective until 1980, after the cleanup and abatement order had been issued). Thus, the former landowners in *Logsdon* were not deemed liable simply because they knew that their tenant was in the wood-treatment business or even because they knew that their tenant was using chemicals requiring careful handling. Instead, the State Board specifically relied upon the fact that the landowners knew or should have known, based on their knowledge of the Central Valley Regional Board's concern about waste discharges at the site and their personal involvement with the property and tenant's business, that those chemicals were being discharged into the environment.

Several years after *Logsdon*, the State Board reiterated in *Stuart* that the relevant question on the issue of landowner knowledge is whether the landowner knew or should have known of contamination. WQ 86-15 at 6. In evaluating whether the petitioner, Stuart Petroleum, could be liable for contamination caused by its tenant, who rented a gas station from Stuart Petroleum, the State Board observed that "[a]ctual knowledge of the contamination need not be shown where it is reasonable for a person to be aware of the dangers generally inherent in the activity." *Id.* at 6 n.3. Significantly, the State Board then went on to explain that this means that landowners may be liable if they have "general knowledge of the operation and the normal dangers common to it." *Id* (emphasis added). According to the State Board, the normal danger common to the tenant's gas-station operation was that underground storage tanks often leak. *Id.* On that point, the State Board emphasized that "[p]roblems of leaking underground tanks have become common knowledge, particularly in the oil business, in recent years and legislative responses (e.g. Health and Safety Code § 25280 et seq.) have called further attention to the issue." *Id.*

Thus, the critical ruling by the State Board in *Stuart* was that a petroleum-company landlord can be found to have "permitted" its tenant gas-station operator's discharges where such discharges were common knowledge in the industry in which both companies operated. Importantly, the State Board did not impose liability on Stuart Petroleum because it knew that its tenant operated a gas station at the site, that the tenant handled gasoline at the site, that gasoline required careful handling and containment, or because Stuart Petroleum should have somehow inferred from the fact that gasoline is flammable or otherwise dangerous that it could be discharged into the environment. Rather, Stuart Petroleum was found liable because it was in the

oil business and it was common knowledge at the time Stuart Petroleum leased the property that gasoline was often discharged from leaking underground storage tanks.[119]

California courts have stressed that Section 13304(a) is to be "construed harmoniously with the law of nuisance" and thus the statute, *Logsdon*, and *Stuart* all must be read in that context. *Redevelopment Agency of the City of Stockton v. BNSF Railway Co.*, 643 F.3d 668, 677 (9th Cir. 2011); *City of Modesto Redevelopment Agency v. Superior Court*, 119 Cal.App.4th 28, 37–38 (Cal. App. 2004); *see also In re Logsdon*, WQ 84-6, 9–10 (relying on nuisance and landlord tort cases to determine the standard of liability for landowners and landlords under Section 13304(a)). California nuisance cases hold that a landlord may be liable for a tenant's nuisance only if the landlord "knows or should know of the condition and the nuisance or unreasonable risk of nuisance involved." *City of Stockton*, 643 F.3d at 675; *see also Resolution Trust Corp. v. Rossmoor Corp.*, 34 Cal.App.4th 93, 102 (1995) (for a landlord to be liable for a tenant's nuisance, the landlord "must be aware of the specific dangerous condition and be able to do something about it before liability will attach"). Knowledge of the "condition and the nuisance" means knowledge or constructive knowledge of the contamination. *City of Stockton*, 643 F.3d at 675 ("We focus instead on whether the [defendants] knew or should have known of the contamination.").

Thus, to determine whether the former landowner defendants in *City of Stockton* were liable in nuisance, the court evaluated whether they knew or should have known that petroleum that was spilled from a neighboring industrial site had contaminated the defendants' former property, not whether the defendants knew simply that the neighboring property was an industrial site that handled petroleum. *Id.* at 675–676. Similarly, in determining whether former landlord defendants knew of the "dangerous condition" at issue in *Resolution Trust*—a case involving contamination caused by a gas station on the former landlords' property—the court did not ask whether the landlords knew that their tenant operated a gas station (which the defendants indisputably knew) but rather, whether the landlords knew or should have known that their tenant had contaminated adjoining property. *Id.* at 104. According to both cases, whether landowners or landlords should have known about contamination depends on whether they reasonably should have inspected their property for contamination, and if so, whether the contamination was discoverable by a reasonable inspection. *City of Stockton*, 642 F.3d at 675; *Resolution Trust*, 34 Cal. App. 4th at 103.

Taken together, it is crystal clear from all of these precedents that landowners and landlords cannot be presumed to know of a discharge based on the simple fact that their tenant's activities involve the use of chemicals, even flammable chemicals, such as those in gasoline.

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[119] A year after *In re Stuart*, the State Board again explained in *In re United States Department of Agriculture* that "a landowner can be held accountable, even without actual knowledge, where the activity permitted on the property might be expected, by a reasonable and prudent landlord, to result in a discharge." WQ 87-5 at 3 n.1. Reasonably expecting a tenant's activities to result in a discharge is not the same, of course, as simply knowing generally of the tenant's activities. Similarly, knowing that a tenant is using a chemical in its business is not the same as knowing that the tenant is discharging that chemical into groundwater.

Rather, landowners and landlords may only be liable if they knew or should have known of the discharge of contaminants on their property.

2. Subsequent State Board orders have not overturned or modified the knowledge requirement articulated in *Logsdon* and *Stuart*, nor has Water Code Section 13304 been amended to modify the knowledge requirement.

In support of its contention that mere "knowledge of the activities which resulted in the discharge" is sufficient for landowners or landlords to be liable for their tenants' discharges, the Order cited *In re Wenwest*, Cal. State Water Res. Control Bd. Order No. WQ 92-13, 4 (Oct. 22, 1992), in addition to *Stuart*.[120] Moonlite's counsel also endorsed the Regional Board's position, citing *In re San Diego Unified Port Dist.*, Cal. State Water Res. Control Bd. Order No. WQ 89-12, 6 (Aug. 17, 1989).[121] Neither of these State Board orders, however, even purports to overturn or modify the standard established by *Logsdon* and *Stuart*, and in fact, both *Wenwest* and *San Diego* confirm that UATC has correctly construed State Board precedent to require actual or constructive knowledge of a discharge.

In *Wenwest*, the State Board evaluated whether a former landowner could be liable under Section 13304(a) for contamination caused by a leaking underground storage tank. In finding that the former owner, Wendy's International, was not a discharger under Section 13304, the State Board addressed the knowledge issue, observing that "Wendy's purchased the site in 1984 at a time when leaking underground tanks were just being recognized as a general problem and before most of the underground tank legislation was enacted." *Id.* at 6. Thus, as in *Stuart*, the State Board looked to see whether knowledge of leaking underground storage tanks was common when the former landowner owned the property, and, in this case, since it was not, declined to impose liability.

In *San Diego*, the San Diego Port District, a current landowner and landlord, argued that the State Board had erred in naming it as a party responsible for its tenant's discharges. The State Board disagreed, explaining that the "Port District concedes and the record verifies that the Port District knew of the potential for discharge of copper ore to San Diego Bay from [its tenant's] activities." WQ 89-12 at 7. In fact, the San Diego Regional Water Quality Control Board had "informed the Port District on two occasions of the potential for a discharge of copper ore to San Diego Bay and requested that the Port District file an application for a [Clean Water Act discharge] permit." *Id.* Far from indicating that a landowner need not have knowledge of a tenant's potential discharge to be liable, *San Diego* suggests just the opposite.

Thus, neither *San Diego* nor *Wenwest* support the assertion made in the Revised Staff Report and by the Cleanup Staff at the Hearing that UATC may be held liable in this case simply upon finding that UATC knew that its tenant's "activities" included the use of "dangerous"

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120 Revised Staff Report at 10.

121 Tr. 98:25–99:12.

chemicals.[122] Instead, these cases, like *Stuart* and *Logsdon*, stand for the proposition that landowners or lessors may only be liable for cleaning up their tenant's discharges where they knew or had reason to know of those discharges.

In naming UATC as a discharger, the Regional Board also relied on an incorrect understanding that the law had somehow changed either to eliminate the knowledge requirement under Section 13304 altogether or modify it such that actual or constructive knowledge of the discharge need no longer be proved. When asked by a Regional Board member during the Hearing how a property owner should be expected to know that a dry-cleaner tenant spilled PCE during its operations, the Advisory Staff cited a footnote in *Stuart* that, according to the Advisory Staff, "talks about the legislative intent of our Code is to provide strict liability in this section, so getting away from the knowledge requirement, if that makes sense."[123] Later in the Hearing, after a closed door session with Advisory Staff, the same Regional Board member explained her reasons for voting to name UATC as a discharger by observing that:

> from what our legal counsel has advised us, the State Water Code states that and, you know, I really struggled with this and I guess I've learned that there actually was a change in the State Water Code to where it was before this issue of knowing that something dangerous had occurred, to just knowing that such an activity could occur.[124]

Another Board member also stressed when explaining her reasons for concluding that UATC should be named as a discharger that she was relying on the advice provided by the Advisory Staff counsel concerning the knowledge requirement.[125] A third Board member strongly implied that she too relied on the Advisory Staff counsel's advice about the knowledge requirement.[126]

These statements demonstrate that the Regional Board and its counsel have fundamentally misunderstood Water Code Section 13304(a), its history, and the case law and State Board orders interpreting it. The Advisory Staff is absolutely correct that Section 13304(a) formerly imposed liability only on those who "negligently or intentionally" caused or permitted waste to be discharged into waters of the state, and that the Legislature subsequently removed the negligence or intent standard from the statute. However, what the Regional Board and its counsel failed to appreciate is that this change in no way impacted Board precedents holding that a former landowner must have actual or constructive knowledge of a discharge in order to be deemed to permit it. This is clear from the fact that the Legislature enacted the statutory amendment at issue in 1980, well before each and every one of the precedents described in the prior section, including *Logsdon* and *Stuart*, were

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122 Revised Staff Report at 11; Tr. 123:22–124:6.
123 Tr. 42:1–42:6.
124 Tr. 134:9–134:16 (emphasis added).
125 Tr. 137:7–138:2.
126 Tr. 135:10–135:21.

decided.[127] Indeed, the *Stuart* case discusses this change in law just before it explains that a former lessor's knowledge of the discharge is an element of liability under Section 13304. *See Stuart*, WQ 86-15 at 7. Under these circumstances, it is abundantly clear that the 1980 amendment to Section 13304 in no sense "get[s] away from the knowledge requirement" as far as landowner liability is concerned, and that the implication that the 1980 amendments in any way altered the knowledge requirement articulated in *Stuart* and *Logsdon* is clearly erroneous.

3. There is not substantial evidence that UATC "should have known" that dry cleaning at the Site would result in a discharge of PCE.

None of the factors on which the State Board and California courts have relied in prior precedents to conclude that a landowner or landlord should have known of its tenant's discharges is remotely present in this case.

Unlike in *Stuart*, there is simply no evidence, let alone substantial evidence, that UATC should have known by 1978 based on common knowledge that its tenant would discharge PCE into the groundwater. On the contrary, numerous sources confirm that this hazard was not discovered until the 1980s, long after UATC sold and ceased leasing the Site. The 2007 Study, upon which the Revised Staff Report heavily relies, indicates that PCE contamination from dry cleaners was first detected in the Central Valley in California in approximately 1984 as a result of state-mandated groundwater testing.[128] A 1992 publication by the Central Valley Regional Water Quality Control Board indicates that groundwater contamination from dry-cleaning operations in California was first discovered in the late 1980s.[129] A publication of the State

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[127] *See In re Petition for Review of Cleanup and Abatement Order for Big Hole Project*, Cal. State Water Res. Control Bd. Order No. 81-8 at 5 (June 18, 1981). As the State Board explained, until January 1, 1981, Water Code Section 13304(a) provided that:

> [a]ny person who discharges waste into the waters of this state in violation of any waste discharge requirement or other order issued by a regional board or the state board, or who intentionally or negligently causes or permits any waste to be discharged or deposited where it is, or probably will be, discharged into the waters of the state and creates, or threatens to create, a condition of pollution or nuisance, shall upon order of the regional board clean up such waste or abate the effects thereof or, in the case of threatened pollution or nuisance, take other remedial action.

Id. (emphasis added).

[129] *See* Central Valley Regional Water Quality Control Board, "Dry Cleaners—A Major Source of PCE in Ground Water" 10 (Mar. 27, 1992), enclosed as Ex. A to Letter from S. Reisch to N. King, "Moonlite Associates LLC's Contentions as to United Artists Theatre Circuit, Inc.'s Liability for Contamination at 2640 El Camino Real, Santa Clara, California" (Dec. 17, 2012).

Coalition for Remediation of Drycleaners suggests the same.[130] And the first cleanup and abatement order published by the State Board that addresses groundwater contamination caused by a dry cleaner was issued in 1989, upholding a 1988 regional board order. *See In re Spitzer*, Cal. State Water Res. Control Bd. Order No. WQ 89-8 at 1–2 (May 16, 1989).

Thus, the earliest that a reasonable and prudent landowner should have known from common knowledge about the risk of groundwater contamination associated with dry-cleaning businesses is after the mid-1980s, several years after UATC ceased owning or leasing the Site.[131] The Order has not offered one iota of evidence to the contrary or even disputed this conclusion. Accordingly, "common knowledge" does not provide a basis for concluding that UATC should have known of a PCE discharge at the Site.

Similarly, the facts in this case do not remotely resemble those on which the Regional Board imposed liability in *Logsdon*. The Logsdons were told by a regional water quality control board to submit a report of waste-discharge requirements to the board. *Logsdon*, WQ 84-6 at 10. UATC was not. Harold Logsdon participated in the day-to-day operation of his tenant's business. *Id.* at 11. UATC did not. Harold Logsdon was sued contemporaneously by another regional water quality control board in connection with a similar business that also discharged chemicals into the environment. *Id.* UATC was not. The discharges at issue in *Logsdon* were made to a "shallow unlined pond," in which the presence of toxic chemicals presumably would have been obvious to any observer. *Id.* at 2. In this case, any discharges at issue were made to the sewer or subsurface, where they would not have been detectable by a routine property visit. And the Logsdons were specifically notified that wood-treatment operations had to be conducted in accordance with regional board requirements. *Id.* at 11. UATC received no such notice.

Although the Revised Staff Report argues that "the Fire Marshal Permit put UATC on notice that the business had risks related to solvent handling not inherent in other businesses,"[132]

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130 *See* "A Chronology of Historical Developments in Drycleaning" 4 (Nov. 2007), enclosed as Ex. B to Letter from S. Reisch to N. King, "Moonlite Associates LLC's Contentions as to United Artists Theatre Circuit, Inc.'s Liability for Contamination at 2640 El Camino Real, Santa Clara, California" (Dec. 17, 2012) (indicating that dry cleaners were not identified as a source of groundwater contamination until the City of Lodi detected PCE in groundwater samples in the late 1980s).

131 The Regional Board tries to intimate that UATC was some kind of expert in dry-cleaning contamination because it allegedly owned or leased a second site in California where a dry cleaner may have operated. Revised Staff Report at 11. Of course, having two dry-cleaner tenants in the 1970s would not change the fact that dry-cleaner contamination was not common knowledge until after the mid-1980s. In any event, it is important to note that UATC has not been named a discharger in that case, and the party that originally sought to name UATC has conceded that there is no evidence that UATC had knowledge of the dry-cleaner discharges at that site. *See* Letter from L. Stalteri to San Francisco Regional Water Quality Control Board at 1(Feb. 22, 2013) ("We have no evidence that would show that United Artist Communications, Inc. knew about any spills or releases at the property.") *available at* http://geotracker.waterboards.ca.gov/regulators/deliverable_documents/8825332462/El%20Camino%20Real%20correspondence.pdf.

132 Revised Staff Report at 11.

the Order and Revised Staff Report provide no grounds for presuming that UATC therefore should have known that its tenant would discharge solvent into the sewer or subsurface. As an initial matter, nothing in the record suggests that UATC ever received or reviewed the permit, which is addressed only to "Moonlight Cleaners" and copied only to the Santa Clara Fire Department. And, even if there were evidence that someone affiliated with UATC actually reviewed the Fire Marshal permit, there is no basis for inferring that the permit actually notified UATC in 1961 (or at any other time before 1978) that its tenant would discharge PCE at the Site. The Fire Marshal permit specifically authorizes Moonlite Cleaners to install equipment that uses solvents, but nothing in the permit precludes Moonlite from discharging "solvent" to the sewer system. In fact, the Fire Marshal permit does not impose any restrictions on solvent-disposal practices or mention the risk of groundwater contamination.

To the contrary, the Fire Marshal permit's provisions are aimed at hazards associated with inhalation of vapors during the dry-cleaning process and—not surprisingly since the permit was issued by the Fire Marshal—the risk that solvent vapors could be flammable. The permit specifies how exhaust fans should be operated, requires use of breathing masks or floor-level ventilation under certain conditions, ensures that reclaimed solvent is transferred in enclosed rather than open piping, and requires fans to be in use during equipment operation. The State Fire Marshal most likely had jurisdiction to issue the permit to Moonlite Cleaners in the early 1960s because of the fire risk associated with dry cleaners at that time. Highly flammable petroleum-based cleaning solutions, such as Stoddard solvent, were used widely in the dry-cleaning industry until they were generally phased out in favor of chlorinated solvents.[133] Indeed, PCE replaced petroleum-based solvents in part due to the fire risk associated with petroleum-based solvents.[134] It is plainly the risk of fire and the potential for occupational exposure to vapors, and not the risk of discharges to groundwater, that the Fire Marshal permit conditions are designed to guard against. The Fire Marshal Permit thus is not evidence that UATC should have known that its dry-cleaner tenant might discharge PCE from the Site.

While the facts in *Logsdon* and *Stuart* are clearly distinguishable, UATC's position is similar to that of the landlord in *Resolution Trust*. In that case, a landowner leased its property (through a subtenant) to a gas station. 34 Cal. App. 4th at 98. During the time that the gas station operator rented the property, substantial gasoline and diesel fuel leaks occurred, contaminating the plaintiff's neighboring property. *Id.* at 98–99. The plaintiff brought a nuisance claim against the landowner who had leased the property to the gas-station operator.

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[133] *See* State Coalition for Remediation of Drycleaners, "Chemicals Used in Drycleaning Operations" (Jan. 2002), attached to Ex. 3 hereto (UATC's Comments on the Cleanup Staff's Tentative Order) as Ex. F. *See also* "A Chronology of Historical Developments in Drycleaning" (Nov. 2007), enclosed as Ex. B to Letter from S. Reisch to N. King, "Moonlite Associates LLC's Contentions as to United Artists Theatre Circuit, Inc.'s Liability for Contamination at 2640 El Camino Real, Santa Clara, California" (Dec. 17, 2012); State Compensation Ins. Fund, "Dry Cleaner Safety" at 1, attached to Ex. 3 hereto (UATC's Comments on the Cleanup Staff's Tentative Order) as Ex. G.

[134] *See* State Coalition for Remediation of Drycleaners, "Chemicals Used in Drycleaning Operations" (Jan. 2002), attached to Ex. 3 hereto (UATC's Comments on the Cleanup Staff's Tentative Order) as Ex. F.

Id. at 98. The California Court of Appeals held that the landowner was not liable for creating a nuisance. *Id.* at 98. In so holding, the court specifically evaluated the circumstances under which a landlord has a duty to inspect for nuisances created by its tenant or subtenant. *Id.* at 102–104. The court stressed that "[t]he landlord need not take extraordinary measures or make unreasonable expenditures of time and money in trying to discover hazards unless the circumstances so warrant." *Id.* at 103. On this basis, the court went on to conclude that there was no reason to find that the landlord should have known that its tenant's gas station operations had caused subsurface contamination of adjoining property. *Id.* at 103–04.

Here, discharges before September 1978 of colorless PCE into the sewer or through tiny cracks in a concrete floor would not have been detected by a reasonable inspection. As *Resolution Trust* demonstrates, UATC had no duty to undertake extraordinary measures, such as extensive and expensive soil and groundwater sampling, to discover any such latent, subsurface contamination on its property. That is especially true given that the risk of PCE contamination by dry cleaners was not generally known by 1978 and subsurface environmental investigations were exceptionally uncommon prior to the enactment of the federal Comprehensive Environmental Response Compensation and Liability Act ("CERCLA") in December 1980.[135] Indeed, the current landowner, whose cooperation the Regional Board lauds, did not undertake a subsurface investigation of the Site until more than 20 years after UATC vacated the Site.

* * *

For the foregoing reasons, there is no basis for concluding that UATC should have known of any PCE discharges at the Site that occurred while UATC owned or leased it. It is undisputed that groundwater contamination was not a hazard commonly associated with dry cleaners until years after UATC's affiliation with the Site ended. And there is no evidence in the record from which to conclude that UATC otherwise should have known that its tenant discharged PCE at the Site (if any such discharges occurred). The State Board accordingly should reverse the Regional Board's decision to name UATC as a discharger under Section 13304.

C. The Regional Board Lacked Substantial Evidence to Conclude that UATC Had the Legal Ability to Prevent a PCE Discharge.

In determining whether a landlord has the legal authority to prevent a tenant's discharge of waste, the State Board has focused on whether the terms of the relevant lease authorized the landlord to terminate the tenancy, enter the premises, or otherwise remediate the contamination. *See, e.g., In re Logsdon,* WQ 84-6 at 12 (lease authorized landlord to re-enter the premises if

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[135] Tr. 77:5–8; *see also, e.g., In re Hemingway Transp., Inc.*, 174 B.R. 148, 169 (D. Mass. 1994) ("In early 1983, at the time this sale was closed, professional environmental site assessments were not yet common or customary."); *Ashley II of Charleston, LLC v. PCS Nitrogen, Inc.*, 791 F.Supp.2d 431, 452–453 (D.S.C. 2011) (finding that it was not customary in 1985 for purchasers of commercial property to investigate the property's environmental condition) *aff'd* 714 F.3d 161 (4th Cir. 2012).

tenants violated lease provisions prohibiting tenants from creating a nuisance on the premises and requiring tenants to abide by all laws); *In re Spitzer*, WQ 89-8, 1989 WL 97148 at *4 (owners had right to regain possession of the site if the lessee failed to maintain the premises in good order and condition or failed to comply with all applicable laws).

The Regional Board's conclusion that UATC had such authority was not supported by substantial evidence. Even if it were reasonable to assume that UATC entered into written leases with its tenant at the Site in the 1960s, nothing about the content of any such lease is known. The Revised Staff Report engages in pure speculation when it claims that UATC had a lease or leases that "would have given UATC legal control over Moonlite Cleaners' activities."[136] There is absolutely no evidence from which to infer that any applicable leases would have included provisions allowing UATC to enter the premises, terminate the lease, or remediate contamination if, for example, a tenant operated in accordance with its permit but PCE somehow leaked from sewers serving the Site.

Moreover, UATC could only be expected to prevent contamination it knew or should have known about. For all of the reasons set out above, UATC neither knew nor should have known about any PCE discharges at the Site by its tenant, and it is therefore simply irrelevant whether UATC had the legal ability to prevent any such discharges.

D. The Regional Board Incorrectly Concluded that UATC's Bankruptcy Did Not Release UATC from Liability under Water Code § 13304 for Contamination at the Site.

Even if the State Board were inclined to uphold the Regional Board's decision to name UATC as a discharger under Section 13304(a) of the Water Code, any and all claims against UATC are barred as a matter of law because such claims were discharged by the Bankruptcy Court order confirming the Bankruptcy Plan.

As a general matter of bankruptcy law, any and all pre-bankruptcy claims against a debtor are discharged in bankruptcy. Indeed, "the purpose of bankruptcy law and the provisions for reorganization could not be realized if the discharge of debtors were not complete and absolute." *See, e.g.*, *In re Penn Central Transp. Co.*, 771 F.2d 762, 767 (3d Cir. 1985). Here, the Bankruptcy Court order granted UATC a broad discharge from all claims against UATC. The order provides that:

> all Persons and Entities shall be precluded from asserting against the Debtors, the Debtors in Possession, the Estates, and the Reorganized Debtors, their successors and assigns, their assets and properties, any other Claims or Equity Interests based upon any documents, instruments, or any act or omission, transaction or other activity of any kind or nature that occurred prior to the Effective Date [of the Bankruptcy Plan].

136 Revised Staff Report at 11.

Bankruptcy Court Order at 43.

The Effective Date of the UATC Bankruptcy Plan was March 2, 2001. Because UATC has not owned or leased the Site since 1978, any claims that may be asserted against UATC relating to the Site would necessarily be based on an "act or omission, transaction or other activity of any kind or nature that occurred prior to the Effective Date [of the Bankruptcy Plan]." Accordingly, any such claims have been discharged by the Bankruptcy Court Order and cannot now be asserted against UATC.

Indeed, further support that any claims against UATC relating to the Site were discharged can be found in the fact that the Bankruptcy Court Order provides for the following limited exception to its discharge provisions:

> Notwithstanding any language to the contrary in the [Bankruptcy] Plan or in this Order, nothing in the [Bankruptcy] Plan or this Order shall be construed as releasing or relieving any entity of any liability to a governmental entity under any police or regulatory statute as the owner or operator of property that the entity owns or operates after the date of this Order.

Bankruptcy Court Order at 23 (emphasis added).

Thus, the Bankruptcy Court Order expressly carves out of its discharge provisions governmental entity claims relating to property that is owned or operated by UATC "after the date of [the Bankruptcy Plan]." However, there is no such carve-out for claims (governmental or otherwise) relating to property that was not owned or operated by UATC after the date of the Bankruptcy Court Order (*i.e.*, January 25, 2001). The Bankruptcy Court's approach provides UATC with the "fresh start" promised by the Bankruptcy Code, while preserving the ability of regulators to protect the environment by holding those in possession of contaminated property responsible for ongoing compliance with environmental laws. *See Ohio v. Kovacs*, 469 U.S. 274, 283-285 (1985) (holding that claims against the debtor for cleanup costs were discharged, but noting that the Court did not "question that anyone in possession of the site . . . must comply with the environmental laws of the State . . . . Plainly, that person or firm may not maintain a nuisance, pollute the waters of the State or refuse to remove the source of such conditions."). In accordance with the Bankruptcy Court Order's terms, because UATC did not own or operate the Site at any time after January 25, 2001, any claims against UATC relating to the Site were discharged in UATC's bankruptcy.

Despite the plain language and clear intent of the Bankruptcy Order, the Regional Board concluded that its claim against UATC was not discharged because, according to the Revised Staff Report, (1) orders requiring cleanup of ongoing contamination are not "claims" within the meaning of the Bankruptcy Code; and (2) even so, the Regional Board's claim against UATC did

not arise pre-petition and thus could not have been discharged by the Bankruptcy Court.[137] Neither of these arguments is persuasive.

1. Cleanup orders are claims under the Bankruptcy Code.

As to the first argument, the Revised Staff Report relies on *In re Chateaugay Corp.*, 944 F.2d 997 (2d Cir. 1991), a decision by the Second Circuit Court of Appeals. According to the Revised Staff Report, *In re Chateaugay* stands for the proposition that "an obligation to cleanup and ameliorate ongoing pollution is not a claim that is dischargeable through bankruptcy."[138] Importantly, the Revised Staff Report wholly ignores the fact that the Bankruptcy Code expressly provides that the term "claim" includes "the right to an equitable remedy for breach of performance" if such breach "gives rise to a right to payment . . . ." 11 U.S.C. § 101(4)(B). And *Chateaugay* itself recognizes that equitable remedies, such as certain injunctions requiring environmental remediation, are, in fact, treated as "claims" under the Bankruptcy Code where monetary damages may be paid as an alternative to the equitable remedy. *Id.* at 1007–08. Here, the Regional Board is plainly authorized under the Porter-Cologne Water Quality Control Act to perform any required cleanup itself and recover costs incurred from any "liable party." Cal. Water Code §13304(b)(1) & (2), (c). Thus, an order requiring UATC to remediate the Site can be a "claim" that is dischargeable in bankruptcy, even under *Chateaugay.*

It appears that the Regional Board may be relying on language in *Chateaugay* that states that "a cleanup order that accomplishes the dual objectives of removing accumulated wastes and stopping or ameliorating ongoing pollution emanating from such wastes is not a dischargeable claim" because EPA "has no authority to accept a payment from a responsible party as an alternative to continued pollution." *Id.* at 1008. Here, UATC has not owned or leased the Site for several decades and is not currently causing or allowing continuing pollution. In that regard, the Seventh Circuit's decision in *In re CMC Heartland Partners*, 966 F.2d 1143, 1147 (7th Cir. 1992), is instructive. In that case, which was decided after *Chateaugay*, the court expressly considered the different positions under the Bankruptcy Code of former and current property owners that are liable under sections 107(a)(2) and 107(a)(1), respectively, of CERCLA with respect to ongoing pollution that EPA claimed presented a current threat to human health and the environment. The court concluded that, because EPA cleanup orders issued under section 106 of CERCLA against prior owners and operators that are liable under section 107(a)(2) "require a person to pay money today because of acts before or during the reorganization proceedings," they are "claims" dischargeable under the Bankruptcy Code, whereas Section 106 orders issued to current owners and operators liable under CERCLA sections 107(a)(1) "depend not at all on the debtor's actions before or during the reorganization" and are therefore not dischargeable. *CMC Heartland Partners*, 966 F.2d at 1146–47. Here, the Regional Board seeks to require UATC, a former owner of the Site, to perform a cleanup based on occurrences before its bankruptcy, and those claims are therefore discharged.

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137 Revised Staff Report at 12.

138 Revised Staff Report at 12.

Finally, while the Revised Staff Report assumes that the exception carved out in *Chateaugay* for remedial orders relating to "ongoing" pollution applies in this case, *Chateaugay* is not controlling precedent in this case, has not been universally followed, and, in fact, has been expressly rejected by a district court within the Ninth Circuit, which includes California. In *In re Goodwin*, 163 B.R. 825, 829–833 (Bankr. D. Idaho 1993), the court undertook a thorough and careful review of the Bankruptcy Code and prior Supreme Court decisions and declined to follow *Chateaugay*. Instead, the court held that the only relevant question is whether the enforcing agency has an alternative right to perform the cleanup itself and seek damages from the debtor, a prior owner of the contaminated property. The Regional Board clearly had (and still has) that option here. Cal. Water Code §13304(b)(1) & (2), (c). Thus, under the *Goodwin* court's analysis, the Regional Board's finding that UATC is liable under Section 13304 is a claim subject to discharge by UATC's bankruptcy.

By naming UATC as a discharger at the Site in addition to Moonlite, the Regional Board is effectively prosecuting a collection action on behalf of Moonlite and for Moonlite's benefit. Moonlite is already responsible for cleaning up the Site, so the only result of issuing a cleanup and abatement order to UATC is to require UATC to share in Moonlite's costs. But Courts plainly disfavor such efforts to repackage an injunction as a claim for damages in order to evade the effect of a bankruptcy proceeding. *See In re CMC Heartland Partners*, 966 F.2d at 1147 (EPA may not repackage a forfeited cleanup claim for damages as an injunction). Moreover, Moonlite does not deserve any special assistance from the Regional Board given that it leased the Site to dry cleaners until 1996, failed to investigate potential impacts from the former dry cleaners until 2004 (even after evidence of environmental impacts from dry cleaners was well known), and then failed to report the results of its discovery of PCE impacts at the Site to the state for almost five more years.

2. <u>The Regional Board's claim against UATC arose before UATC filed for bankruptcy.</u>

The Regional Board also argues that, even if the Order is a claim under the Bankruptcy Code, under the "fair contemplation" test that Regional Board contends applies to this case,[139] the Regional Board's claim was discharged in UATC's bankruptcy only if it is "based on pre-petition conduct that [could] be fairly contemplated by the parties at the time of [UATC's] bankruptcy."[140] That is, the Revised Staff Report asserts that a pre-petition claim is dischargeable only if the creditor reasonably should have anticipated that it had the claim

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[139] Not all courts apply the "fair contemplation" test, and UATC does not concede that it applies in this case. For example, under the "conduct" test applied by some courts, an environmental cleanup claim arises when the conduct occurred, even though the injury resulting from the conduct was not manifest at the commencement of the case. *See, e.g., In re Parks*, 281 B.R. 899, 902 (E.D. Mich.2002); *In re Jensen*, 995 F.2d at 930. In the environmental context, the test permits the discharge of claims in bankruptcy where the release of hazardous substances occurred prepetition, regardless of when the release was discovered. *See, e.g., In re Chateaugay*, 944 F.2d at 1005.

[140] Revised Staff Report at 12 (citing *In re Jensen*, 995 F.2d 925, 930 (9th Cir. 1993)).

because it knew or should have known of the facts underlying the claim by the time the bankruptcy plan was confirmed.

The Revised Staff Report contends that the Regional Board did not fairly contemplate its claim against UATC by the time of UATC's bankruptcy because the Regional Board did not learn of contamination at the Site until 2009, years after UATC's bankruptcy was confirmed.[141] Even assuming that is true,[142] as the Revised Staff Report acknowledges, the inquiry under the fair contemplation test does not end if the Regional Board lacked actual knowledge of contamination at the Site. If the Regional Board should have known of contamination at the Site by the time UATC's bankruptcy was confirmed—that is, had constructive knowledge of the contamination—its claim against UATC arose before the bankruptcy was confirmed and has been discharged. *See In re Jensen*, 995 F.2d at 930–931; *In re Chicago, Milwaukee, St. Paul & Pac. R.R. Co.*, 3 F.3d 200, 207 (7th Cir. 1993). In determining whether the Regional Board should have fairly contemplated its claim against UATC, knowledge of other state agencies may be imputed to the Regional Board. *See In re Jensen*, 995 F.2d at 931.

It is plain that the Regional Board by 2001 had extensive knowledge of the risks of dry-cleaner contamination. Certainly, if the Regional Board is prepared to conclude that UATC should have known before 1978 that its dry-cleaner tenant had released PCE into the environment on the grounds that such releases were common knowledge, it must also inevitably true that the Regional Board should have known by 2001 that such a release had occurred at the Site.

In particular, the Regional Board undeniably knew by January 2001 that dry cleaners had released PCE into the environment throughout the Central Valley and in Santa Clara. In 1992, the neighboring regional board issued a study entitled "*Dry Cleaners – A Major Source of PCE In Ground Water*," and concluded that that the "data strongly indicate that leakage through the sewer lines is the major avenue through which PCE is introduced to the subsurface."[143] According to the 2007 Study, the Regional Board had initiated 38 dry-cleaner-release cases in Santa Clara County by 2002. *Id.* at 115. The Regional Board also had by January 2001 the data necessary to identify historical dry-cleaning operations. By surveying records such as telephone, business, and shopping mall directories, the 2007 Study identified approximately 1,250 dry-cleaner sites that operated in Santa Clara County between 1946 and 2001. *Id.* at 31–35. In fact, the survey specifically included the dry-cleaning businesses that operated in the Moonlite Shopping Center and identified them as a historical, medium-threat facility. *Id.* at 192. Lastly,

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[141] Revised Staff Report at 12.

[142] UATC is unable to independently determine when the Regional Board first learned that a dry cleaner operated at the Site. If, as the Regional Board appears to contend, actual knowledge of the existence of a dry cleaner at the Site is a basis for imposing liability under the Water Code, then such information is relevant to when the Regional Board "fairly contemplated" its claim against UATC. Accordingly, we respectfully request that the Regional Board make this information available in the public record.

[143] Victor J. Izzo, *Dry Cleaners – A Major Source of PCE In Ground Water*, Sacramento: California Regional Water Quality Board, Central Valley Region (1992).

data indicating that releases were common in the dry-cleaning industry was available to the Regional Board by 2001. The 2007 Study explains that a 2001 EPA survey estimated that 75 percent of active dry-cleaning facilities in the United States have caused soil and groundwater contamination. *Id.* at 13–14.

Moreover, it is undisputed that the California State Fire Marshal knew since the early 1960s that dry cleaning with solvents occurred at the Site. If as the Revised Staff Report asserts, UATC "should have known of the use of chemicals at the Site and its dangers, including the potential for unauthorized discharges" because of the Fire Marshal Permit,[144] then the State Fire Marshal should have had the same knowledge in the 1960s and 1970s. And, just as the knowledge held by a California regional water quality control board was imputed to the California Department of Health Services in *Jensen*, 995 F.2d at 931, then in this case the State Fire Marshal's knowledge should be imputed to the Regional Board.

Thus, if UATC—a movie theater company that was operating well before the dawn of modern environmental law—should have known that a release of PCE occurred at the Site before September 1978, the Regional Board indisputably should have drawn the same conclusion itself by 2001. Accordingly, to the extent the State Board believes that the Regional Board has a viable claim against UATC under Section 13304, that claim must have arisen before UATC's bankruptcy was confirmed, and it was therefore discharged.

E. The Regional Board Improperly Concluded that the City of Santa Clara Should Not Be Named as an Additional Discharger.

As explained above in Section II.A of the Petition, the evidence overwhelmingly supports the conclusion that PCE contamination at the Site is attributable to releases from the City of Santa Clara's sanitary sewer system that services the Site. Key indicators of sewer releases include:

1. PCE has been detected at elevated concentrations in groundwater samples along the sewer lines (boreholes B6, B43, B44, B12, and MW2). Since these locations are cross-gradient from the former dry-cleaning premises, they cannot be explained by down-gradient migration of contaminated groundwater.

2. As explained above, the concentrations at which PCE has been detected in groundwater at the Site indicate that the PCE was released in the dissolved phase, which would occur in a release of wastewater from sewers, rather than as a DNAPL, which would occur in a surface spill.

3. Video logging of the 8-inch diameter sewer line south of the Site, which was constructed by the City in 1960 or 1961, revealed compromised pipe integrity.[145]

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144 Revised Staff Report at 11.

145 *See, e.g.*, UATC Presentation at Slide 26.

4. Methylene blue active substances, which are found in detergents and soaps that would have been discharged to the sewer system in wastewater, have been detected in groundwater samples along with PCE near the sewer system.[146] Furthermore, compounds unrelated to dry cleaning, such as acetone, toluene, and cyclohexane, have been detected in soil gas samples collected near the sewer line in the alley behind the Moonlite tenant space. These detections suggest that wastewater has leaked from the sewer serving Moonlite and the surrounding businesses, as none of these materials would be expected to be found in a PCE spill at the surface.[147]

Despite this evidence, and even though the Cleanup Staff conceded that a sewer lateral connecting the dry cleaner to the sewer line in the alley may have leaked,[148] the Revised Staff Report asserts that PCE was not released from the adjacent City sewer,[149] and the Regional Board (either explicitly or by its failure to act) rejected UATC's request that the City of Santa Clara be named as an additional discharger responsible for remediating the Site.[150] The Cleanup Staff attempt to justify their conclusion on two main grounds.

First, the Cleanup Staff contend that detection of PCE at high concentrations in indoor air and soil gas beneath the dry-cleaner tenant's space shows that the PCE must have come from a surface release and not from leaking sewers. However, using a model developed by the California Department of Toxic Substances Control, EKI has already demonstrated that both soil gas and indoor air concentrations measured at the dry-cleaner building space are fully explained by a release of wastewater containing PCE from sewer lines beneath the building.[151] Moreover, EKI has pointed out that PCE also has been detected in indoor air within buildings to the east and west of the former dry-cleaning establishment and that the presence of PCE in the other buildings (where no dry-cleaning equipment was present) suggests that the source of the

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[146] West, "Site Investigation Report, 2640 El Camino Real, Santa Clara, California" 30 (Oct. 5, 2011).

[147] *Id.*

[148] Revised Staff Report at 6; Tr. 35:14–17.

[149] Revised Staff Report at 6–7.

[150] At the Hearing, the Advisory Staff appeared to advise the Regional Board incorrectly that the question of whether the City should be named as a discharger was not before the Regional Board. Tr. 42:17–20; 43:11–13. To the contrary, UATC specifically requested in its comments on the Tentative Order (a copy of which UATC provided to the City) that the City be named as a party responsible for remediating the Site. *See* UATC's Comments on the Cleanup Staff's Tentative Order at 27–28, attached as Ex. 3 hereto. At the Hearing, the Cleanup Staff presented their reasons for recommending that the City not be named. Tr. 35:3–17. Thus, although the Order and Regional Board discussion at the Hearing did not explicitly reject UATC's request that the City be named, the Regional Board's failure to act on that request is an action reviewable by the State Board. Cal. Water Code § 13320.

[151] EKI Comments at 7 and n.24, attached to Ex. 3 hereto (UATC's Comments on the Cleanup Staff's Tentative Order) as Attachment A.

detections is vapor intrusion of PCE from underlying soil and groundwater contamination, not a surface release of PCE from dry-cleaning equipment and operations.[152]

Second, the Cleanup Staff assert that the presence of PCE in locations cross-gradient from the former dry-cleaner operation can be explained by an inconsistent local groundwater gradient, which temporarily pushed contamination to the southwest.[153] For the reasons explained above in Section II.A.3(d), the Cleanup Staff's assertion that groundwater flowed to the southwest in the early 1990s is not supported by the data. Thus, there is no merit to the Cleanup Staff's "inconsistent-local-groundwater-flow" theory and no scientifically valid explanation for the PCE concentrations in groundwater along the sewer line other than a sewer line release.

Although UATC presented these arguments to the Regional Board, UATC is concerned that the Regional Board's decision not to name the City as a discharger may have been impacted by inaccurate and incomplete depictions of the relevant data at the Hearing. In Slide 8 of its presentation to the Regional Board, the Cleanup Staff purported to present a plot of existing PCE soil gas and groundwater concentration data in relation to the location of the sewer system. That slide showed high concentrations of PCE in soil gas located to the north of, but not in the alley behind the Site where the sewer lines are located.[154] Upon a careful review, EKI was able to confirm that the Cleanup Staff's presentation does not honor the available data.[155] Specifically, and most importantly, the Cleanup Staff's portrayal of the soil gas plume in Slide 8 inexplicably excludes data from sample location SG-15, located in the alleyway, adjacent to the sewer, where PCE was detected at a concentration of 11,000 $\mu g/m^3$.[156] Slide 8 also fails to include data from soil gas samples collected at depths below one foot, when in fact soil gas data collected at depths between five and ten feet show a "hot spot" of 110,000 $\mu g/m^3$ of PCE in the alley near the sewer.[157] Similarly, the Cleanup Staff's plot of the PCE groundwater plume (Slide 9 of the Cleanup Staff's presentation) ignores data from sample locations B43 and B12, which show concentrations of PCE along the sewer line at the eastern end of the alley.[158] Finally, by selecting a concentration contour of 100 µg/L (20 times the applicable cleanup standard), the Cleanup Staff's depiction of the groundwater plume excludes numerous detections of PCE at concentrations below 100 µg/L along the sewer line, and may again have left the impression that the area along the sewer line has not been contaminated. [159]

Given the overwhelming evidence of PCE releases from the City's sewer, under the Board's own guidance, the City should be named as an additional discharger at the Site. *See* William R. Attwater, "Responsibility of Operators of Publicly Owned and Operated Sewer Systems for

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152 EKI Comments at 7, attached to Ex. 3 hereto (UATC's Comments on the Cleanup Staff's Tentative Order) as Attachment A.

153 Cleanup Staff's Response to Comments at 24–25; Cleanup Staff Presentation at Slide 29.

154 Cleanup Staff Presentation at Slides 8, 9; Tr. 9:7–18; 10:6–11:1.

155 Peabody Decl. ¶ 26.

156 *Id.*

157 *Id.*

158 Peabody Decl. ¶ 27.

159 *Id.*

Discharges from their Systems which Pollute Ground Water" (Apr. 27 1992) (concluding that public agencies that own or operate sanitary sewer systems are liable under Section 13304 for discharges of PCE—and other wastes—that leak from their systems). The Regional Board's failure to name the City as an additional discharger was erroneous and should be reversed.

CONCLUSION

For all of the foregoing reasons, UATC respectfully requests that the State Board modify the Regional Board's Order to remove UATC as a named party responsible for remediating the Site and to add the City of Santa Clara as an additional party responsible for remediating the Site.

CERTIFICATE OF SERVICE

I hereby certify that on this 11th day of October, 2013, I served the foregoing **UNITED ARTISTS THEATRE CIRCUIT, INC.'S PETITION FOR REVIEW** by e-mail on the following recipients:

State Water Resources Control Board
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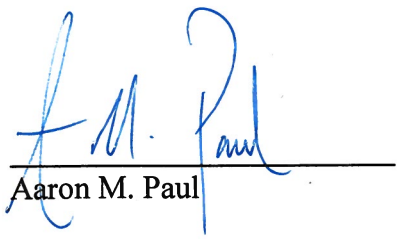

Aaron M. Paul

EXHIBIT 1

September 17, 2013
File No. 43S1090 (NMK)

Certified Mail No.
Return Receipt Requested

Moonlite Associates, LLC
c/o SClay Management
Attn: Mr. Bill Mehrens
1111 Bayhill Drive, Suite 450
San Bruno, CA 94066
Bill_Mehrens@sclay.com

United Artists Theatre Circuit, Inc.
c/o Hogan Lovells US LLP
Attn: Scott Reisch
One Tabor Center, Suite 1500
1200 Seventeenth Street
Denver, CO 80202
Scott.reisch@hoganlovells.com

SUBJECT: Transmittal of Final Order – Site Cleanup Requirements for Moonlite Associates, LLC, and United Artists Theatre Circuit, Inc., for the Property Located at 2640 El Camino Real, Santa Clara, Santa Clara County

Dear Mr. Mehrens and Mr. Reisch:

Attached is Regional Water Board Order No. R2-2013-0032 adopted by the Regional Water Board on September 11, 2013. This Order names United Artists Theatre Circuit, Inc., and Moonlite Associates, LLC, as dischargers and requires the investigation and cleanup of tetrachloroethene contamination at the Site.

If you have any questions, please contact Nathan King of my staff at (510) 622-3966 [nking@waterboards.ca.gov].

Sincerely,

Digitally signed by
Bruce H. Wolfe
Date: 2013.09.17
16:22:44 -07'00'

Bruce H. Wolfe
Executive Officer

Attachment
cc w/attachment: Mailing List

Mailing List

Mr. George Cook
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gcook@valleywater.org

Ms. Julia Hill
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CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER No. R2-2013-0032

ADOPTION of SITE CLEANUP REQUIREMENTS for:

MOONLITE ASSOCIATES, LLC, and
UNITED ARTISTS THEATRE CIRCUIT, INC.

for the property located at:

2640 El CAMINO REAL
SANTA CLARA, SANTA CLARA COUNTY

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

1. **Site Location:** The Site is located at 2640 El Camino Real in Santa Clara (Figure 1). The Site is a 3,000 square foot tenant space located in the 14.34 acre Moonlite Shopping Center (Figure 2). The Moonlite Shopping Center is bounded to the west by Kiely Boulevard, to the east by Bowe Avenue and Saratoga Creek, to the north by El Camino Real, and to the south by an alley. Saratoga Creek is located immediately east of Bowe Avenue. El Camino Real is a large boulevard flanked by residential neighborhoods located one block to the north and south.

   The Site is presently occupied by Cosmo's Gifts, a retail store. Within the Moonlite Shopping Center there are several large tenant spaces and twenty-five additional smaller tenant spaces.

2. **Site History**: Moonlite Cleaners, a dry cleaning business that used the dry cleaning chemical tetrachloroethene (PCE), operated at the Site for 35 years, from 1962 to 1997. In 1961, the State Fire Marshal issued a permit for establishment of the Moonlite Cleaners dry cleaning facility and permitted the installation and use of dry cleaning equipment using PCE.

   United California Theaters, Inc., (now United Artists Theatre Circuit, Inc. [UATC]) developed the shopping center in 1960. UATC owned the shopping center, including the Site, from 1961 to 1975 and then continued as the master lessor until 1978. UATC owned and/or controlled the shopping center where the dry cleaner operated for 16 years, from 1962 to 1978. On September 5, 2000, UATC and affiliated entities filed for chapter 11 bankruptcy in the United States Bankruptcy Court for the District of Delaware. The court confirmed UATC's plan of reorganization.

   Moonlite Associates, LLC, (Moonlite Associates), the current property owner, has owned the shopping center, including the Site, since 1977. As such, Moonlite Associates owned the shopping center where the dry cleaner operated as a tenant for 20 years (1977 to 1997).

   Moonlite Cleaners used PCE in conducting its dry cleaning operations. These operations resulted in PCE discharges to soil and groundwater beneath the Site. There is substantial evidence that PCE discharges occurred during UATC's ownership and control of the Site from 1962 and 1978, and Moonlite Associates' ownership and control of the Site from 1977 to 1997.

The evidence that PCE discharges occurred during UATC's ownership includes the physical evidence of PCE at the Site and downgradient from it, the history of solvent usage beginning in 1962, common industry-wide operational practices, and the inefficiencies of older dry cleaning equipment from the 1960s. The August 29, 2013, Revised Cleanup Staff Report more fully discusses PCE discharges that occurred during UATC's ownership. Similarly, the physical evidence of PCE at the Site and downgradient from it, the history of solvent usage, the common industry-wide practices, and the inefficiencies of older dry cleaning equipment, provide evidence that PCE discharges occurred during Moonlite Associates' ownership of the Site when Moonlite Cleaners operated. PCE discharges continue to occur from the Site to offsite areas.

3. **Named Dischargers**: UATC is named as a discharger because it owned the Site during the time of the PCE discharges, had knowledge of the activities that caused the discharge, and had the legal ability to prevent the discharge, as more fully discussed in the August 29, 2013, Revised Cleanup Staff Report.

   Moonlite Associates is named as a discharger because it is the current owner of the property on which there was and continues to be discharge of waste, had and has knowledge of the activities that caused the discharge, and had and has the legal ability to control the discharge.

   UATC and Moonlite are hereafter collectively referred to as the dischargers.

   The previous owners and operators of the Moonlite Cleaners dry cleaning business are not named as dischargers because they are deceased.

   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 Regional Water Board order.

5. **Site Hydrogeology**: The topography of Santa Clara is predominantly flat, sloping gently to the north northeast towards the Guadalupe River and the San Francisco Bay. Locally at the Site, the topography slopes gently to the east, towards the adjacent Saratoga Creek, that flows to the north. The elevation of the Site is approximately 80 feet above mean sea level.

   The headwaters of Saratoga Creek originate in the Santa Cruz Mountains at 3,100 feet, approximately 10 miles to the southwest. Saratoga Creek is the principal drainage for the Saratoga Creek Watershed. The Santa Clara Valley Water District uses Saratoga Creek upstream of the Site to recharge groundwater in the reach between the city of Saratoga and Highway 280, approximately. Saratoga Creek currently is a gaining creek adjacent to the Site. Saratoga Creek joins San Tomas Aquino Creek before joining Guadalupe Slough, ultimately draining to San Francisco Bay.

   The sediment beneath the Site consists of ancestral Saratoga Creek stream channel sediment overlying older Late Pleistocene alluvial plain sediment. The ancestral Saratoga Creek sediment is fine to coarse grained channel deposits, with fine grained flood deposits outside the channels. The pattern of fine and coarse grained lenses of sediment observed at the Site

represent the deposits of the meandering ancestral Saratoga Creek flowing northward over alluvial plain sediment. The ancestral Saratoga Creek sediment has been encountered from approximately 5 to 50 feet below ground surface during investigations.

The depth to groundwater in Site monitoring wells is approximately 12 feet below ground surface. The calculated groundwater flow direction at the Site is northeast, with a gradient of approximately 0.005 feet per foot.

6. **Remedial Investigation**: Multiple onsite investigations have occurred since PCE was first detected in 2004. PCE has been detected above the Regional Water Board's Environmental Screening Levels (ESLs) in soil gas, indoor air and groundwater.

PCE has been detected in soil gas at concentrations up to 5,700,000 $\mu g/m^3$ beneath the Site, 2714 times higher than the commercial/industrial ESL of 2,100 $\mu g/m^3$. The extent of soil gas PCE contamination has not been delineated to the adjacent tenant spaces within the Moonlite Shopping Center, and is not delineated offsite to the east before the residences, to the south before the residences, or downgradient across El Camino Real. Further investigation is warranted to delineate the extent of soil gas contamination.

PCE has been detected in indoor air at concentrations up to 150 $\mu g/m^3$ within the Site, 71 times higher than the commercial/industrial ESL of 2.1 $\mu g/m^3$. Additional indoor air delineation may be needed following completion of soil gas delineation. An engineering control (soil vapor extraction) is presently mitigating vapor intrusion of PCE from beneath the building foundation into the retail shop currently operating at Site.

PCE has been detected in groundwater at concentrations up to 1,280 ug/L downgradient from the Site, 250 times higher than the drinking water ESL of 5 ug/L, with the downgradient extent delineated to approximately 1,600 feet northeast. Groundwater samples collected from boring B24 located in the residential neighborhood 1,200 feet northeast from the Site, contained concentrations of PCE at 120 ug/L.

PCE has been detected at concentrations up to 1,130 ug/L approximately 40 feet below ground surface (bgs) in monitoring well MW-5A (located 75 feet northeast of the Site). PCE has been detected at concentrations up to 22 ug/L at approximately 55 feet bgs in MW-4A (located about 375 feet northeast of the Site). It appears that the vertical extent of PCE contamination is less than 60 feet bgs at the Site.

Groundwater PCE contamination has been adequately defined by grab groundwater sampling but is not adequately monitored downgradient of Site monitoring well MW-4. MW-4 is the furthest downgradient monitoring well of seven Site monitoring wells and contains the highest concentrations of PCE at 799 ug/L as reported during the December 2012 monitoring event. Additional monitoring wells are warranted to adequately monitor the offsite PCE groundwater plume in the downgradient direction.

PCE has been detected in the adjacent Saratoga Creek at 49 ug/L, less than the ESL of 120 ug/L for protection of aquatic receptors.

No soil samples have been collected at the Site. Soil samples will be needed as part of curtailment activities to determine if concentrations of PCE in soil have been cleaned up to the soil cleanup levels.

7. **Risk Assessment**:

a. **Screening Levels:** A screening level evaluation was carried out to evaluate potential environmental concerns related to identified soil, soil gas, groundwater, surface water and indoor air impacts. The chemical evaluated in the risk assessment is PCE, the primary chemical of concern.

As part of the initial assessment, Site data were compared to ESLs compiled by Regional Water Board staff. 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 impacts to indoor air. 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 1.0 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:** The results of the screening level risk assessment are summarized in the table below.

Media / Constituent	Result of Screening Assessment*					
	Human health – direct	Leaching to ground water	Indoor air	Aquatic life	Drinking water	Nuisance
Soil Gas:						
PCE			X			
Groundwater:						
PCE			X	X	X	X
Indoor Air:						
PCE			X			
Soil:						
PCE		X^1				

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

X^1 Assumed - no soil data has been collected at the Site

c. **Conclusions:** The dischargers have opted to forego a site-specific risk assessment and instead will address these screening level exceedances using a combination of remediation and risk management.

8. **Adjacent Sites**: A Chevron gasoline facility operated at 2798 El Camino Real on the northwest corner of the Moonlite Shopping Center (Figure 2) until approximately 1984. In 1985, three gasoline underground storage tanks (USTs) and one waste oil UST with associated conveyance pipes and dispenser were removed. Soil samples collected beneath the gasoline and waste oil USTs indicated that unauthorized releases of waste oil and gasoline had occurred. There is no reference to a release of chlorinated solvent, such as PCE, at this site. The County of Santa Clara, Department of Environmental Health, closed this case in 2007.

9. **Interim Remedial Measures**: A soil vapor extraction (SVE) system was installed in February 2010 beneath the Site and has been operating continuously since then. The SVE system consists of five horizontal extraction pipes and eight vertical extraction wells. The purpose of the SVE system is to provide vapor intrusion mitigation to indoor air and to remove PCE mass. Approximately 293 pounds of PCE have been removed as of December 2012.

   In March 2013, Moonlite Associates initiated an in-situ pilot study to evaluate the effectiveness and implementability of injecting a slurry of zero-valent iron (ZVI) and an electron donor (e.g., emulsified oil) to remediate contaminated groundwater at the Site.

   Further interim remedial measures need to be implemented at this Site to reduce the threat to water quality, public health, and the environment posed by the discharge of waste and to provide a technical basis for selecting and designing final remedial measures.

10. **Remedial Action Plan**: A remedial action plan including a feasibility study will be needed following completion of the pilot study that will determine the effectiveness of the ZVI injections.

11. **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. 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 and requires attainment of background levels of water quality, or the highest level of water quality which is reasonable if background levels of water quality cannot be restored. 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. The groundwater cleanup levels in this Order are set at drinking water standards, which are greater than background concentrations. This order and its requirements are consistent with the provisions of Resolution No. 92-49, as amended.

b. **Beneficial Uses**: The Regional Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) is the Regional Water 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 Regional Water Board and approved by the State Water Board, the Office of Administrative Law, and 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 deeper aquifer is used for the above purposes, with shallow groundwater underlying the Site only expected to replenish Saratoga Creek; however, the aquitard separating the shallow groundwater from deeper groundwater in the vicinity of the Site is apparently not competent and/or compromised by deep, old production wells in the vicinity. This allows communication between the shallow and deep aquifers; therefore, the shallow groundwater beneath the Site is potentially used for the above purposes.

The existing and potential beneficial uses of Saratoga Creek include:

o Agricultural supply
o Fresh water replenishment to surface water
o Groundwater recharge
o Wildlife habitat
o Cold freshwater and warm freshwater habitat

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 U.S. 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 cleanup levels for the Site are intended to prevent leaching of contaminants to groundwater and will result in acceptable residual risk to humans.

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. An attenuation factor of 0.001 was used from soil gas to indoor air.

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.

g. The remedial action plan may propose revised cleanup levels for Regional Water Board consideration.

12. **Future Changes to Cleanup Levels**: The goal of this remedial action is to restore the beneficial uses of groundwater underlying and adjacent to the Site. Results from other sites suggest that full restoration of beneficial uses to groundwater as a result of active remediation at this Site may not be possible. If full restoration of beneficial uses is not technologically or economically achievable within a reasonable period of time, then the dischargers may request modification to the cleanup levels or establishment of a containment zone, a limited groundwater pollution zone where water quality objectives are exceeded. Conversely, if new technical information indicates that cleanup levels can be surpassed, the Regional Water Board may decide that further cleanup actions should be taken.

13. **Risk Management**: The following human health risks are 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 possibly after active remediation to assure protection of human health. Risk management measures include engineering controls (such as engineered caps or wellhead treatment) and institutional controls (such as deed restrictions that prohibit certain land uses).

The following risk management measures are needed at this Site:

a. A risk management plan to ensure that vapor intrusion mitigation systems (including the current SVE system) operate reliably and protect human health.

b. A deed restriction that notifies future owners of sub-surface contamination, prohibits the use of shallow groundwater beneath the Site as a source of drinking water until cleanup levels are met, and prohibits sensitive uses of the Site such as residences and daycare centers.

The remedial action plan may propose revised risk management measures for Regional Water Board consideration.

14. **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.

15. **Basis for 13304 Order**: Water Code section 13304 authorizes the Regional Water Board to issue orders requiring a discharger to cleanup and abate waste where the discharger has 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.

16. **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.

17. **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 MCLs designed to protect human health and ensure that water is safe for domestic use.

18. **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.

19. **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.

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

IT IS HEREBY ORDERED, pursuant to sections 13304 and 13267 of the Water Code, that the dischargers 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 as required by Task 7.

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
Tetrachloroethene (PCE)	5	Drinking water MCL
Trichloroethene (TCE)	5	Drinking water MCL
cis-1,2-Dichloroethene (DCE)	6	Drinking water MCL
trans-1,2-DCE	10	Drinking water MCL

MCL = Maximum contaminant level

3. **Soil Cleanup Levels**: The following soil cleanup levels shall be met in all vadose-zone soil contaminated by releases from this Site:

Constituent	Level (mg/kg)	Basis
PCE	0.70	Leaching to groundwater
TCE	0.46	Leaching to groundwater
cis-1,2-DCE	0.19	Leaching to groundwater
trans-1,2-DCE	0.67	Leaching to groundwater

4. **Soil Gas Cleanup Levels**: The following soil gas cleanup levels shall be met in all vadose-zone soil contaminated by releases from this Site:

Constituent	Commercial or Industrial Level (µg/m3)	Residential Level (µg/m3)	Basis
PCE	2,100	210	Vapor intrusion
TCE	3,000	300	Vapor intrusion

5. **Indoor Air Cleanup Levels**: The following indoor air cleanup levels shall be met in occupied buildings contaminated by releases from this Site:

Constituent	Commercial or Industrial Level (µg/m3)	Residential Level (µg/m3)	Basis
PCE	2.1	0.41	Inhalation
TCE	3.0	0.59	Inhalation

C. **TASKS**

1. **WORKPLAN FOR ADDITIONAL SOIL GAS INVESTIGATION**

COMPLIANCE DATE: December 31, 2013

Submit a workplan acceptable to the Executive Officer to conduct an additional soil gas investigation to delineate the soil gas plume down to or below the appropriate residential or commercial cleanup level for soil gas. The workplan should specify investigation methods and proposed time schedule. Work may be phased to allow the investigation to proceed efficiently, provided that this does not delay compliance.

2. **COMPLETION OF SOIL GAS INVESTIGATION**

COMPLIANCE DATE: March 31, 2014

Submit a technical report acceptable to the Executive Officer documenting completion of necessary tasks identified in the Task 1 workplan. The technical report shall include recommendations for additional work to delineate soil gas contamination greater than the corresponding cleanup level, as warranted.

3. **WORKPLAN FOR ADDITIONAL INDOOR AIR SAMPLING**

COMPLIANCE DATE: April 30, 2014

Submit a workplan acceptable to the Executive Officer to conduct additional indoor air sampling following completion of Task 2 to delineate PCE and TCE in indoor air down to or below the corresponding cleanup level in indoor air. The workplan should specify investigation methods and proposed time schedule. Work may be phased to allow the investigation to proceed efficiently, provided that this does not delay compliance.

4. **COMPLETION OF INDOOR AIR SAMPLING**

COMPLIANCE DATE: July 31, 2014

Submit a technical report acceptable to the Executive Officer documenting completion of necessary tasks identified in the Task 3 workplan. The technical report shall include recommendations for additional work to delineate indoor air contamination greater than the corresponding cleanup level, as warranted.

5. **WORKPLAN FOR GROUNDWATER MONITORING WELLS INSTALLATION**

COMPLIANCE DATE: November 30, 2013

Submit a workplan acceptable to the Executive Officer to install additional groundwater monitoring wells downgradient of monitoring well MW-4 to monitor groundwater pollution down to or below the corresponding cleanup level in groundwater. The

workplan should specify investigation methods and a proposed time schedule. Work may be phased to allow the investigation to proceed efficiently, provided that this does not delay compliance.

6. **COMPLETION OF GROUNDWATER MONITORING WELLS INSTALLATION**

COMPLIANCE DATE: May 31, 2014

Submit a technical report acceptable to the Executive Officer documenting completion of necessary tasks identified in the Task 5 workplan. The technical report shall include recommendations for additional work to delineate groundwater contamination greater than the corresponding cleanup level, as warranted.

7. **REMEDIAL ACTION PLAN**

COMPLIANCE DATE: July 31, 2014

Submit a technical report acceptable to the Executive Officer containing:

a. Summary of remedial investigation
b. Summary of risk assessment (if applicable)
c. Evaluation of the installed interim remedial actions
d. Feasibility study evaluating alternative final remedial actions
e. Recommended final remedial actions and cleanup levels
f. Proposed risk management plan
g. Implementation tasks and time schedule

The remedial action plan shall include recommended remedial work that has a high probability of eliminating unacceptable threats to human health and restoring beneficial uses of water in a reasonable time. Reasonable time shall be proposed based on the severity of impact to the beneficial use (for current impacts) or the time before the beneficial use will occur (for potential future impacts).

Item d should include projections of cost, effectiveness, benefits, and impact on public health, welfare, and the environment of each alternative action.
Items a through d should be consistent with the guidance provided by Subpart F of the National Oil and Hazardous Substances Pollution Contingency Plan (40 C.F.R. § 300), CERCLA guidance documents with respect to remedial investigations and feasibility studies, Health and Safety Code section 25356.1(c), and State Water Board Resolution No. 92-49 as amended ("Policies and Procedures for Investigation and Cleanup and Abatement of Discharges Under Water Code Section 13304").

8. **IMPLEMENTATION OF REMEDIAL ACTIONS**

COMPLIANCE DATE: January 31, 2015

Submit a technical report acceptable to the Executive Officer documenting completion of necessary tasks identified in the Task 7 workplan. For ongoing actions, such as soil vapor extraction or groundwater extraction, the report shall document system startup (as opposed to completion) and shall present initial results on system effectiveness (e.g., capture zone or area of influence). Proposals for further system expansion or modification may be included in annual reports (see attached Self-Monitoring Program).

9. **PROPOSED DEED RESTRICTION** (MOONLITE ASSOCIATES ONLY)

COMPLIANCE DATE: November 30, 2014

Submit a proposed deed restriction acceptable to the Executive Officer whose goal is to limit onsite occupants' exposure to Site contaminants to acceptable levels. If pollution at the Site has been cleaned up to residential levels and groundwater pollution has been cleaned up to less than MCLs, a request may be made to the Executive Officer to eliminate this task and Task 10. Otherwise, the proposed deed restriction shall prohibit the use of shallow groundwater beneath the Site as a source of drinking water until cleanup levels are met, and/or prohibit sensitive uses of the Site such as residences and daycare centers. 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.

10. **RECORDATION OF DEED RESTRICTION** (MOONLITE ASSOCIATES ONLY)

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

Moonlite Associates shall 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.

11. **RISK MANAGEMENT PLAN IMPLEMENTATION**

COMPLIANCE DATE: November 30, 2015, and every year thereafter

Submit a technical report acceptable to the Executive Officer documenting implementation of the Risk Management Plan over the previous 12-month period ending on June 30. The report should include a detailed comparison of Risk Management Plan elements and implementation actions taken. The report should provide a detailed discussion of any instances of implementation actions falling short of Risk Management Plan requirements, including an assessment of any potential human health or environmental effects resulting from these shortfalls. 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 Risk Management Plan, although those changes shall not take effect until approved by the Regional Water Board or the Executive Officer

12. **FIVE-YEAR STATUS REPORT**

COMPLIANCE DATE: October 31, 2019, 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 should 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 should assess the technical practicability of meeting cleanup levels and may propose an alternative cleanup strategy.

13. **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 abandonment), 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 should include the rationale for curtailment. Proposals for final closure should demonstrate that cleanup levels have been met, contaminant concentrations are stable, and contaminant migration potential is minimal.

14. **IMPLEMENTATION OF CURTAILMENT**

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

Submit a technical report acceptable to the Executive Officer documenting completion of the tasks identified in Task 13.

15. **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.

16. **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.

17. **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(m).

2. **Good Operation and Maintenance**: 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(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 which 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 on-site (e.g., temperature).

8. **Document Distribution**: An electronic and paper version of all correspondence, technical reports, and other documents pertaining to compliance with this Order shall be provided to the Regional Water Board, and electronic copies shall be provided to the following agencies:

a. City of Santa Clara, City Attorney's Office
b. 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.

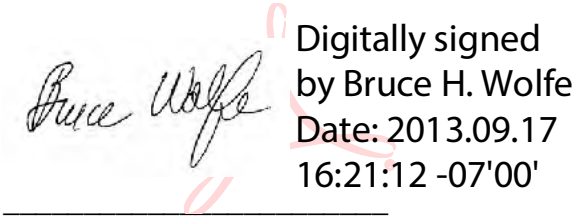
A written report shall be filed with the Regional Water Board within five working days. The report shall describe: the nature of the hazardous substance, estimated quantity

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 September 11, 2013.



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Bruce H. Wolfe
Executive Officer

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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

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Attachments: Site Vicinity Map
Site Location Map
Self-Monitoring Program
Staff Report

Figure 1: Site Vicinity Map

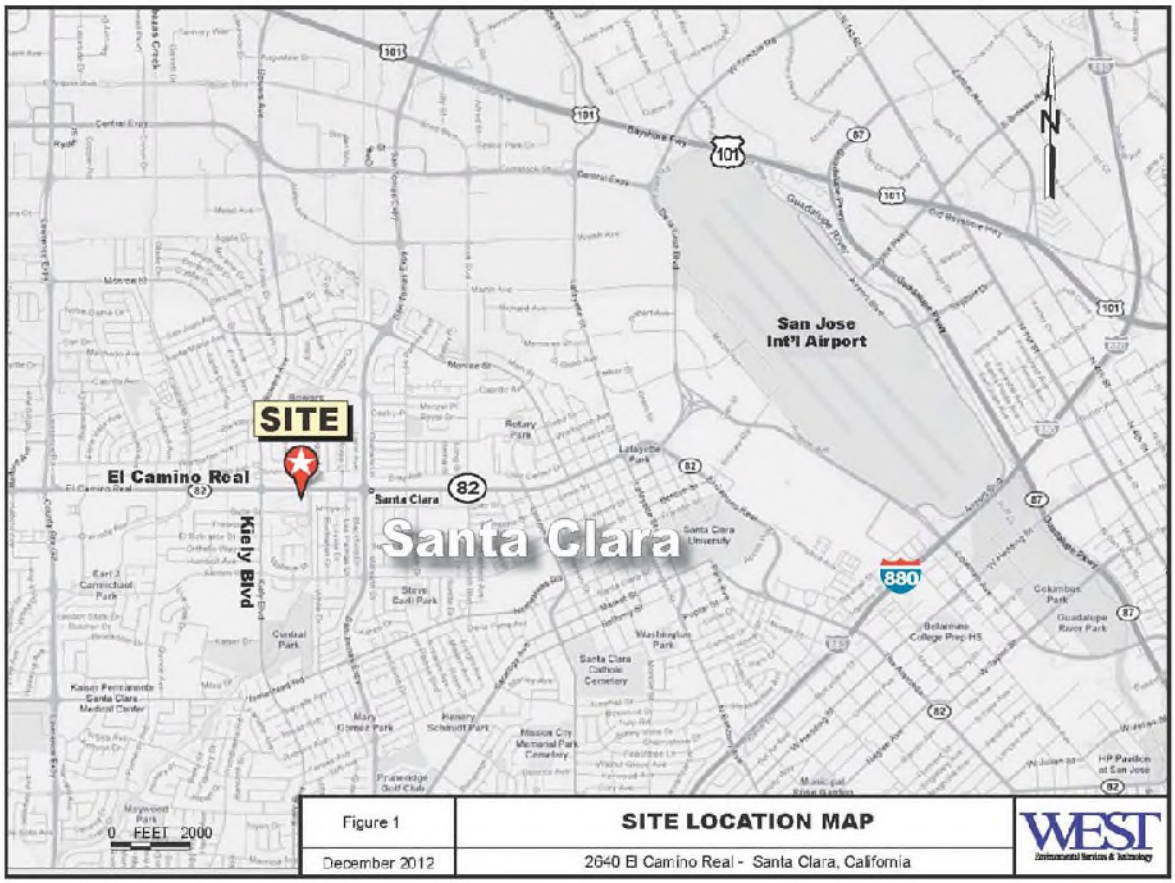
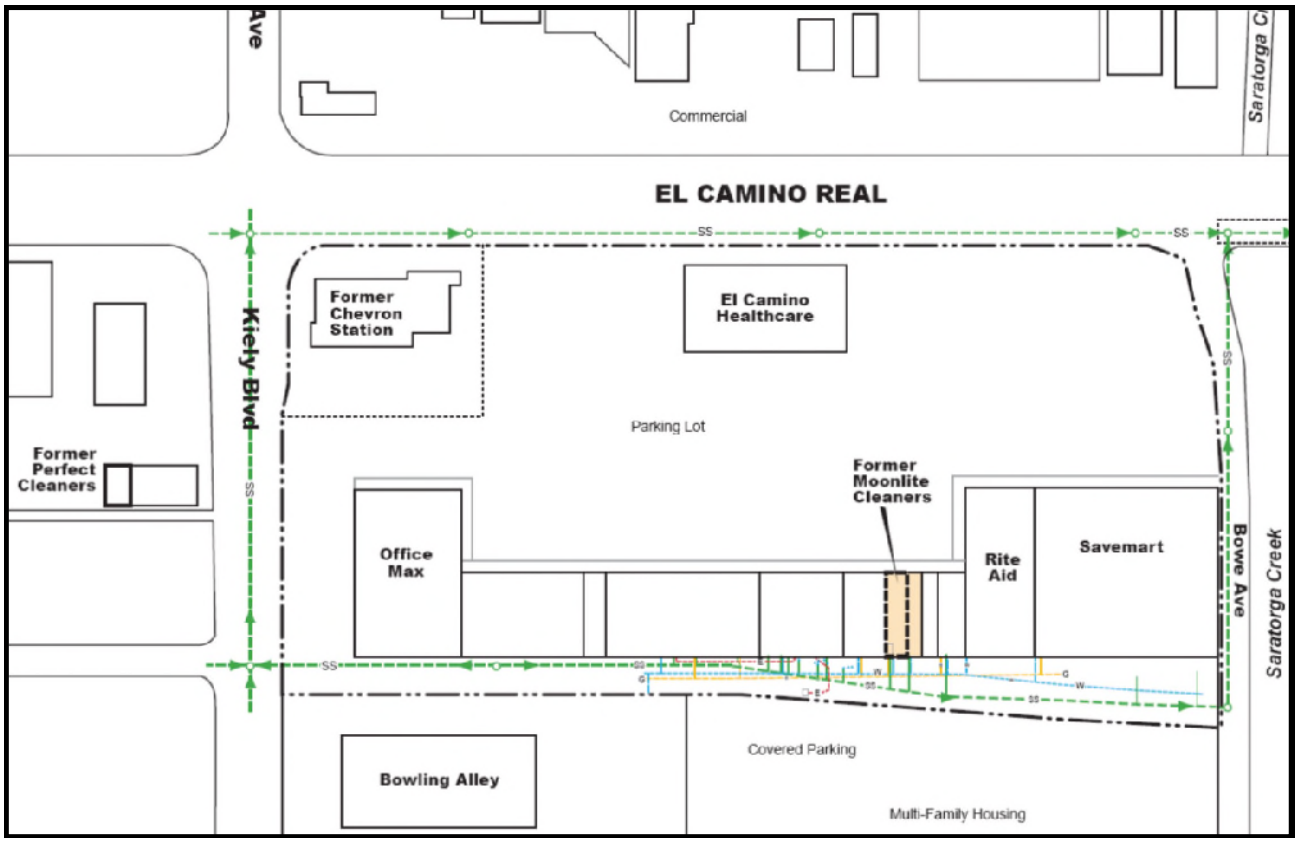


Figure 2: Site Location Map



CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM for:

MOONLITE ASSOCIATES, LLC, and
UNITED ARTIST THEATRE CIRCUIT, INC.

for the property located at:

2640 El CAMINO REAL
SANTA CLARA, 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. R2-2013-0032 (site cleanup requirements).

2. **Monitoring**: The dischargers shall measure groundwater elevations and surface water elevations quarterly in all monitoring wells and Saratoga Creek sampling stations and shall collect and analyze representative samples of groundwater according to the following table:

Well #	Sampling Frequency	Analyses	Well #	Sampling Frequency	Analyses
MW-1	Q	8260B/5030B	MW-5	Q	8260B/5030B
MW-2	Q	8260B/5030B	MW-5A	Q	8260B/5030B
MW-3	Q	8260B/5030B	C1	SA	8260B/5030B
MW-4	Q	8260B/5030B	C2	SA	8260B/5030B
MW-4A	Q	8260B/5030B	C3	SA	8260B/5030B

Key: Q = Quarterly, SA = Semi Annually
8260B = EPA Method 8260B or equivalent
5030B = EPA Method 5030B or equivalent
C1, C2, C3 = Saratoga Creek sampling locations

The dischargers shall sample any new monitoring or extraction wells quarterly 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. **Quarterly Monitoring Reports**: The dischargers shall submit quarterly monitoring reports to the Regional Water Board no later than 30 days following the end of the quarter (e.g., report for first quarter of the year due April 30). The first quarterly monitoring report shall be due on October 30, 2013. 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 and Surface Water Elevations: Groundwater and Surface Water elevation data shall be presented in tabular form, and a groundwater and surface water elevation map should be prepared for each monitored water-bearing zone. Historical groundwater and surface elevations shall be included in the fourth quarterly report each year.

c. Groundwater and Surface Water Analyses: Groundwater and surface water sampling data shall be presented in tabular form, and an isoconcentration map should 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 and surface water sampling results shall be included in the fourth quarterly 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 fourth quarterly report each year.

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

5. **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.

6. **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.

7. **Record Keeping**: The dischargers or their agents 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.

8. **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.

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

August 29, 2013
File No. 43S1090 (NMK)

Revised Cleanup Staff Report

This report provides the basis for the Water Board Cleanup staff's (Staff) recommendation to adopt Site Cleanup Requirements (SCR) naming Moonlite Associates, LLC, (Moonlite Associates) and United Artists Theatre Circuit, Inc., (UATC) as Dischargers, for the former Moonlite Cleaners site (Site) located at 2640 El Camino Real, Santa Clara, Santa Clara County. This report was revised in response to comments received on a publicly noticed Tentative Order and focuses on Staff's recommendation to name UATC and Moonlite Associates as dischargers based upon the following evidence:

- A dry cleaner using tetrachloroethene (PCE) operated at the Site for approximately 35 years, from 1962 to 1997.
- The Site is contaminated with PCE, as evidenced by indoor air, soil gas, and groundwater monitoring results.
- UATC owned the property from 1961 to 1975, and then continued as the master lessor until 1978.
- Moonlite Associates has owned the property from 1977 to the present.
- Both UATC and Moonlite owned the Site at the time of the PCE discharges, had knowledge of the activities which resulted in the discharges, and had the legal ability to prevent the discharges.

I. Background

The Water Board has provided regulatory oversight for this case since March 2009, at which time Moonlite Associates voluntarily enrolled in our cost recovery program. Moonlite Associates has been conducting the investigation and cleanup, and has requested the Water Board to name UATC as an additional discharger. Moonlite Associates does not object to being named as a discharger in the SCR. UATC objects to being named as a discharger.

This Staff Report provides the rationale for naming UATC as an additional discharger. UATC retained Erler & Kalinowski, Inc. (EKI) to assess the likelihood of a PCE release between 1962 and 1978 and submit a report detailing their findings. This Staff Report also provides a detailed response to this March 2013 EKI report and the basis for Staff's assertion that PCE discharges did occur during the time period in question.

II. Site Location

The Site is located at 2640 El Camino Real in Santa Clara (Figure 1). The Site is located in the Moonlite Shopping Center (Figure 2). The Moonlite Shopping Center is bounded to the west by Kiely Boulevard, to the east by Bowe Avenue and Saratoga Creek, to the north by El Camino

Real, and to the south by an alley. Saratoga Creek is located immediately east of Bowe Avenue. El Camino Real is a large boulevard, primarily used by commercial businesses and as an east to west thoroughfare, and is flanked by residential neighborhoods located one block to the north and south.

The former Moonlite Cleaners Site is an approximately 3,000 square foot tenant space and is presently occupied by Cosmo's Gifts, a retail store. The largest tenant spaces in the Moonlite Shopping Center are occupied by Save Mart Super Market, Rite Aid Drugs, Palo Alto Medical Group, Home Town Buffet, and Office Max. There are twenty-five additional smaller tenant spaces.

III. Site History

A. History of Owners and Operators

Multiple different dry cleaners using the name Moonlite Cleaners operated at the Site from 1962 to 1997.

UATC owned the shopping center from about 1961 to 1975, and then continued as the master lessor until 1978. UATC owned and, as master lessor, controlled the shopping center where the dry cleaner operated as a tenant for 17 years, from 1961 to 1978. On September 5, 2000, UATC and affiliated entities filed for chapter 11 bankruptcy in the United States Bankruptcy Court for the District of Delaware. The court entered an order confirming a plan of reorganization for UATC on January 25, 2001.

Moonlite Associates, the current property owner, has owned the Site since 1977. Moonlite Associates owned the shopping center during the time when the dry cleaner operated as a tenant for 20 years, from 1977 to 1997.

All previous owners and operators of the Moonlite Cleaners dry cleaning business are not named as dischargers because they are either deceased, or their current location is unknown. Cleanup Staff will send site history requirement letters to the individuals with known addresses whose contact information was recently provided. Once staff has reviewed the site history responses they will provide a recommendation to the Board about naming additional parties as dischargers.

B. Fire Marshal Permit and Dry Cleaning Equipment Used

On May 11, 1961, the State Fire Marshal issued a permit (Fire Marshal Permit) for establishment of a dry cleaner facility and installation of dry cleaning equipment at the Moonlight Shopping Center. On July 10, 1962, the City of Santa Clara Building Department issued a certificate of occupancy authorizing the operation of the dry cleaning business. This Fire Marshal Permit, the Building Department permit, the equipment used, and the discussion below, support that PCE was used at the Site beginning in 1962.

The Fire Marshall Permit indicates the following equipment was installed at the Site:

- Hoffman Master Jet Cleaning Unit

- Hoyt SF-130 Reclaimer
- Per Combo Filter-Still Cooker
- Vapor-Mat Model 800

The permit also refers to solvents and contains requirements for its proper handling, such as piping and ventilation. According to an employee of Hoffman/New Yorker, Inc. (personal communication with Richard Grecco, Hoffman New Yorker, February 2013,), a manufacturer and distributer of dry cleaning equipment for over 100 years, the Hoffman Master Jet Cleaning Unit and the Hoyt SF-130 Reclaimer are machines designed to be used only with chlorinated solvent dry cleaning fluids such as PCE, and not with petroleum hydrocarbon-based fluids such as Stoddard solvent. Additionally, according to Tom Mohr (personal communication with George Cook relaying message from Tom Mohr, February 6, 2013), the principal author of the Santa Clara Valley Water District *Study of Potential for Groundwater Contamination from Past Dry Cleaner Operations in Santa Clara County*, the Per Combo Filter-Still Cooker was only used for PCE. A 1979 operation manual for the Hoyt SF-130 Reclaimer also indicates the equipment is for the use of PCE only.

There are a number of ways in which PCE releases are known to occur while performing dry cleaning operations. Some of the release mechanisms are specific to the equipment used at the Site and some relate to general practices. For example, the Per Combo Filter Still Cooker cooked down the leftover PCE mixture from the dry cleaning process, during which the PCE mixture routinely boiled over on to the floor. This cooker also produced wet PCE-laden muck waste that was messy to dispose of and would result in dripping onto the floor. The Hoyt SF-130 Reclaimer's purpose was to reclaim as much PCE as possible for reuse. It never reclaimed 100% of the PCE and the remaining PCE mixture either went into a bucket or a drain. The Vapor Mat Model 800 (a sniffer) extracted PCE that was present in the air and produced PCE-laden wastewater that needed to be disposed of. In addition, Moonlite Cleaners' operation was not a closed system, meaning that wet PCE-laden clothes were manually transferred from the wash into the Hoyt SF-130 Reclaimer for drying (and PCE reclaiming, which underscores the amount of PCE still on the wet clothes). Such transfer inevitably led to PCE dripping onto the floor.

A 1975 Bulk Transfer Agreement confirms that the original equipment identified in the 1961 Permit was still located at the facility, and includes additional equipment which suggests that facility operations expanded since 1962. This original equipment and more transferred over to a new operator, which means the same 1961 equipment was still being used in 1975 (during UATC's ownership) and resulting in PCE discharges.

C. PCE Discharges Occurred During UATC's Ownership and Control

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 1960s 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 (the highest PCE concentrations in soil gas and groundwater are beneath the Site and downgradient from the Site), indicate that the Moonlite Cleaners' dry cleaning operations were no different than the dry cleaners discussed in the Water District Study that discharged PCE.

In addition, 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 mount 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.

Thus, based on the physical evidence at the Site and downgradient from it (see Section VI below), the history of solvent usage at the Site beginning in 1962, the common industry-wide operational practices that led to PCE discharges in the 1960s and 1970s, and the inefficiencies of older dry cleaning equipment from the 1960s, the cleanup staff conclude that there is substantial evidence that PCE discharges occurred during UATC's ownership and control of the Site from 1962 and 1978 and afterwards when Moonlite Associates took ownership.

IV. Hydrogeology

The topography of Santa Clara is predominantly flat, sloping gently to the north northeast towards the Guadalupe River and the San Francisco Bay. Locally at the Site, the topography slopes gently to the east, towards the adjacent Saratoga Creek, that flows to the north. The elevation of the Site is approximately 80 feet above mean sea level.

The headwaters of Saratoga Creek originate is in Santa Cruz Mountains at 3,100 feet, approximately 10 miles to the southwest. Saratoga Creek is the principal drainage for the

Saratoga Creek Watershed. Santa Clara Valley Water District uses Saratoga Creek upstream of the Site to recharge groundwater in the reach between the city of Saratoga and Highway 280, approximately. Saratoga Creek currently is a gaining creek adjacent to the Site. Saratoga Creek joins the San Tomas Aquino Creek before joining the Guadalupe Slough, ultimately draining to the San Francisco Bay.

The sediment beneath the Site is ancestral Saratoga Creek stream channel sediment overlying older Late Pleistocene alluvial plain sediment. The ancestral Saratoga Creek sediment is fine to coarse grained channel deposits, with fine grained flood deposits outside the channels. The pattern of fine and coarse grained lenses of sediment observed at the Site represent the deposits of the meandering ancestral Saratoga Creek flowing northward over the alluvial plain sediments. These ancestral Saratoga Creek sediment has been encountered from approximately 5 to 50 feet below ground surface during investigations. The ancestral Saratoga Creek sediment was deposited in the same orientation as the present orientation of Saratoga Creek, and the north-trending ancestral stream channels of Saratoga Creek should influence the direction of groundwater flow to the north.

The depth to groundwater in Site monitoring wells is approximately 12 feet below ground surface. The calculated groundwater flow direction at the Site is northeast, with a gradient of approximately 0.005 feet per foot. The flow direction of groundwater at the Site is most likely controlled by north-trending Saratoga Creek, the north-trending ancestral Saratoga Creek stream deposits, the gently north sloping topography, the regional groundwater gradient, and deep production wells located in the vicinity.

Concentrations of PCE have been detected in groundwater down gradient of the Site to the north, from the northeast to the northwest. This distribution of contamination in groundwater is consistent with the controlling factors that influence the groundwater flow direction.

V. Investigation and Cleanup

Significant releases of the dry cleaning chemical PCE can be attributed to the former Moonlite Cleaners. PCE has been detected in indoor air samples, in soil gas samples, and in groundwater samples in quantities far exceeding Environmental Screening Levels (ESLs) for each media. PCE is day lighting in the adjacent Saratoga Creek. Other potential dry cleaning chemicals, such as Stoddard solvent, were not detected during the investigations.

The highest historical detections of PCE in groundwater, soil gas, and indoor air are in the immediate vicinity of or directly beneath the Site, indicating a discharge directly beneath the dry cleaner. This statement is supported by the following Site data:

- PCE has consistently been detected in groundwater immediately down gradient of the Site in MW3, MW4, MW4A, MW5, and MW5A. Recent groundwater monitoring results from June 2012 detected PCE in groundwater at 1,280 ug/L in MW4, over 200 times higher than the ESL of 5 ug/L.

- The highest soil gas concentration of PCE was detected immediately beneath the former dry cleaner at 5,700,000 ug/m3, over 2,000 times higher than the ESL of 2,100 ug/m3. Soil gas concentrations decrease with distance from the former dry cleaner.
- The highest indoor air concentration of PCE was detected in the former dry cleaner at 150 ug/m3 PCE, about 70 times higher than the ESL of 2.1 ug/m3. Indoor air concentrations of PCE in the adjacent tenant spaces decrease with distance from the former dry cleaner.
- The highest surface water concentration of PCE collected from Saratoga Creek was detected downstream of the former dry cleaner at 49 ug/L, approximately half of the ESL of 120 ug/L. Surface water samples collected upstream from the former dry cleaners have never contained any PCE.

The Site data clearly indicate that the highest concentrations of PCE are immediately beneath, down gradient, and downstream of the former dry cleaner, and decrease with distance away from the former dry cleaner. This pattern indicates that significant releases of PCE occurred at the former dry cleaner.

The very high PCE indoor air concentrations in the former dry cleaning location and the very high PCE soil gas concentrations immediately beneath the former dry cleaner indicate that PCE product was most likely spilled onto the concrete floor due to the sloppy nature of the dry cleaning equipment and processes. The PCE would have slowly seeped into the concrete floor, or through cracks or perforations in the concrete floor.

This release mechanism is consistent with the most common release mechanisms identified in the 2007 SCVWD Dry Cleaner Study, which cites a 2002 Florida Department of Environmental Protection dry cleaner study (Florida Study) as an excellent, comprehensive review of release mechanisms from dry cleaners. The Florida Study identified soil beneath the floor slab in the vicinity of the dry cleaning machines and distillation units as the area within dry cleaning operations most frequently contaminated by PCE. The SCVWD Dry Cleaner Study states that the Florida Department of Environmental Protection and Florida State University study (Florida Study) "...showed that more PCE mass is released as a result of solvent transfer, storage and operations than due to sewer line discharges." The SCVWD Dry Cleaner Study also notes that leaking sewer lines can be a release mechanisms.

Based on the high soil gas concentrations beneath the facility, there is a possibility that the sewer lateral immediately beneath the dry cleaning equipment (owned by UATC and Moonlite Associates) was also a source of contamination. However, these soil gas results do not indicate that a release occurred from the City sanitary sewer lines behind the facility. The highest PCE detected in soil gas concentrations beneath the slab was 5,700,000 ug/m3 PCE. The highest soil gas samples collected along the City sanitary sewer are less than 1,000 ug/m3 PCE, a significant difference of over three orders of magnitude, and can be attributed to the sanitary sewer gravel pack acting as a preferential pathway from the source area beneath the slab of the former Moonlite Cleaners.

In summary, the site history and the site data, taken together with the SCVWD Dry Cleaner Study, indicate that the primary release mechanism was PCE product spilled onto the concrete floor due to the sloppy nature of the dry cleaning equipment and processes. The PCE would have then slowly seeped into the concrete floor, or through cracks or perforations in the concrete floor, and then to the soil beneath the slab. A possible secondary release mechanism could have also been a leak from the sewer lateral immediately beneath the dry cleaning equipment.

A soil vapor extraction (SVE) system was installed in February 2010 beneath the former dry cleaner facility and has been operating continuously since then. The SVE system consists of five horizontal extraction pipes and eight vertical extraction wells. The purpose of the SVE system is to provide vapor intrusion mitigation to the tenants and to remove PCE mass. Approximately 300 pounds of PCE have been removed by the SVE system as of December 2012.

VI. Response to March 12, 2013, EKI Report

UATC retained Erler & Kalinowski, Inc. (EKI) to assess the likelihood of a PCE release between 1962 and 1978. EKI concluded in its March 12, 2013, report that there is no evidence of a pre-1978 PCE release for the following reasons.

- Modeled leakage of PCE-contaminated wastewater from a hypothetical leaking sewer pipe would take six years to reach groundwater, indicating a post-1978 release.
- Groundwater at the Site would have flowed to the northwest prior to the mid-1990s; therefore, if there was a pre-1978 PCE release, there would be evidence of a northwest-trending PCE groundwater plume, which does not exist.
- Groundwater flow at the Site shifted to the northeast in the mid-1990s, and since the current groundwater plume travels to the northeast, the PCE release that caused the groundwater plume happened in the mid-1980s or early 1990s.
- Groundwater levels at the Site were deeper during the pre-1978 period, therefore if a PCE release occurred pre-1978, it would have resulted in a deeper groundwater plume, which does not exist.

These conclusions are not technically supportable, as explained below.

A. <u>Sewer Leakage Model Doesn't Consider Primary Release Mechanism</u>

The EKI report assumes a continual leak of wastewater from a leaking sanitary sewer line as the driver for carrying PCE through soil to groundwater. Using this assumption, EKI's model predicts that the PCE would have reached groundwater in approximately six years as a result of the flushing of wastewater. Cleanup Staff disagree that this was the primary leak mechanism and assert that the extremely high PCE indoor air concentrations more likely indicate a release directly to the floor of the dry cleaner as discussed further in Sections III and V. PCE released on the floor of the dry cleaner would have seeped into the concrete floor, or through cracks or perforations in the concrete floor, and then to the soil beneath the slab. The PCE could have been bound up for years to decades in the soil immediately beneath the concrete slab and

above any sewer lines. This probable delay from the release of PCE to when PCE entered the groundwater raises questions as to the validity of EKI's age-dating of the groundwater plume.

B. Northwest-trending Plume Not Expected Based on Groundwater Depths

EKI infers from a review of groundwater data that groundwater at the Site would have flowed to the northwest prior to the mid-1990s; therefore, if there was a pre-1978 PCE release, there would be evidence of a northwest-trending PCE groundwater plume, which according to EKI does not exist. EKI's assertion that if a pre-1978 release occurred there should be remnants of a northwest trending groundwater plume, is dependent on (1) shallow groundwater existing beneath the Site, and (2) enough surface water in the losing Saratoga Creek to affect shallow groundwater and to cause a northwest trending plume.

B.1 Groundwater Too Deep in 1960s and 1970s to Cause Northwest-trending Plume
Staff disagrees with many aspects of EKI's analysis. The issue regarding a time lag between PCE releases and when PCE is present in groundwater is discussed above. Furthermore EKI's analysis of historic groundwater flow directions is flawed. There were many influences on the groundwater flow direction historically, including localized pumping from three nearby water supply wells located within one-half mile of the Site that were not taken into consideration. In addition, Saratoga Creek in the vicinity of the Site probably had little influence. Staff reviewed the USGS surface water discharge records for Saratoga Creek collected at the gage located approximately 0.5 mile southwest of Saratoga (around 9 miles upstream of the Site). The flow within Saratoga Creek was intermittent from 1962 to 1978, and depth to groundwater was very deep during this period (up to 200 feet approximately below ground surface). The only flow into the creek occurred from precipitation and minor surface runoff. In other words, Saratoga Creek only had flowing water when it was raining and it was likely a losing creek, meaning that some portion of the flow was discharging to the subsurface. Whereas today it is considered a gaining creek as groundwater is much higher and is recharging the creek.

Based on the intermittent flow in Saratoga Creek and the depth to groundwater during the 1960s and 1970s, it is highly unlikely that there was enough surface water in the creek to recharge shallow groundwater beneath the Site and alter flow direction. Therefore, PCE subsurface migration during the 1960s during UATC's ownership would not have been significantly affected by Saratoga Creek, and there should not be a northwest trending contaminant plume, which is the case. During the 1970s, after the SCVWD began actively recharging groundwater, subsurface water levels rose, but were still much deeper than today. Staff conclude that in the 1970s the creek would still not have significantly altered the groundwater flow direction to the northwest in the shallow aquifer. In the early 1990s as rising groundwater levels surpassed the surface water elevation in the creek, the northerly regional gradient shifted to the northeast near the creek, as is seen today.

B.2 Shell Data not Representative of Moonlite Site
EKI used time-series groundwater elevation data from a deep well to make inferences about groundwater elevations in shallow groundwater at the Site. The index well that EKI used is a deep well located approximately six miles to the southeast that appears to be a good proxy to describe historic groundwater elevations in the groundwater basin. However, the three deep production wells within on-half mile from the Site provide a closer representation of deeper groundwater conditions beneath the Site. EKI used 1990 to 2000 groundwater data from a Shell gas station 1000 feet away from the Moonlite Cleaners Site, and on the opposite side of Saratoga Creek, to estimate a northwest groundwater flow direction at the Moonlite Cleaners Site from the early 1960s to the mid-1990s. The time and distance involved in this comparison is too large and could lead to variations in the correlations of groundwater flow directions between the two sites. For instance, groundwater flow directions for the former Chevron USA station located on the Moonlite Shopping Center property flowed southwest from April 1990 until June 1991, which is opposite than what is predicted by EKI.

B.3 90 Degree Variation in Groundwater Flow Direction not Supported by Shell Data
EKI's depiction of a northwest trending groundwater plume in Figure 10 of the EKI report is not supported by the groundwater flow variations seen at the Shell gas station. Staff reviewed the groundwater flow directions from the Shell gas station contained in Attachment A of the EKI report and observed a roughly 45 degree variation in the groundwater flow direction from the time when Saratoga Creek was purportedly losing or gaining. This is less than the 60 degree variation EKI cites in Attachment A of the report, and less than the 90 degree variation EKI shows on Figures 10 and 11 for a hypothetical groundwater plume under losing-creek conditions compared to the present day groundwater plume under gaining-creek conditions.

B.4 PCE Plume Detected to the North
Using a 45 degree amount of variation in the groundwater flow direction from a losing to a gaining creek, the groundwater flow direction at the Moonlite Cleaners Site could have varied from its present northeast direction under gaining-creek conditions to a northerly direction under losing-creek conditions. This is consistent with the areal spread of groundwater contamination seen in the current groundwater plume with groundwater concentrations in northerly borings B2, B17, B18, and B32 at 27 ug/L PCE, 4.6 ug/L PCE, 18 ug/L PCE, and 96 ug/L PCE, respectively. Additionally EKI's depiction of a northwest trending groundwater plume in Figure 10 is not supported by the groundwater flow directions for the former Chevron USA station that was located on the Moonlite Shopping Center property and closer to the former Moonlite Cleaners than the Shell Station.

C. Northeast-trending PCE Plume Partially Caused by PCE Discharges from the 1960s and 70s

EKI infers from a review of groundwater data that groundwater flow at the Site shifted to the northeast in the mid-1990s, and since the current groundwater plume travels to the northeast, the PCE release that caused the groundwater plume happened in the mid-1980s or early 1990s. This conclusion is incorrect because the PCE could have been bound up for years to decades in

the soil immediately beneath the concrete slab and above any sewer line. This would cause a delay in PCE reaching groundwater. Therefore, PCE released during UATC's ownership and control from 1962 to 1978 would not have started to migrate in groundwater until the northeast gradient was established.

D. PCE Contamination is Found at Deeper Depths Beneath the Site

EKI infers from a review of groundwater data that groundwater levels at the Site were deeper during the pre-1978 period, therefore if a PCE release occurred pre-1978, it would have resulted in a deeper groundwater plume, which according to EKI does not exist. This is incorrect. Groundwater in boring B32 located 50 feet north of the Site contained 96 ug/L PCE at approximately 40 feet below ground surface. Groundwater monitoring well MW5A located 50 feet northeast of the Site contained 1,130 ug/L PCE at approximately the same depth. These concentrations of PCE at depth are immediately above a relatively thick clay layer that extends from approximately 40 to 60 feet bgs at B32 that would slow any further downward vertical migration of PCE regardless of the time of release.

VII. UATC is a Discharger under Water Code section 13304

Water Code section 13304 authorizes the Water Board to issue cleanup and abatement orders to any person who 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. Whether a person caused or permitted such waste discharges has been broadly construed by the State Water Resources Control Board (State Water Board) in numerous precedential orders to include owners and operators at the time of discharge. A prior landowner and lessees may be named as a discharger if it (1) owned or were in possession of the property at the time of discharge, (2) had knowledge of the activities which resulted in the discharge, and (3) had the legal ability to prevent the discharge. State Water Board Orders WQ 85-7, 86-15, and 93-13. In this case, UATC meets all the criteria to be named as a discharger as discussed below.

A. UATC Owned the Property during the Time of Discharge

As discussed previously, UATC owned the property from 1961 to 1975 and then continued as master lessor until 1978. During this time, Moonlite Cleaners used PCE in its dry cleaning business and discharged PCE to soil and groundwater, as previously discussed.

B. UATC had Knowledge of Activities that Resulted in the Discharge

UATC had knowledge of the activities that resulted in the discharge. As previously stated, on May 11, 1961, the State Fire Marshall issued a permit to Moonlite Cleaners for the establishment of a dry cleaning business, which required numerous interior and exterior building improvements such as the installation of a piping system and exhaust fans and ducts. In furtherance of this, on June 27, 1961, UATC obtained a building permit for Moonlite Cleaners. On July 10, 1962, UATC received, on behalf of Moonlite Cleaners, a certificate of

occupancy from the City of Santa Clara. UATC was therefore actively involved in the establishment of the dry cleaner site. Importantly, the Fire Marshall Permit put UATC on notice that the business had risks related to solvent handling not inherent in other businesses. The permit required all processes to take place only in the equipment approved by the Fire Marshall and required reclaimed solvent to be transferred only through an approved piping system. The permit also alerted UATC of the potential for "toxic concentration of vapor" developing around the cleaning equipment and the need for floor level ventilation or an approved "breathing mask." Thus, UATC had actual knowledge of the hazardous nature of solvent handling at the Site and the need for careful handling of solvents. Even if one accepts that UATC did not have actual knowledge, the historical record shows that UATC should have known of the use of chemicals at the Site and its dangers, including the potential for unauthorized discharges. As the State Water Board held, actual knowledge of contamination need not be shown where it is reasonable for a person to be aware of the dangers generally inherent in the activity. State Water Board Order No. 86-15.

UATC was more than a movie theater company. UATC was a large corporation that owned large commercial properties similar to the Moonlite Shopping Center, and rented space to commercial operations such as dry cleaners. For example, UATC also owned a shopping center at 39-49 El Camino real, Millbrae, California, where a dry cleaner also operated from approximately 1958 to 1989 and where a release of PCE has occurred. Given that UATC was a large property owner renting space to commercial operations, it should have known of the hazardous nature of PCE and other chemicals used by the many commercial operators at its multiple properties.

C. UATC had the Legal Ability to Prevent the Discharge

As the owner of the Site (as well as master lessor) and landlord to Moonlite Cleaners, UATC exercised ultimate control over the property and had the legal ability to prevent the discharge. UATC would have had several different leases with the several different operators at Moonlite Cleaners for operation of the dry cleaning business. These leases would have given UATC legal control over Moonlite Cleaners' activities and would have given UATC the legal ability to prevent the discharge.

On November 7, 1975, UATC concurrently sold the Site to Hanson Holding, Inc. and leased it back as a master lessor under a master lease agreement. See Tab 3 and 4 of March 11, 2011, Lori Gualco Letter to Nathan King. Under section 4.02 of that agreement, it specifically refers to existing leases between UATC and its tenants and affirms UATC's rights as landlord under those leases. In that section, UATC also represents that it supplied correct copies of those existing leases. Moreover, under the master lease agreement, UATC's initial rent as master lessor was $400,000 (in 1975 dollars) a year for the shopping center, so it is not credible to think UATC had no leases for the shopping center tenants given the magnitude of money involved. In addition, under the master lease agreement, UATC had full control of its sublessees as landlord. The State Water Board has held that the contractual position of a party as sublessor and lessee of a service station gave him enough legal control over the property to hold him responsible for

what took place there. In the Matter of John Stuart. The same is true here: UATC was in a contractual position to legally control what went on the Site. Thus, UATC had the legal ability to prevent the PCE releases at the Site.

IX. UATC Did Not Discharge its Cleanup Obligations as a Result of its Bankruptcy

UATC filed for bankruptcy in 2000 and emerged from Chapter 11 bankruptcy as a newly reorganized entity in 2001. An obligation to cleanup and ameliorate ongoing pollution is not a claim that is dischargeable through bankruptcy. (*In re Chateaugay* (2d Cir. 1991), 944 F.2d 997). Even if it were a claim that could be discharged through bankruptcy, the claim never arose in time for it to be discharged. The Regional Water Board was not aware of the Site and its contamination until 2009—almost a decade after UATC filed for bankruptcy. Under the "fair contemplation" test commonly used by bankruptcy courts, all future response costs and natural resource damages costs based on prepetition conduct gave rise to claims to the extent such claims could be 'fairly contemplated' by the parties at the commencement of the debtor's bankruptcy. (*In re National Gypsum Co*. (N.D. Tex 1992 139 B.R. 397; *In re Jensen* (9th Cir. 1993) 995 F.2d 925.) Knowledge, notification, investigation, cleanup activities, and incurring response costs are all indicia of "fair contemplation." (*In re Gypsum Co*. at 407.) None applies here since the Regional Water Board only became aware of the Site and the contamination nine years after the bankruptcy filing. In sum, UATC's cleanup obligation was not a claim that could be discharged and even if it could be, the claim never arose for it to be discharged by the bankruptcy proceeding and UATC remains liable for cleaning up the Site.

X. Conclusion

Based on a review of all relevant information Staff recommends that the Regional Water Board adopt Site Cleanup Requirements naming Moonlite and UATC as dischargers for the Site.

Attachments:

Figure 1: Site Vicinity Map
Figure 2: Site Location Map

Figure 1: Site Vicinity Map

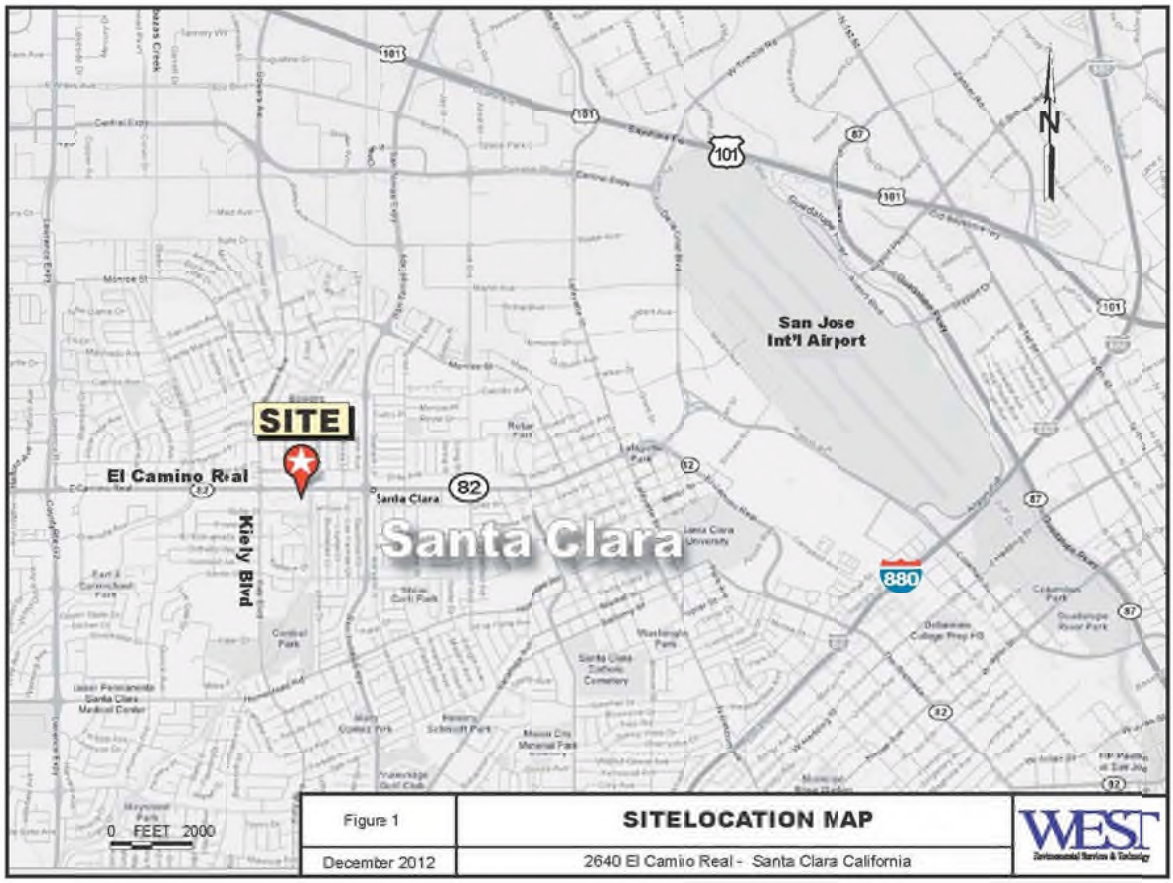


Figure 2: Site Location Map

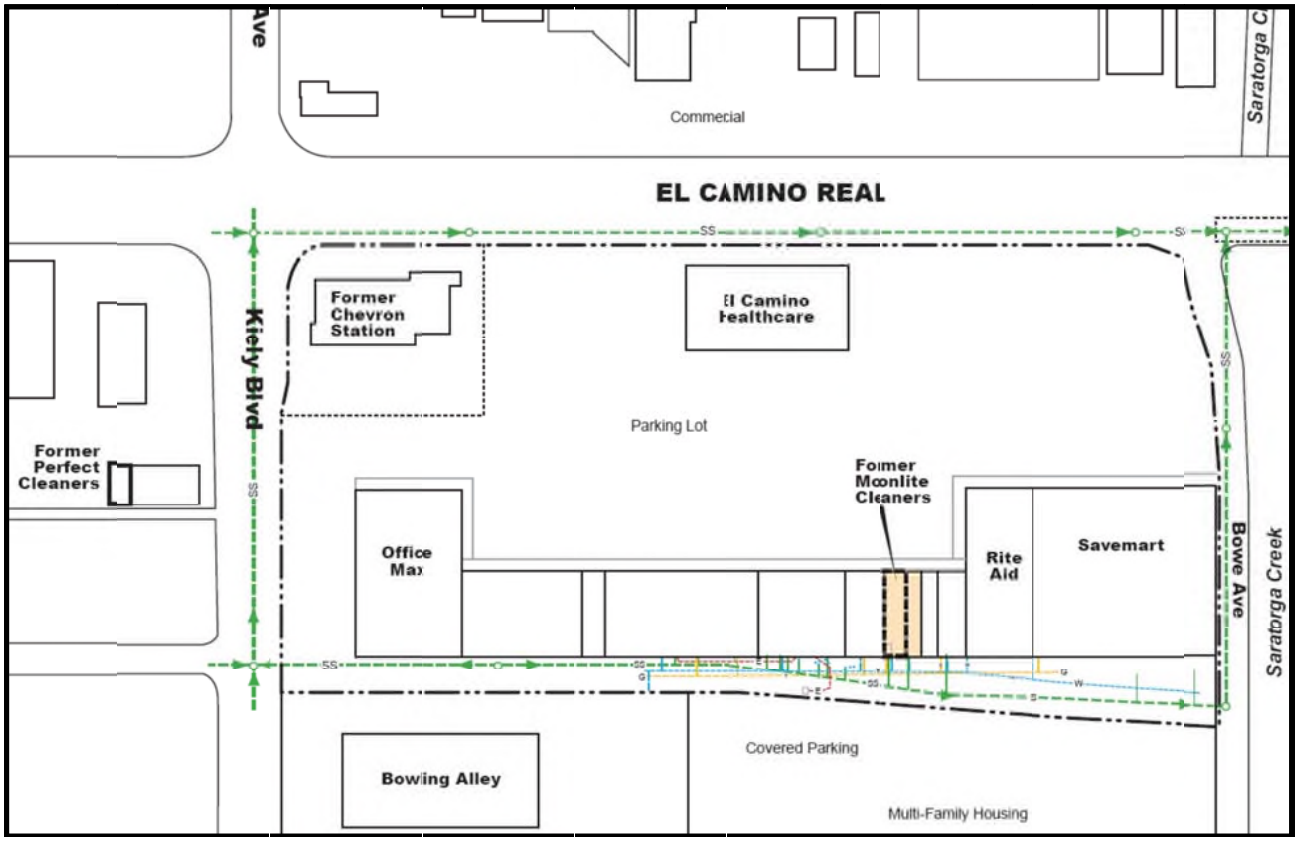


EXHIBIT 2

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CALIFORNIA STATE WATER RESOURCES CONTROL BOARD

In the Matter of Adoption of Site Cleanup Requirements for Moonlite Associates, LLC and United Artists Theatre Circuit, Inc. for the Property Located at 2640 El Camino Real, Santa Clara County (Order No. R2-2013-0032)	UNITED ARTISTS THEATRE CIRCUIT, INC.'S PETITION FOR REVIEW (Water Code § 13320), REQUEST TO SUPPLEMENT THE RECORD (23 CCR 2052.6); AND, REQUEST FOR HEARING (23 CCR § 2052(b))

DECLARATION OF CAREY E. PEABODY IN SUPPORT OF UNITED ARTISTS THEATRE CIRCUIT, INC.'S PETITION FOR REVIEW

I, Carey E. Peabody, declare as follows:

1. My name is Carey E. Peabody. I am a Vice President of Erler & Kalinowski, Inc. ("EKI"), an environmental consulting and engineering firm. I am in all ways competent to make this declaration. This declaration is based on my personal knowledge and on what I reasonably believe to be reliable analyses prepared by colleagues at EKI with my independent review and oversight. My references to EKI throughout this declaration refer to my analysis and

conclusions, as well as the analysis and conclusions of my colleagues made with my independent review and oversight.

2. I have bachelor's and master's degrees in Geology from Stanford University and a Ph.D. in Applied Earth Sciences from Stanford University. I am registered in the State of California as a Professional Geologist (No. 5018). I have practiced as an environmental consultant since 1989, focusing on investigation and remediation of properties contaminated with volatile organic compounds ("VOCs"), including perchlorethylene ("PCE"). Such properties include Superfund Sites located inside and outside of California as well as properties in the San Francisco Bay area at which VOCs have been detected in soil, groundwater, and soil gas.

3. A true and correct copy of my resume is attached hereto as Attachment 1.

4. On September 11, 2013, the San Francisco Bay Regional Water Quality Control Board ("Regional Board") issued a cleanup and abatement order (the "Order") to, among others, United Artists Theatre Circuit, Inc. ("UATC") relating to PCE contamination at property located at 2640 El Camino Real, Santa Clara, California (the "Site").

5. Over the course of more than two years, EKI has been assessing the likelihood that a PCE discharge occurred while UATC owned or leased the Site (i.e., before September 1978). After careful analysis and review of available information, including information regarding present and historic hydraulic conditions at and near the Site and groundwater and soil vapor monitoring data relating to the PCE plume at the Site, EKI determined that the evidence did not support the conclusion that PCE was released at the Site before September 1978, as set out in detail in a March 12, 2013 report that UATC submitted to the Regional Board. That conclusion was principally based on the absence of any evidence of a northwesterly trending PCE plume in shallow groundwater at the Site, which would have been formed if a PCE release

to shallow groundwater had occurred before September 1978 due to the influence of Saratoga Creek on groundwater flow.

6. In a Tentative Order and a report prepared by the Regional Board's cleanup staff ("Cleanup Staff") issued on June 25, 2013 ("Cleanup Staff Report"), the Cleanup Staff recommended to the Regional Board that UATC and the current Site owner, Moonlite Associates, LLC ("Moonlite"), be named as dischargers liable for cleaning up PCE contamination at the Site. The Regional Board scheduled a hearing on the Tentative Order for September 11, 2013 (the "Hearing"). On July 28, 2013, UATC submitted comments to the Cleanup Staff on the Tentative Order, which included extensive comments by EKI.

7. One week before the Hearing, the Cleanup Staff provided the Regional Board with a package of materials that included the Cleanup Staff's responses to comments on the Tentative Order and Cleanup Staff Report submitted by UATC and other interested parties, as well as a Revised Cleanup Staff Report ("Revised Staff Report") and Revised Tentative Order.

8. The Revised Staff Report included new arguments and factual information in response to EKI's analysis and comments on the June 25, 2013, Tentative Order and Cleanup Staff Report. In particular, the Revised Staff Report relied on groundwater elevation data maintained by the Santa Clara Valley Water District to contest EKI's conceptual model of how PCE was discharged at the Site. The data were not included in the record on the grounds that they are confidential. Based on its review of the Revised Staff Report, EKI contacted the Water District to obtain the data but did not receive the data until after the Hearing. The Revised Staff Report also argued, for the first time, that Saratoga Creek flowed only intermittently during the 1960s and 1970s, such that it would not have caused groundwater to flow to the northwest at the Site or in the vicinity of the Site. For that assertion, Cleanup Staff relied (again for the first time) on data from a stream gauge upstream of the Site. Before the Hearing, EKI did not have a

sufficient opportunity to analyze whether the data supported the conclusion that Saratoga Creek flowed only intermittently at the Site in the 1960s and 1970s.

9. At the Hearing, the Cleanup Staff repeated and elaborated on the new arguments presented in the Revised Staff Report. They also presented a slide deck to the Regional Board, which included, among other information, several figures that purported to depict soil gas and groundwater PCE plumes at the Site. I first saw this presentation during the Hearing, and a copy of the presentation, including these figures, was not made available to EKI until after the Hearing.

10. At the Hearing, Moonlite also asserted for the first time that the current length of the PCE plume at the Site is consistent with a release in the early 1960s. Moonlite also presented this claim in a slide deck that I did not see until the Hearing and did not obtain a copy of until after the Hearing.

11. Because all of this information was presented either days before or at the Hearing, EKI did not have an adequate opportunity to analyze the information and the arguments that the Cleanup Staff and Moonlite made based on that information. Following the Hearing, EKI obtained copies of and analyzed the relevant new information relied on by the Cleanup Staff and Moonlite. EKI's analysis of the new information presented and arguments made by the Cleanup Staff and Moonlite is set out below.

<u>The No-Shallow-Groundwater Theory</u>

12. The Cleanup Staff asserted at the Hearing that the absence of a northwesterly trending PCE plume is explained by a purported absence of shallow groundwater at the Site in the 1960s and 1970s.[1] That assertion was based on an obviously erroneous interpretation of groundwater elevation data from three deep production wells located about one-half mile from the

[1] Regional Board Hearing Transcript, Agenda Item No. 7 ("Tr.") at 18:3–18:4; 25:3–21 ("For most of UATC's period of ownership, there was no shallow groundwater and the creek was completely disconnected from deep groundwater.").

Site. These deep production wells are screened in a different, deeper aquifer, and consequently are not representative of shallow groundwater conditions at the Site.

13. This is evident from a simple comparison between (1) the groundwater elevation data from the three deep production wells; and (2) the groundwater elevation data from shallow aquifer monitoring wells at gas stations formerly located near the Site—a Mobil station about 2,500 feet from the Site, a Chevron station about 700 feet from the Site, and a Shell station about 1,100 feet from the Site.

14. Figure 1 attached hereto is a true and correct representation of the approximate locations of the deep groundwater production wells referenced by the Cleanup Staff and the locations of the former Mobil, Chevron, and Shell gas stations mentioned above. Figure 2 attached hereto is a true and correct representation of the groundwater elevation data from those wells.

15. The shallow monitoring wells at the former Mobil station are about 650 feet from one of the deep production wells (Well 07S/01W-04E002). As depicted on Figure 2, data from a representative shallow monitoring well at the former Mobil station (i.e., well GT3) show groundwater present in the shallow aquifer in early 1985 at depths of about 22–23 feet below ground surface ("bgs"). Contemporaneous data from the neighboring deep production well (upon which the Cleanup Staff relies) show groundwater elevations at about 112 feet bgs. Thus, the groundwater elevation in the shallow aquifer was about 90 feet higher than the groundwater elevation measured in the deep production well located just 650 feet away. The obvious implication is that the groundwater elevation data from production wells upon which the Cleanup Staff relies are not representative of shallow groundwater elevations at the Site, likely because the shallow aquifer and deep aquifer are separated by low-permeability layers and are, consequently, hydraulically distinct.

16. As is shown on Figure 2, data from the Chevron and Shell stations compared to the available data for the three deep production wells referenced by the Cleanup Staff, also confirm the conclusion that the deep production well data relied upon by the Cleanup Staff are not representative of shallow groundwater conditions at the Site. For the years in which groundwater elevation data are available for the Chevron and Shell Stations as well as the production wells, groundwater elevations in shallow groundwater monitoring wells at the Chevron and Shell Stations are substantially higher than the groundwater elevations in the three deep groundwater production wells.

17. At the Hearing, Moonlite also endorsed the claim that groundwater elevations at the Site were too deep for a northwesterly trending PCE plume to form from a release in the 1960s or 1970s.[2] In support of that argument, Moonlite presented a graph (on Slide 21) to the Regional Board entitled "Santa Clara Subbasin" but did not identify the source of the information on the graph. The graph is identical, however, to Figure 2-4 from a 2001 Santa Clara Valley Water District Groundwater Management Plan.[3] This figure depicts groundwater elevation data from the San Jose Index Well in the Santa Clara Valley Subbasin.[4]

18. The groundwater elevation data that Moonlite cited from the San Jose Index Well, which are also shown on Figure 2 attached hereto, are not representative of Site conditions. This is to be expected inasmuch as Figure 2-4 from the 2001 Santa Clara Valley Water District Groundwater Management Plan is accompanied by the statement: "[w]hile groundwater elevations in the well are not indicative of actual elevations throughout the County, they demonstrate

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[2] *See* Tr. 107:19–109:8; 111:16–113:7; 126:16–127:7.

[3] Santa Clara Valley Water District, "Santa Clara Valley Water District Groundwater Management Plan," 12–13 (July 2001) *available at* http://www.water.ca.gov/urbanwatermanagement/2010uwmps/Morgan%20Hill,%20City%20of/ELECTRONIC.Groundwater%20Management%20Plan.pdf.

[4] *Id.* at 12.

relative changes in groundwater levels."[5] The San Jose Index Well is screened in the deep aquifer within the Santa Clara Subbasin and is located approximately 4 miles to the southeast of the Site. Moonlite provided no explanation as to how a well screened in the deep aquifer and located approximately 4 miles from the Site would be representative of shallow aquifer conditions at the Site. Indeed, the groundwater elevation data reported for the San Jose Index Well are not even consistent with and are substantially higher than the groundwater elevation data reported for the three deep aquifer groundwater production wells referenced by the Cleanup Staff. Even more importantly, the data from the San Jose Index Well, on their face, cannot possibly represent shallow groundwater elevations at the Site. As recently as 1995, those data show groundwater elevations above 80 feet mean sea level ("msl"), which is above the ground surface at the Site.

19. In contrast, the Site-specific and aquifer-specific monitoring data from the nearby Mobil station show that shallow groundwater elevations were approximately 22–23 feet bgs in the mid-1980s. Groundwater elevation data from the Shell and Chevron stations located closer to the Site than the Mobil station are very similar to the data for the Mobil station.

20. Thus, the deep groundwater production well data and San Jose Index well data provided by Cleanup Staff and Moonlite, respectively, do not support their assertions that shallow groundwater did not exist at the Site in the 1960s and 1970s. Indeed, the available data from the Mobil, Shell and Chevron stations indicate that the production well and Index Well data are not representative of shallow groundwater elevations at the Site, and thus provide no basis for disputing EKI's conclusion that a pre-1978 release into shallow groundwater would have migrated in a northwesterly direction.

[5] *Id.*

Intermittent-Creek Theory

21. The Revised Staff Report also asserts, and the Cleanup Staff argued at the Hearing, that Saratoga Creek was an intermittent creek during the 1960s and 1970s, that Saratoga Creek flowed on average one-half of each year, and that under those conditions, there would not have been enough flow in the Creek to recharge groundwater and cause a northwesterly trending plume.[6]

22. To make this argument, the Cleanup Staff relies on data from a stream gauging station (USGS Saratoga Creek 11169500) located approximately 9 miles south and upstream of the Site but provides no basis for concluding that the data collected at such a distance would be representative of Site conditions. In fact, the surface water catchment area for Saratoga Creek at the gauging station is much smaller than the surface water catchment area for Saratoga Creek near the Site. The surface water catchment area for the gauging station on Saratoga Creek is approximately 9.2 square miles.[7] In comparison, EKI has calculated that the surface water catchment area for Saratoga Creek at the Site is nearly twice as large, at approximately 16.75 square miles. Accordingly, the stream gauge data cited by the Cleanup Staff are not representative of the conditions at the Site and do not support the Cleanup Staff's argument.

23. Moreover, the Cleanup Staff's claim that Saratoga Creek flowed on average only one-half of each year during the 1960s and 1970s is inaccurate. As indicated in Table 1 attached hereto, monthly discharge data during the 1960s and 1970s from the USGS Saratoga Creek gauging station show that on average Saratoga Creek flowed year round, with lower discharge rates in the summer than the winter.

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[6] Revised Staff Report at 8; Cleanup Staff's Response to Comments on Tentative Order for Site Cleanup Requirements, 2640 El Camino Real, Santa Clara, Santa Clara County at 10, 31 (Aug. 26, 2013); Tr. at 18:2–9.

[7] *See* U.S. Geological Survey, "USGS 11169500 Saratoga C A Saratoga CA" *available at* http://waterdata.usgs.gov/ca/nwis/nwisman/?site_no=11169500.

Moonlite's Plume-Length Calculation

24. At the Hearing, Moonlite also presented a wholly new argument that the PCE plume's current length is consistent with a release in approximately 1963.[8] Moonlite based that assertion on a measured plume length of about 750 feet.[9] But that length is incorrect. Based on the scale shown on the graphics presented by Moonlite and performing an independent check using publicly-available street maps, the actual plume length is approximately 1,200 feet. All other variables being equal, it would take 70 years for the plume to reach that length, which would mean the release occurred in 1939, a conclusion that does not make any sense because the dry cleaner did not begin operating at the Site until 1962. Moonlite also estimated the release date using a plume-velocity value of 18.8 feet per year, which EKI had previously estimated for the plume's center of mass as part of an assessment of plume flushing. To determine the date of release based on the total plume length as opposed to the travel distance of the center of mass, however, a leading-edge velocity is needed. Moonlite did not calculate a leading-edge velocity. Moonlite's claim that the release can be dated to 1963 is thus based on multiple invalid parameters and is completely erroneous.

25. Further, Moonlite's time calculations assume that the entire PCE plume originated from a single source located at the dry cleaner operation at the Site. But Moonlite's consultant, West Environmental Services and Technologies ("West"), previously concluded that the sewer main leaked PCE at the location of the sewer siphon beneath Saratoga Creek along El Camino Real, 650 feet away from the building in which the dry cleaner operated.[10] In other words, the plume was not formed solely as a result of a chemical release from the sewer at the Site but

[8] Tr. 109:19–110:5.

[9] *See* Moonlite Presentation: Former Moonlite Cleaners, Santa Clara, California at Slides 23, 29, 31 (Sep. 11, 2013).

[10] West, "Site Investigation Report, 2640 El Camino Real, Santa Clara, California" 3, 31 (Oct. 5, 2011).

rather as a result of sewer releases both at the Site and the siphon. Because West's calculations incorrectly assume that the entire release occurred at the dry cleaner building, they cannot be used to estimate the date of the chemical release.

Cleanup Staff's Depictions of Site Data at the Hearing

26. In Slide 8 of its presentation to the Regional Board, the Cleanup Staff purported to present a plot of existing PCE soil gas data in relation to the location of the sewer system. That slide showed high concentrations of PCE in soil gas located to the north of, but not in the alley behind the Site where the sewer lines are located.[11] After carefully reviewing the Cleanup Staff's plot, it is clear that the Cleanup Staff's presentation does not honor the available data. Specifically, and most importantly, the Cleanup Staff's portrayal of the soil gas plume in Slide 8 inexplicably excludes data from sample location SG-15, which is in the alley, adjacent to the sewer, where PCE was detected at a concentration of 11,000 micrograms per cubic meter ("$\mu g/m^3$") at a depth of one foot. Slide 8 also fails to include data from soil gas samples collected at depths below one foot, when in fact soil gas data collected at depths between five and ten feet show a "hot spot" of 110,000 $\mu g/m^3$ of PCE in the alley near the sewer.

27. Similarly, the Cleanup Staff's plot of the PCE groundwater plume (Slide 9 of the Cleanup Staff's presentation) ignores data from sample locations B43 and B12, which show concentrations of PCE along the sewer line at the eastern end of the alley. Finally, by selecting a concentration contour of 100 micrograms per liter (" μg/L") (20 times the applicable cleanup standard), the Cleanup Staff's depiction of the groundwater plume excludes numerous detections of PCE at concentrations below 100 μg/L along the sewer line, and may again have left the impression that the area along the sewer line has not been contaminated.

[11] Cleanup Staff Presentation at Slides 8, 9; Tr. 9:7–18; 10:6–11:1.

I declare under penalty of perjury under the law of the State of California that the foregoing is true and correct. Executed this 11th day of October, 2013.

Carey E. Peabody, Ph.D., P.G.

ATTACHMENT 1

Carey E. Peabody, Ph.D., P.G.

Vice President and Principal
Principal Geologist

Education

Stanford University, Ph.D. in Applied Earth Sciences, 1990
Stanford University, M.S. in Geology, 1979
Stanford University, B.S. in Geology, 1977

Registrations/Certifications

Professional Geologist in California (PG #5018)
Forty-hour HAZWOPER Training Course
Eight-hour Health and Safety Training Course for Supervisors

Organizations

Stanford University School of Earth Sciences Advisory Board
National Ground Water Association
Association of Women Geoscientists
Groundwater Resources Association of California

Honors

Instructor, U.C. Berkeley Extension Course, Site Assessment and Remediation, Part 1: Assessment, Fall 1994
Invited Contributor, Bitumens in Ore Deposits Symposium Volume; International Sedimentological Congress, Nottingham, England, August 1990
Invited Speaker, 28th International Geological Congress, Washington D.C., July 1989
Successful Applicant, Petroleum Research Fund Grant, 1987
Stanford University Fellowship, September 1983 - March 1987
Phi Beta Kappa, 1979

Summary of Experience

Dr. Peabody is a principal geochemist and geologist with over thirty years experience in mapping geologic formations and evaluating the movement of groundwater and chemicals in natural systems. In addressing problems of environmental contamination, Dr. Peabody leads the development of conceptual geologic, hydraulic and contaminant distribution models. Her analysis and synthesis of site data into useful conceptual models during site characterization can lower project costs and accelerate schedules by focusing field investigation strategies. Ultimately, the resulting site conceptual models provide a sound foundation for developing computer simulations of groundwater flow and/or contaminant transport, which in turn are key tools used to assess health risks or design engineering solutions. Dr. Peabody directs large complex efforts with multi-disciplinary teams to effectively reach project characterization and remediation goals. She is especially skilled in interpreting technical information and clearly communicating strategic issues to clients and regulatory agencies.

Detailed Experience

- On behalf of a joint defense group, Dr. Peabody manages a technical team that is evaluating historical and environmental data (e.g., geologic, hydrologic, and chemical data) to identify the probable source(s) of a chlorinated volatile organic compound ("VOC") plume in a Southern California groundwater basin. Challenges include interfacing with multiple technical consultants to build a uniform and solid project database and synthesizing data of variable quality to support project objectives.

- On behalf of a Fortune 500 company, Dr. Peabody provides oversight for an EKI team conducting a search for potential responsible parties ("PRPs") that may have contributed chemicals to a commingled VOC plume in California. EKI has completed file reviews at environmental and regulatory agencies and developed a database to track and allow timely distribution of critical documents related to the numerous PRP sites. EKI has performed research on prior chemical uses, regulatory records, and environmental investigation and remediation activities at the PRP sites. EKI is responsible for the preparation of a comprehensive source identification report and will collaborate with technical team members to develop the regional site conceptual model.

- Dr. Peabody is a consulting expert geologist for a litigation project that involves the definition of geologic structures that control the migration of groundwater and chemical contaminants, most notably ethylene dichloride and benzene. She has overseen the compilation of lithologic data from hundreds of geologic logs that record subsurface data within Quaternary fluvial sedimentary units. She has interpreted the lithologic data and created a three dimensional geologic framework that includes identification of specific geologic conduits that control the flow of groundwater, chemicals in the dissolved phase, and dense non-aqueous phase liquids. Identification of these geologic conduits has allowed for focusing the remedial approach and provided a strategy for lowering the costs of future remedial actions.

- To protect a groundwater resource, groundwater pump-and-treat has been proposed as the preferred remedy for preventing off-site migration of chemicals of concern in a 1,000-acre area of uplifted sediments and complex faulting. The current remedial design is predicated on there being relatively gently dipping layered sediments at the site. This assumption has been evaluated by Dr. Peabody on the basis of available geologic maps, lithologic logs, and geophysical logs. The available data suggest that the subsurface geologic conditions are substantially more complex than currently assumed including areas of vertically-dipping sediments and closely-spaced faults. On the basis of this analysis, hydraulic pumping tests have been proposed to obtain the data needed to complete design of the planned groundwater pump-and-treat system.

- Dr. Peabody is leading a multi-disciplinary team of scientists and engineers in assisting the Environmental Protection and Restoration Department of the SLAC National Accelerator Center ("SLAC") in the investigation, evaluation, and remediation of a variety of environmental issues at SLAC. She has coordinated the investigation of the extent of VOCs and other chemicals of concern in soil, rock, and groundwater on portions of the 426-acre research facility, located 1.5 miles west of Stanford University. A primary goal of the remedial investigation work has been to develop a revised site conceptual model for the occurrence of VOCs in the subsurface to allow the development of a cost-effective remedy.

- Dr. Peabody has overseen remedial excavation of soils that contain polychlorinated biphenyls ("PCBs") that are located within the on-site 230-kilovolt master electrical substation. The primary challenge was to institute healthy and safety control measures that would allow work to proceed while the substation remained energized. In addition, Dr. Peabody managed excavation of PCB-containing sediments located within an on-site natural drainage channel. After excavation was

complete, the drainage channel was returned to its original state by re-vegetating with indigenous plants. Dr. Peabody has worked closely with client personnel in evaluating potential remedial options and assisting in meetings with regulatory agencies.

- On behalf of a Fortune 500 company, Dr Peabody, as Project Manager, lead the remedial investigation and remediation of a former crystal growing and slicing facility, located near the margin of San Francisco Bay. Trichloroethene ("TCE") occurred at elevated concentrations in soil, and TCE as a dense non-aqueous phase liquid ("DNAPL") was suspected in the saturated zone. Groundwater is not potable at the site and is apparently impacted by intrusion of saline brines from nearby bayshore ponds. Based on the results of remedial investigation, site-specific risk-based cleanup goals were developed, and a Feasibility Study/Remedial Action Plan ("FS/RAP") was prepared that called for excavating site soils above the groundwater table and performance of a pilot test to evaluate the efficacy of in situ chemical oxidation using potassium permanganate to destroy TCE in the saturated zone.
    - Given the completion of soil excavation activities at the site and the limitations of in situ treatment options for saturated soils and groundwater, EKI, in accordance with the FS/RAP, is currently monitoring chemical concentrations in groundwater on- and off-site to evaluate the stability of the groundwater chemical plume. Based on data collected to date, the regulatory agency has indicated its willingness to close the site upon receipt of a final report.
    - To facilitate sale and development of the site, Dr. Peabody oversaw preparation of a Risk Management Plan ("RMP") to define long-term risk management activities based upon the intended land reuse as commercial property. The RMP facilitated sale of the property to a third parties.
    - Communication was a critical element of this project to attain our client's objectives. Dr. Peabody provided the client representatives with frequent project status summary reports for discussion during weekly conference calls and maintained a frequent dialogue with regulatory agency staff to expedite project completion in order to meet the client's business objective of sale of the property.
- As Project Manager, Dr. Peabody coordinated design and installation of groundwater extraction and treatment systems related to a release of petroleum hydrocarbons within a Superfund site on one of the U.S. Virgin Islands. Petroleum hydrocarbons from a gasoline station were co-mingled with chlorinated volatile organic compounds in groundwater from other sources. The affected aquifer, historically used as a primary source of drinking water for the island, consists of fractured, hydrothermally-altered volcanic and volcanoclastic rocks. On the basis of available geologic, hydraulic and chemical data collected by previous investigators, Dr. Peabody prepared a conceptual model for the site and directed development of a groundwater model to aid in remedial system design. The final design consists of two remediation systems: groundwater and soil vapor extraction at the service station source area and groundwater extraction at the leading edge of the petroleum hydrocarbon plume. An innovative design approach for the treatment system was developed by EKI to maintain quality and cost controls and to minimize construction work on site. The two treatment systems were constructed within shipping containers and tested at an assembly site in the San Francisco Bay Area prior to shipment to the Virgin Islands. The systems are currently in operation and successfully remediating petroleum compounds released to soil and groundwater.
- As Project Manager, Dr. Peabody directed remedial investigation of soil and groundwater at a former helicopter manufacturing site. This complex site involved multiple Potentially Responsible Parties, detailed hydrogeological analysis, and multiple chemicals of concern including halogenated and aromatic VOCs and petroleum hydrocarbons. A Soil Remedial Plan recommended limited soil excavation and vapor extraction for remediating residual VOC-impacted

soil. Based on results of a successful pilot test, a 150-cubic feet per minute vapor extraction and treatment facility was installed to remediate site soil in the primary source area. A baseline health risk assessment indicated that VOCs in site groundwater posed a potential health risk if ingested. However, because of the site's proximity to San Francisco Bay and the absence of groundwater use, the regulators concurred that protection of ecological receptors in the Bay was the key remedial action objective. EKI developed site-specific chemical goals for site groundwater that are higher than MCLs and were based on available aquatic toxicological data, the results of bioassays on bivalve larvae, and chemical fate and transport modeling.

The Regional Water Quality Control Board's Final Order for the site required implementation of a Non-Attainment Zone, one of the first in the Bay Area, for residual chemicals of concern remaining in the source area, combined with groundwater monitoring. This remedial action, compared to conventional pump-and-treat remediation, represented a substantial cost saving to the Potentially Responsible Parties. The success of this project was largely due to positive working relationships developed amongst Dr. Peabody, the clients, and the regulators based on detailed technical evaluations.

- For two Fortune 500 corporations, Dr. Peabody was Assistant Project Manager and Project Geologist leading a multi-firm technical team, integrating and analyzing geological, hydrological and chemical data collected over a ten year period for a Midwestern polyethylene manufacturing facility, now a Superfund site. She was a key manager and overseer of large outside engineering firms responsible for producing deliverables to the United States Environmental Protection Agency ("U.S. EPA") on this complex project, including Remedial Investigations, Treatability Studies, Endangerment Assessments, and Remedial Design documents. Other duties included a leading role concerning liaison with U.S. EPA staff and the responsible State agency on a wide variety of technical and regulatory issues, including management of DNAPLs. During her three years on this effort, Dr. Peabody's clear technical direction and communication skills were key reasons behind a marked improvement in relations with regulators and in the resulting significant reduction in potential client remediation costs.

- Dr. Peabody was Project Geochemist investigating fill adjacent to San Francisco Bay in which battery casing fragments were associated with elevated lead concentrations. She utilized computer codes for chemical equilibria to evaluate subsurface transport of lead.

- She co-authored a Remedial Action Plan for a former engine manufacturing facility where VOCs were released to a shallow aquifer. She calibrated and implemented analytical and numerical models (MODFLOW and MOC) to estimate the future distribution of chemicals as a consequence of alternative remedial actions.

- To expedite closure of a former foundry site, Dr. Peabody evaluated chemical data for soil samples contaminated largely with fuel oil. On the basis of gas chromatogram "fingerprints", she demonstrated that the fuels were substantially biodegraded, allowing advocacy of the position that no further remedial actions were necessary.

- Dr. Peabody's doctoral thesis concerned the origin of cinnabar (HgS)-petroleum deposits in the California Coast Ranges. The research included detailed mapping of geological formations with subsequent extensive laboratory analytical work including: x-ray diffraction, scanning electron microscopy, energy dispersive electron microscopy, gas chromatography and mass spectrometry ("GC-MS") and GC-MS/MS. Using GC-MS/MS techniques, molecular markers in naturally-occurring petroleum deposits were studied to determine the sources of the oils and their thermal histories. Such laboratory and field data were integrated with the results of geochemical modeling.

- Dr. Peabody formerly worked at Chevron Resources Company in the Geothermal Division from 1979 to 1983, where she managed geothermal exploration projects. Geological, geochemical and

geophysical data were utilized to map the subsurface movement of geothermal waters. Dr. Peabody supervised acquisition, management and interpretation of these data sets.

Publications

Moes, M., Peabody, C., Siegrist, R. and Urynowicz, M., 2000, Permanganate Injection for Source Zone Treatment of TCE DNAPL, The Second International Conference on Remediation of Chlorinated and Recalcitrant Compounds, 22-25 May 2000, abstract.

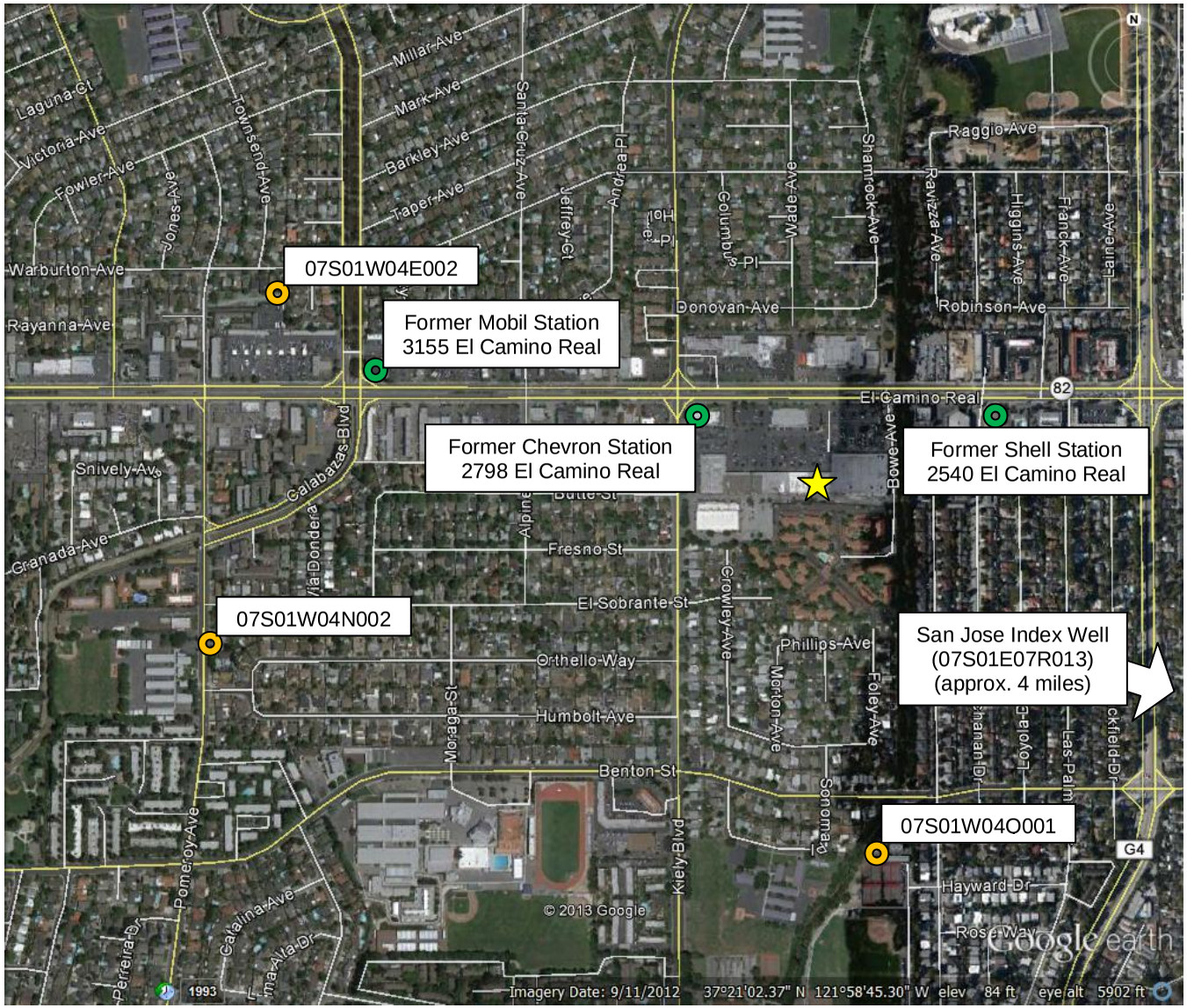
Peabody C.E. and Gruebel, K.A., 1999, Restoration of Groundwater in Distributory Channel Sediments at San Francisco Bay Margin, Fourth Biennial State of the Estuary Conference, March 1999.

Peabody, C. E., 1993, The Association of Cinnabar and Bitumen in Mercury Deposits of the California Coast Ranges: Bitumens in Ore Deposits: Parnell, J., ed., Springer-Verlag.

Peabody, C. E. and Einaudi, M. T., 1992, Origin of petroleum and mercury in the Culver-Baer cinnabar deposit, Mayacamas District, California: Economic Geology, v. 87, p. 1078–1103.

Peabody, C. E., 1989, Cinnabar-petroleum deposits: nature and source of mineralizing fluids: 28th International Geological Congress, Washington D.C., July 1989, p. 2–582 to 2–583.

Peabody, C. E., 1988, The source of petroleum and mercury in the Wilbur Springs quicksilver district, California: Geological Society of America 1988 Annual Meeting, abstracts with programs, p. A141.



Legend

- Former Moonlite Cleaners Site
- Shallow Monitoring Well Site (see note 2)
- Deep Production Well (see note 3)

Notes:

1. All locations approximate.
2. Shallow monitoring well sites are based on the SWRCB GeoTracker website.
3. Deep production well locations are from SCVWD map of wells within 1 mile of the former Moonlite Cleaners Site, provided to EKI on 26 September 2013.
4. Basemap source: Google Earth

N

Approximate Scale in Feet

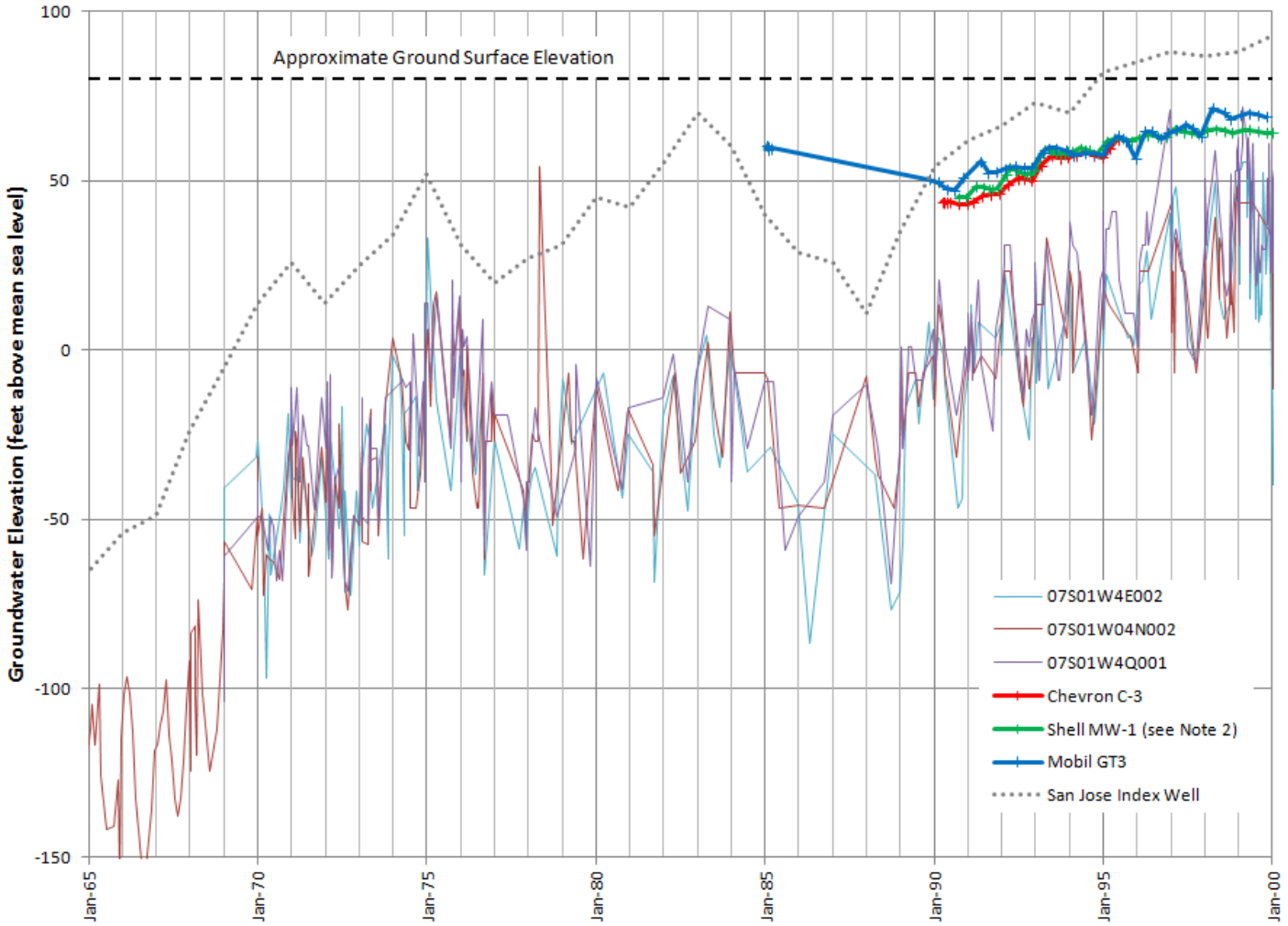
0 500 1,000 2,000

Erler & Kalinowski, Inc.

Locations of Wells with Historical Water Level Data

Former Moonlite Cleaners
2640 El Camino Real
Santa Clara, CA
October 2013
EKI B10003.00

Figure 1



Notes:

1. Deep production wells are identified by their state well ID. Water level data for deep production wells were provided to EKI by SCVWD on 26 September 2013.
2. Shallow monitoring wells are identified by the gas station site on which they are/were located, and by the well ID. Water level data for shallow monitoring wells were obtained from the SWRCB GeoTracker website. Water levels for well Shell MW-1 were adjusted downward 23 feet to correct for the use of a local vertical datum in the data tables included in the Site Closure Summary report.
3. Water level data for the San Jose Index Well were extracted from Figure 2-4 of the SCVWD Groundwater Management Plan (SCVWD, 2001).
4. Locations of the deep production wells and shallow monitoring well sites are shown on Figure 1.

Erler & Kalinowski, Inc.

Historical Water Level Data from Nearby Shallow and Deep Wells

Former Moonlite Cleaners
2640 El Camino Real
Santa Clara, CA
October 2013
EKI B10003.00

Figure 2

Table 1

Monthly Average Streamflow at USGS Saratoga Creek (11169500) Gauging Station

January 1960 through December 1979

Month and Year	Streamflow (cfs)
1/1960	4.12
2/1960	13.8
3/1960	0.452
4/1960	0.393
5/1960	0.1
6/1960	0
7/1960	0
8/1960	0
9/1960	0.013
10/1960	0.016
11/1960	1.39
12/1960	2.94
1/1961	0.697
2/1961	1.72
3/1961	1.74
4/1961	0.47
5/1961	0.168
6/1961	0.023
7/1961	0
8/1961	0
9/1961	0
10/1961	0
11/1961	0.653
12/1961	2.98
1/1962	0.755
2/1962	50.8
3/1962	23
4/1962	0.62
5/1962	0.206
6/1962	0.093
7/1962	0.026
8/1962	0
9/1962	0
10/1962	17.5
11/1962	0.173
12/1962	2.62

Month and Year	Streamflow (cfs)
1/1963	30.1
2/1963	52.7
3/1963	18.5
4/1963	37.1
5/1963	9.92
6/1963	1.3
7/1963	0.39
8/1963	0.313
9/1963	0.14
10/1963	0.532
11/1963	4.14
12/1963	0.561
1/1964	5.94
2/1964	0.086
3/1964	0.923
4/1964	0.32
5/1964	0.213
6/1964	0.127
7/1964	0
8/1964	0.045
9/1964	0.12
10/1964	0.29
11/1964	3.85
12/1964	39.6
1/1965	54.2
2/1965	7.57
3/1965	2.92
4/1965	28.3
5/1965	5.27
6/1965	0.33
7/1965	0.316
8/1965	0.084
9/1965	0.423
10/1965	0.932
11/1965	5.5
12/1965	7.75

Month and Year	Streamflow (cfs)
1/1966	5.46
2/1966	7.58
3/1966	0.732
4/1966	0.343
5/1966	0.226
6/1966	0.103
7/1966	0.1
8/1966	0.229
9/1966	0.327
10/1966	0.381
11/1966	3.3
12/1966	10.1
1/1967	43.3
2/1967	17.2
3/1967	39.3
4/1967	53.9
5/1967	11.6
6/1967	2.63
7/1967	0.389
8/1967	0.264
9/1967	0.124
10/1967	0.169
11/1967	0.276
12/1967	1.69
1/1968	15.6
2/1968	5.29
3/1968	4.29
4/1968	0.817
5/1968	0.53
6/1968	0.801
7/1968	0.197
8/1968	0.113
9/1968	0.423
10/1968	0.553
11/1968	0.873
12/1968	5.93

Table 1

Monthly Average Streamflow at USGS Saratoga Creek (11169500) Gauging Station

January 1960 through December 1979

Month and Year	Streamflow (cfs)
1/1969	79.8
2/1969	114.5
3/1969	40.7
4/1969	16.2
5/1969	1.77
6/1969	0.828
7/1969	1.02
8/1969	0.401
9/1969	1.06
10/1969	1.73
11/1969	1.62
12/1969	7.7
1/1970	41.4
2/1970	16
3/1970	24.3
4/1970	1.76
5/1970	0.451
6/1970	0.374
7/1970	0.328
8/1970	0.782
9/1970	0.729
10/1970	0.84
11/1970	8.55
12/1970	6.81
1/1971	19.3
2/1971	3.81
3/1971	3.46
4/1971	1.4
5/1971	0.318
6/1971	0.288
7/1971	0.235
8/1971	0.693
9/1971	0.586
10/1971	0.644
11/1971	0.989
12/1971	8.24

Month and Year	Streamflow (cfs)
1/1972	1.17
2/1972	1
3/1972	0.318
4/1972	0.243
5/1972	0.109
6/1972	0.113
7/1972	0.127
8/1972	0.081
9/1972	0.235
10/1972	1.05
11/1972	11.2
12/1972	1.18
1/1973	59.4
2/1973	96.5
3/1973	36.1
4/1973	6.04
5/1973	0.836
6/1973	0.289
7/1973	0.285
8/1973	0.163
9/1973	0.127
10/1973	0.685
11/1973	9.3
12/1973	10.4
1/1974	25.9
2/1974	4.11
3/1974	48.5
4/1974	28.2
5/1974	2.95
6/1974	0.458
7/1974	1.57
8/1974	0.453
9/1974	1.54
10/1974	0.464
11/1974	1
12/1974	2.11

Month and Year	Streamflow (cfs)
1/1975	1.46
2/1975	29.9
3/1975	51.1
4/1975	14.5
5/1975	1.58
6/1975	0.506
7/1975	0.393
8/1975	0.349
9/1975	0.192
10/1975	1.16
11/1975	2.4
12/1975	0.395
1/1976	0.306
2/1976	0.619
3/1976	0.786
4/1976	0.557
5/1976	0.189
6/1976	0.23
7/1976	0.12
8/1976	0.135
9/1976	0.132
10/1976	0.267
11/1976	0.413
12/1976	0.71
1/1977	1.33
2/1977	0.769
3/1977	1.62
4/1977	0.504
5/1977	0.637
6/1977	0.119
7/1977	0.01
8/1977	0
9/1977	0.098
10/1977	0.096
11/1977	0.754
12/1977	4.71

Table 1

Monthly Average Streamflow at USGS Saratoga Creek (11169500) Gauging Station

January 1960 through December 1979

Month and Year	Streamflow (cfs)
1/1978	80.1
2/1978	43.6
3/1978	50.5
4/1978	20.6
5/1978	4.46
6/1978	1.74
7/1978	0.304
8/1978	0.197
9/1978	0.396
10/1978	1.2
11/1978	2.48
12/1978	1.77
1/1979	8.97
2/1979	26.8
3/1979	29.7
4/1979	8.67
5/1979	1.57
6/1979	0.367
7/1979	0.425
8/1979	0.427
9/1979	0.512
10/1979	1.09
11/1979	1.28
12/1979	10

Abbreviations:

cfs cubic feet per second

Source:

http://waterdata.usgs.gov/ca/nwis/nwisman/?site_no=11169500, accessed 22 February 2013.

EXHIBIT 3

Hogan Lovells

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www.hoganlovells.com

July 28, 2013

BY ELECTRONIC MAIL AND FEDERAL EXPRESS

Dyan C. Whyte
Assistant Executive Officer
California Regional Water Quality Control Board
San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, California 94612

Re: United Artists Theatre Circuit Inc.'s Comments on the Tentative Order – Site Cleanup Requirements for Moonlite Associates, LLC, and United Artist[s] Theat[re] Circuit, Inc., for the Property Located at 2640 El Camino Real, Santa Clara, Santa Clara County – File No. 43S1090 (NMK)

Dear Ms. Whyte:

Enclosed please find United Artists Theatre Circuit, Inc.'s comments on the Tentative Order – Site Cleanup Requirements for Moonlite Associates, LLC, and United Artist[s] Theat[re] Circuit, Inc., for the Property Located at 2640 El Camino Real, Santa Clara, Santa Clara County issued by the staff of the San Francisco Bay Regional Water Quality Control Board on June 25, 2013.

Please do not hesitate to contact me with any questions.

Very truly yours,

Scott H. Reisch/amp

Scott H. Reisch

Partner
scott.reisch@hoganlovells.com
D 303.899.7355

Enclosures

cc: Nathan King, California Regional Water Quality Control Board
Lori Gualco, The Law Offices of David E. Frank (via Federal Express)
Julia Hill, Assistant City Attorney (via Federal Express)

COMMENTS OF UNITED ARTISTS THEATRE CIRCUIT, INC, ON THE TENTATIVE ORDER AND CLEANUP STAFF REPORT PREPARED BY STAFF OF THE SAN FRANCISCO BAY REGIONAL WATER QUALITY CONTROL BOARD, DATED JUNE 25, 2013

United Artists Theatre Circuit, Inc. ("UATC") hereby submits these comments on the Tentative Order and associated Cleanup Staff Report ("Staff Report") prepared by the Staff of the San Francisco Bay Regional Water Quality Control Board ("Regional Board" or "Board") regarding the property located at 2640 El Camino Real in Santa Clara, California (the "Site").[1] In these documents, the Staff propose to name UATC as a "discharger" under Section 13304(a) of the California Water Code and to require UATC to perform various Site cleanup activities to address releases of perchloroethylene ("PCE") at the Site by a dry cleaner that apparently operated at the Site from 1962 until the mid-1990s. For the reasons set forth below, the Staff's proposal is unjustified by the facts and unsupported by the law, and should be rejected by the Regional Board.

I. EXECUTIVE SUMMARY

The Tentative Order naming UATC, a former owner of the Site, as a liable "discharger" is unique and unprecedented. It hangs on a thin, one-sided record supplied to the Regional Board Staff by the current Site owner, Moonlite Associates LLC ("Moonlite Associates" or "Moonlite"), with little corroboration or independent investigation by the Staff. It relies on misstatements of both fact and law and mischaracterizations of the technical analysis of scientific experts. It rejects sound scientific analysis by the United States Environmental Protection Agency ("EPA"), the Santa Clara Valley Water District, the United States Geological Survey and other recognized experts in favor of "anything-is-possible" conjecture and speculation. And it asks the Regional Board to adopt a new precedent under which innocent former landowners will be subject to draconian cleanup liability based solely on the mere existence of a former commercial use of their property and the detection decades later of contamination not previously associated with that commercial use.

Without facts and technical analysis to support the Tentative Order, the Regional Board lacks substantial evidence on which to name UATC as a discharger. Moreover, even if UATC would otherwise be liable under Section 13304(a), any such liability was discharged when UATC went through bankruptcy in 2001. Indeed, because of UATC's bankruptcy, to hold UATC liable, the Regional Board must find that UATC reasonably should have known by 1978 (when UATC's affiliation with the Site ended) that its tenant had contaminated the Site with PCE, while simultaneously concluding that the Regional Board should not reasonably have known by 2001 that UATC's tenant had contaminated the Site with PCE. The Regional Board should decline to make these utterly inequitable and incompatible findings.

For these reasons, which are set out in detail in the ensuing comments, the Regional Board should decline to name UATC as a discharger responsible for cleaning up the Site.

[1] By email from Nathan King to Scott Reisch (and others) dated July 18, 2013, the deadline for submitting these comments was extended to 8 AM PDT, July 29, 2013.

II. FACTUAL BACKGROUND

A. Site History

UATC (and entities affiliated with UATC) owned the Site from the mid-1940s until November 1975, when UATC sold the Site to Hanson Holdings, Inc. ("Hanson").[2] After the sale, UATC leased the Site back from Hanson.[3] In September 1977, after several other Site ownership changes, Sherman, Clay of Delaware, Inc. ("Sherman, Clay")—an entity related to Moonlite Associates—bought the Site.[4] About a year later, in November 1978, UATC and Sherman, Clay terminated the 1975 lease, effective September 1, 1978.[5] In 1983, Sherman, Clay transferred the Site to Moonlite, which continues to own the Site today.[6]

Evidence in the record suggests that a dry cleaner began operating at the Site in mid-1962, when the City of Santa Clara (the "City") issued a Certificate of Occupancy dated July 10, 1962, certifying that the City had inspected a "44' wide section – Cleaners & Laundry" at the Site and approving occupancy of the property.[7] It is undisputed that dry cleaning occurred at the Site (though perhaps not continuously) until at least October 1996, approximately 18 years after UATC vacated the Site.

Little is known about dry-cleaning practices at the Site. In anticipation of a dry cleaner operating at the Site, in May 1961, the California State Fire Marshal issued a permit to "Moonlight Cleaners" authorizing it to run a "clothes cleaning establishment" at the Site.[8] The permit allowed Moonlite Cleaners to install a Hoffman Master-Jet Cleaning Unit, Hoyt SF-130 Reclaimer, Per Combo Filter-Still-Cooker, and a Vaper-Mat Model 800. It also placed a handful of conditions on Moonlite Cleaners' operations. For example, it required "[a]ll processes consisting of washing, extracting, and deodorizing solvent-cleaned garments [to] take place in equipment approved for that purpose by the State Fire Marshal." Moonlite Cleaners had to ensure that exhaust fans on the cleaning and reclaiming equipment operated automatically when the equipment doors were open so that vapors would be exhausted to the outside of the building through ventilation ducts. The permit also required Moonlite Cleaners to use an enclosed piping

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[2] UATC, "Former Moonlite Cleaners, 2640 El Camino Real, Santa Clara, Santa Clara County, UATC's Technical Report on Site History" 2 (Apr. 12, 2012), enclosed with letter from S. Reisch to B. Wolfe (Apr. 12, 2012). In the interests of efficiency, UATC has not attached to these comments any document that is posted on the State Water Resources Control Board GeoTracker database (http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T10000000901), as of today's date. We understand that all such documents are part of the administrative record in this matter.

[3] *Id.* at 3 and Exhibit 3-A.

[4] *Id.* at 3–4 and Exhibit 3-E.

[5] .*Id.* at 4 and Exhibit 3-F.

[6] *Id.* at 4 and Exhibit 3-G.

[7] City of Santa Clara, Building Department, "Certificate of Occupancy No. 1032," enclosure to L. Gualco letter to N. King (Dec. 18, 2012).

[8] State Fire Marshal letter to Moonlight [sic] Cleaners (May 11, 1961), enclosure to L. Gualco letter to N. King (Dec. 18, 2012). For simplicity, we use the name "Moonlite Cleaners" to refer collectively to all of the dry-cleaning businesses that operated at the Site. According to Moonlite, at least nine different individuals operated that business. *See* Letter from L. Gualco to N. King, "Former Moonlite Cleaners, 2640 El Camino Real, Santa Clara, California" Tab 11 (Mar. 30, 2011).

system to transfer reclaimed solvent from the "muck-reclaimer" to the "cleaning system." Although the permit refers to "solvent," it does not mention the type of solvent.

In June 1961, the City of Santa Clara approved a one-page application for a building permit at the Site, which requested permission to install partitions in the Moonlite Cleaners' space, a minor improvement with an estimated value of $1,000.[9] The application identifies "United Calif Theater" as the Site owner but is signed by a construction contractor.[10]

Scarcely any other documentation about Moonlite Cleaners or its operations has been identified or relied upon in the Tentative Order and Staff Report. The Staff has not set forth evidence of a single lease between any landlord and Moonlite Cleaners' owners or operators. In fact, the Staff Report points to no records whatsoever to shed light on how Moonlite Cleaners actually conducted its operations either before or after UATC vacated the Site in September 1978—records about the volume of business the dry cleaner conducted, how it received and disposed of the "solvent" it used, or how much solvent the dry cleaner used or the frequency of solvent deliveries, or any documentation of landlord, City, or fire marshal inspections or spill responses at the Site. Moreover, the Staff Report has not identified or offered evidence from any witnesses with direct knowledge of Moonlite Cleaners' operations.

The absence of pre-1978 records (such as a lease) regarding the Site is attributable in part to the fact that many of UATC's historic records were destroyed in 2006, several years after UATC was sold to a new owner, as part of an established document-retention program.[11] There is nothing in the record, however, that explains the absence of information from the (more recent) post-1978 period. There is also little information in the record about how the City of Santa Clara operated and maintained the sewer system that serviced the Site, despite evidence that the sewer system is a source of the PCE contamination. The City submitted a Site History Technical Report to the Staff on April 13, 2012, which responded to the Staff's request for certain information and records.[12] Although the City enclosed nearly two hundred pages of inspection and maintenance records for the sewer system in the vicinity of the Site, the earliest dated inspection documented by those records occurred in March 1995.[13]

B. UATC's Bankruptcy

On September 5, 2000—twenty-two years after UATC's involvement with the Site ended—UATC and other affiliated entities commenced chapter 11 bankruptcy cases in the

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[9] "Application for Building Permit" (June 27, 1961), enclosure to L. Gualco letter to N. King (Dec. 18, 2012).
[10] *Id.*
[11] UATC, "Former Moonlite Cleaners, 2640 El Camino Real, Santa Clara, Santa Clara County, UATC's Technical Report on Site History" 1 (Apr. 12, 2012), enclosed with letter from S. Reisch to B. Wolfe (Apr. 12, 2012).
[12] Letter from J. Hill to B. Wolfe, "Former Moonlite Cleaners, 2640 El Camino Real, Santa Clara, Santa Clara County, Site History Technical Report – City of Santa Clara" (Apr. 13, 2012); Letter from B. Wolfe to J. Hill, "Former Moonlite Cleaners, 2640 El Camino Real, Santa Clara, Santa Clara County, Requirement for Technical Report on Site History" (Mar. 13, 2012).
[13] Letter from J. Hill to B. Wolfe, "Former Moonlite Cleaners, 2640 El Camino Real, Santa Clara, Santa Clara County, Site History Technical Report – City of Santa Clara" Ex. 1 (Apr. 13, 2012).

United States District Court for the District of Delaware (the "Bankruptcy Court").[14] On January 25, 2001, the Bankruptcy Court confirmed the debtors' joint plan of reorganization ("Bankruptcy Plan").[15]

The Bankruptcy Court order confirming the Bankruptcy Plan ("Bankruptcy Court Order") broadly discharged legal claims against the debtors, which included UATC. In particular the order provided that:

> The Plan shall bind all Holders of Claims and all Equity Interests, and all Claims against, and Equity Interests in, the Debtors and Debtors in Possession shall be satisfied, discharged and released in full, and the Debtors' liability with respect thereto shall be extinguished completely . . . and (iii) all Persons and Entities shall be precluded from asserting against the Debtors, the Debtors in Possession, the Estates, and the Reorganized Debtors, their successors and assigns, their assets and properties, any other Claims or Equity Interests based upon any documents, instruments, or any act or omission, transaction or other activity of any kind or nature that occurred prior to the Effective Date [of the Bankruptcy Plan].[16]

As a limited exception to the discharge provision, the order also provided:

> Notwithstanding any language to the contrary in the Plan or in this Order, nothing in the Plan or this Order shall be construed as releasing or relieving any entity of any liability to a governmental entity under any police or regulatory statute as the owner or operator of property that the entity owns or operates after the date of this Order.[17]

Thus, the Bankruptcy Court Order expressly carved out of its discharge provisions governmental entity claims relating to property that is still owned or operated by UATC "after the date of [the Bankruptcy Court Order]." There is no such carve-out for governmental entity claims relating to property that was not owned or operated by UATC after the date of the Bankruptcy Court Order (*i.e.*, January 25, 2001).

C. The Claims Against UATC

According to Moonlite, in September 2004, Moonlite discovered PCE contamination in groundwater at the Site in excess of state standards.[18] The record does not reflect whether Moonlite sampled groundwater at the Site because it had reason to know of a PCE release at the

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[14] *See* Docket for Case No. 00-03514 (PJW) (Jointly Administered) (Bankr. D. Del.) ("Chapter 11 Case"); Chapter 11 Case Docket No. 1 (Voluntary Petition under Chapter 11 filed on September 5, 2000).
[15] *See* Chapter 11 Case Docket No. 867 (Confirmation Order entered on January 25, 2001).
[16] Bankruptcy Court Order 43 (emphasis added), attached as Ex. A to letter from S. Reisch to N. King, "Moonlite Associates LLC's Claims Re: United Artists at 2640 El Camino Real, Santa Clara, California" (Dec. 29, 2011).
[17] Bankruptcy Court Order 23 (emphasis added).
[18] *See* http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T10000000901 (Regulatory Activities).

Site during its ownership or for some other reason. What is evident is that Moonlite conducted no further investigation or remediation of the Site in 2004, and did not report the contamination to the Regional Board or further investigate the contamination until March 2009, **four and one-half years** later.[19] The reason for this delay in reporting the Site contamination, as required by California law,[20] has never been explained.

On October 24, 2011, Moonlite sent a letter to the Staff, asking the Regional Board to name UATC as a "discharger" responsible for cleanup of the Site and also asking the Regional Board to obtain information to support naming the City as a discharger as a result of PCE releases from its sewer system.[21] In response, UATC submitted a letter to the Regional Board asserting that UATC should not be named as a discharger, both because of the absence of any evidence of any PCE spills during UATC's ownership and tenancy and because UATC's liability, if any, was discharged in the 2001 bankruptcy.[22]

After additional correspondence with the Staff about whether UATC should be named as a discharger, the Regional Board required UATC and the City to submit reports concerning the Site history.[23] UATC submitted its report on April 12, 2012, and the City followed suit the next day.[24] The Regional Board accepted and approved the City's report on July 25, 2012, and did the same with respect to UATC's report on August 31, 2012.[25] To UATC's knowledge, no site history report has ever been requested from, or submitted by, Moonlite Associates, despite its lengthy ownership of the Site, including 19 years while dry-cleaning operations occurred at the Site.

In August 2012, the Staff also shared a draft letter with Moonlite partially approving and partially rejecting a feasibility study and pilot study work plan Moonlite had prepared concerning

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[19] Moonlite, "Request for Agency Oversight of a Brownfield Site" (Jan. 22, 2009).

[20] *See* Cal. Health & Saf. Code § 25359.4 (requiring that an unauthorized release of a reportable quantity of a hazardous substance be reported to the California Department of Toxic Substances Control within 30 days after the release is discovered).

[21] Letter from L. Gualco to N. King, "Former Moonlite Cleaners, 2640 El Camino, Santa Clara, California" (Oct. 24, 2011) attached hereto as Ex. A.

[22] Letter from S. Reisch to N. King, "Moonlite Associates LLC's Claims Re: United Artists at 2640 El Camino Real, Santa Clara, California" (Dec. 29, 2011).

[23] Letter from B. Wolfe to S. Reisch, "Former Moonlite Cleaners, 2640 El Camino Real, Santa Clara County, Requirement for Technical Report on Site History" (Mar. 13, 2012); Letter from B. Wolfe to J. Hill, "Former Moonlite Cleaners, 2640 El Camino Real, Santa Clara County, Requirement for Technical Report on Site History" (Mar. 13, 2012).

[24] Letter from S. Reisch to B. Wolfe, "Former Moonlite Cleaners, 2640 El Camino Real, Santa Clara, Santa Clara County, Technical Report on Site History" (Apr. 12, 2012); Letter from J. Hill to B. Wolfe, "Former Moonlite Cleaners, 2640 El Camino Real, Santa Clara, Santa Clara County, Site History Technical Report – City of Santa Clara" (Apr. 13, 2012).

[25] Letter from B. Wolfe to J. Hill, "Approval of Technical Report on Site History – Former Moonlite Cleaners 2640 El Camino Real, Santa Clara, Santa Clara County" (July 25, 2012); Letter from B. Wolfe to S. Reisch, "Approval of United Artist[s] Theat[re] Circuit, Inc. Technical Report on Site History, Former Moonlite Cleaners, 2640 El Camino Real, Santa Clara, Santa Clara County" (Aug. 31, 2012).

remediation of the Site.[26] The Staff's draft letter contested the conceptual site model described in Moonlite's work plan, which took the position that a significant release of PCE occurred near the Site from the City's sewer system.[27] Shortly after the Staff shared the draft letter with Moonlite, Moonlite formally withdrew its request that the City be named as a discharger and the Staff and City agreed to withdraw and, according to Moonlite, "delete" the draft letter objecting to Moonlite's work plan.[28] Moonlite simultaneously promised to provide the Staff with "additional information relevant to the naming of United Artists as a former owner of the [Site]" and reiterated its request that the Staff name UATC as a discharger at the Site.[29]

The Staff acceded to Moonlite's request. In an e-mail dated October 9, 2012, the Staff notified Moonlite and UATC that the Regional Board was "planning on moving forward with issuing an order that names Moonlite and [UATC] as dischargers."[30] The Staff also informed UATC that it was declining to pursue a claim against the City of Santa Clara because the City purportedly had been conscientious in maintaining its sewer lines in the area and the PCE discharges violated a 1975 City ordinance.[31] In addition, the Staff took the position that the contamination at the Site is primarily attributable to a release in the vicinity of Moonlite Cleaners' dry-cleaning equipment and not from a leaking sewer line.[32]

On November 20, 2012, the Staff met with representatives of UATC and Moonlite to discuss UATC's objections to being named as a discharger. At the meeting, UATC presented a technical analysis prepared by groundwater hydrology experts from Erler & Kalinowski, Inc. ("EKI"), in which EKI concluded that it is unlikely that a PCE release occurred at the Site while UATC owned or leased the property (*i.e.*, before September 1978). UATC also argued that it should not be named as a discharger because the Regional Board lacked substantial evidence that (a) a PCE release occurred before September 1978; (b) UATC knew or reasonably should have known by 1978 that groundwater contamination was a danger common to dry-cleaning operations; and, (c) UATC had the legal ability to prevent the discharge. In addition UATC explained that any claim the Regional Board might have against UATC was discharged in UATC's 2001 bankruptcy.

In the following months, Moonlite and UATC exchanged additional correspondence with the Staff about whether the Regional Board had an adequate basis for naming UATC as a discharger. In March 2013, UATC submitted a report by EKI to the Staff setting forth EKI's

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[26] Draft letter from N. King to B. Mehrens, "Partial Approval of Feasibility Study/Pilot Study Work Plan and Request for Reports, Former Moonlite Cleaners, 2640 El Camino Real, Santa Clara, Santa Clara County" (Aug. 2012), attached hereto as Ex. B.
[27] *Id.*
[28] Letter from L. Gualco to N. King, "Former Moonlite Cleaners, 2640 El Camino Real, Santa Clara, California" (Aug. 28, 2012).
[29] *Id.*
[30] E-mail from N. King to S. Reisch and L. Gualco, "Moonlite Cleaners" (Oct. 9, 2012), attached hereto as Ex. C.
[31] The Staff did not explain how an ordinance issued in 1975 could provide a basis for declining to name the City as a discharger for releases that Staff contends occurred between 1962 and 1975.
[32] Draft letter from N. King to B. Mehrens, "Partial Approval of Feasibility Study/Pilot Study Work Plan and Request for Reports, Former Moonlite Cleaners, 2640 El Camino Real, Santa Clara, Santa Clara County" (Aug. 2012) attached hereto as Ex. B.

conclusion that the distribution of PCE in the subsurface at the Site is consistent with a post-1978 release and that there is no evidence of a pre-1978 release at the Site.[33] Nonetheless, the Staff has recommended to the Regional Board in the Tentative Order and Staff Report that both Moonlite and UATC be named as dischargers liable for cleaning up PCE contamination at the Site.

III. THERE IS NO BASIS FOR NAMING UATC AS A "DISCHARGER" UNDER THE WATER CODE.

Under the Porter-Cologne Water Quality Control Act, the Regional Board may issue a cleanup and abatement order to "[a]ny person … who has caused or permitted, causes or permits, or threatens to cause or permit any waste to be discharged or deposited where it is, or probably will be, discharged into the waters of the state and creates, or threatens to create, a condition of pollution or nuisance…." Cal. Water Code § 13304(a) (emphasis added). The Regional Board must have "substantial evidence" supporting any decision to name an entity as a "discharger." *See In re Exxon Co.*, Cal. State Water Res. Control Bd. Order No. WQ 85-7 at 10–11 (Aug. 22, 1985); William R. Attwater, Memorandum to Regional Board Executive Officers Regarding Responsible Party Orders, (Dec. 2, 1992). Substantial evidence means "credible and reasonable evidence which indicates the named party has responsibility." *In re Exxon Co.*, WQ 85-7 at 12.

The Regional Board may conclude that UATC "caused or permitted" a discharge under Water Code Section 13304(a) as a former owner and landlord at the Site only if the Regional Board finds, based on substantial evidence, that UATC:

(1) owned or was in possession of the Site at the time PCE was discharged;

(2) either knew of the PCE release or knew or reasonably should have known while it owned or leased the Site that groundwater contamination was a danger common to dry-cleaning businesses; and

(3) had the legal ability to prevent the discharge of PCE from the Site.

See In re Logsdon, Cal. State Water Res. Control Bd. Order No. WQ 84-6 at 10 (July 19, 1984) (former landowners caused or permitted a tenant's discharge where they had "(1) actual knowledge of the dangerous condition and (2) an opportunity to obviate it"); *In re Stuart*, Cal. State Water Res. Control Bd. WQ 86-15 at 6 n.3 (Sept. 18, 1986) (actual knowledge of contamination is not required where a lessor "should have known" of the contamination based upon common knowledge at the time). As explained below, the Regional Board has failed to identify substantial evidence on not just one, but all three of these critical elements.

[33] EKI, "Review of Environmental Data: Former Moonlite Cleaners, 2640 El Camino Real, Santa Clara, California" (Mar. 12, 2013) ("EKI Report"), enclosed with letter from S. Reisch to N. King (Mar. 12, 2013) and attached hereto as Ex. D.

A. The Tentative Order's Assertion that a Discharge Occurred While UATC Owned or Leased the Site Is Based on Conjecture Rather than Substantial Evidence, Conflicts with the Only Viable Technical Analysis Presented, and Represents a Major Departure from Board Precedent.

The Tentative Order flatly asserts that discharges of PCE occurred while UATC owned or leased the Site in the 1960s and mid-1970s. Tentative Order at 2. However, a review of the Staff Report on which the Tentative Order is based demonstrates that, having failed to conduct a complete and independent investigation, the Staff really does not know when the release of PCE occurred at the Site, it is literally guessing as to what "could have" or "would have" happened at the Site, and as a result, it seeks without precedent and without any contemporaneous documents, Site-specific technical analysis or eyewitness testimony to hold UATC liable as a prior landowner merely because it long ago owned commercial property that is now contaminated.

1. The Tentative Order and Staff Report Rely on an Incomplete and Inadequate Investigation of the Site.

Despite the fact that Moonlite admitted it was liable for cleaning up the Site, it appears from the record that the Staff completely ignored Moonlite as a source of information about whether PCE was released at the Site while Moonlite owned it. Although the Regional Board required UATC and the City of Santa Clara to submit site-history reports, according to the record, the Regional Board did not require Moonlite to do the same. Instead, Moonlight Associates voluntarily provided a timeline to the Regional Board that set out some information as to the identity of various owners and operators of Moonlite Cleaners, but Moonlite included no supporting documentation, and, to UATC's knowledge, no such supporting documentation was ever requested by the Staff.[34] For example, it appears that Staff never asked Moonlite Associates how it knows that (1) Sung Ki Kim and Chinhea Kim became dry cleaner tenants on assignment of rents on March 24, 1986; (2) Jung Sup Kim and Soon Cheon Kim entered a new lease for the dry cleaner at the Site on October 1, 1992; or (3) the Site became vacant on October 9, 1996.[35] This is but one example of the inadequacy of the Staff's investigation, and there are many others. Indeed, it appears from the record that the Staff—

- Never required Moonlite to provide written responses to basic questions about dry-cleaning operations conducted at the Site during the 19 years that Moonlite and affiliated companies owned it;

- Did not ask whether Moonlite possessed evidence of a release of PCE during its ownership of the Site;

- Did not ask how PCE was handled by Moonlite's tenants;

- Did not ask whether Moonlite ever inspected the Site;

[34] Letter from L. Gualco to N. King, "Former Moonlite Cleaners, 2640 El Camino Real, Santa Clara, California" Tab 11 (Mar. 30, 2011).
[35] *Id.*

- Did not ask Moonlite to provide leases with its former dry cleaner tenants;

- Did not ask Moonlite for records of how PCE was transported to or from the Site or used at the Site, for records of the dry-cleaning equipment Moonlite's tenants used at the Site, or for records of Site renovations or modifications; and,

- Did not ask Moonlite why dry-cleaning operations at the Site ceased and the dry-cleaning tenant moved to a different location.

Rather than conduct this basic inquiry into Site operations during Moonlite's ownership, the Staff indicate that Moonlite told the Staff that all of the former owners and operators of the dry cleaner were deceased, and the Staff simply accepted that assertion wholesale and then repeated it as an unqualified "fact" in both the Staff Report and the Tentative Order. But the Staff now acknowledge that the assertion is wrong and admit that they never conducted any independent investigation into this alleged "fact."

The Staff's investigation of the City as a potential discharger is plagued with similar shortcomings. For example, it appears that the Staff have decided not to pursue the City as a discharger, in part, because the Staff concluded that the City properly maintained the sanitary sewer system near the Site. But the maintenance records submitted by the City predominantly concerned inspections and repairs of the sewer system performed in 2007 and thereafter.[36] There are only a few entries in those records that are dated before Moonlite Cleaners vacated the Site in 1996, and those entries relate to work orders for what appear to be minor operational incidents, not rigorous, routine inspections and maintenance. In fact, the earliest documented inspection occurred in March 1995, after the dry cleaner had allegedly operated for over thirty years. There are a half dozen work orders dated between July 1995 and May 1996 for nondescript customer complaints and lateral blockages at 2780 El Camino Real, and a single entry in July 1996 for routine maintenance. These records provide no information whatsoever about whether and how well the City maintained the sewer system when dry cleaning occurred at the Site between 1962 and 1996, and in particular, do not address what steps the City took to maintain the sewer system following the Loma Prieta earthquake in October 1989.

Indeed, it appears from the record that the Staff simply stopped investigating the City as a potential discharger after Moonlite Associates formally withdrew its request that the City be named as a party responsible for remediating the Site.[37] The Staff did not require the City to take samples from around the sewer system, even though, according to Moonlite, the Staff had previously indicated that such samples would aid in determining whether a release from the sewer system had occurred.[38] Furthermore, it is evident from the record that the Staff made no additional inquiries about the City's maintenance practices even though the records supplied by the City did not address most of the relevant timeframe.

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[36] Letter from J. Hill to B. Wolfe, "Former Moonlite Cleaners, 2640 El Camino Real, Santa Clara, Santa Clara County, Site History Technical Report – City of Santa Clara" Ex. 1 (Apr. 13, 2012).
[37] Letter from L. Gualco to N. King, "Former Moonlite Cleaners, 2640 El Camino Real, Santa Clara, California" 1 (Aug. 28, 2012).
[38] Letter from L. Gualco to N. King, "Former Moonlite Cleaners, 2640 El Camino Real, Santa Clara, California" 3 (Oct. 24, 2011), attached hereto as Ex. A.

The Staff's failure to scrutinize these issues impacts not only whether all relevant parties are before the Regional Board, but also the validity of the Staff's conclusions that PCE was discharged at the Site before 1978 and that leaks from aging sewers are not a primary cause of contamination at the Site.

2. The Staff's Reliance on Generalities about Contamination from Dry-Cleaning Businesses Is Misplaced.

In the absence of a diligent investigation into dry-cleaning operations at the Site, the Staff Report instead relies on generalities, unsupported assumptions, and flawed logic to conclude that PCE was released at the Site while UATC owned or leased it. In particular, the Staff Report concludes that PCE was released at the Site between 1962 and 1978 based on: (a) physical evidence of PCE at the Site and down-gradient from the Site; (b) the history of solvent usage at the Site beginning in the early 1960s and historic common industry-wide practices that led to PCE discharges in the 1960s and 1970s; and (c) inefficiencies of older dry-cleaning equipment from the 1960s. Tentative Order at 2; Staff Report at 3. As explained below, none of the information relied upon by the Staff supports their conclusion.

a) Presence, Concentration and Distribution of PCE in Groundwater

The mere presence of PCE at the Site and down-gradient from the Site provides no basis for pinpointing when PCE was released at the Site. If Moonlite Associates' tenants spilled PCE at the Site and UATC's tenant did not, there would still be physical evidence of PCE at and down-gradient from the Site, even though no release occurred between 1962 and 1978.

To the extent the Staff Report intends to claim that the concentration and distribution of PCE at the Site supports an inference that PCE was released to the surface of the Site before 1978, that claim has already been debunked by the analysis submitted to the Regional Board by EKI, which demonstrates that the concentrations and distribution of PCE at the Site show exactly the opposite. In particular, groundwater monitoring and elevation data from the Site and the surrounding area indicate that the direction of groundwater flow beneath and around the Site changed in approximately the mid-1990s.[39] Those data reveal that groundwater elevations around the Site were relatively deep until the mid-1990s, and Saratoga Creek was a losing stream, causing a northwest-trending groundwater gradient.[40] If a PCE release had occurred before 1978, according to EKI's travel-time calculations, PCE would have migrated through the unsaturated zone and reached the groundwater table in approximately six years, resulting in a *northwest-trending* PCE plume.[41] But that is not what groundwater monitoring data from the Site show. Rather, a PCE plume about 600-feet long trends from the Site to the *northeast*.[42] That northeastern trend is consistent with a release that occurred in the late 1980s or thereafter, shortly before the groundwater gradient at the Site changed.

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[39] EKI Report 6–7, attached hereto as Ex. D.
[40] *Id.*
[41] *Id.*
[42] *Id.* at 10–11. EKI also concluded that a northwest-trending plume would still be detectable today if a release had occurred before 1978, despite the mid-1990s shift in gradient to the northeast. *Id.*

EKI also explained in its technical report that PCE groundwater contamination at the Site is relatively shallow, which is consistent with a post-1978 release when the water table was far shallower than in the pre-1978 timeframe. In particular, if a pre-1978 release occurred, PCE would have migrated vertically downward through the vadose zone, at least as far as a thick layer of clay underneath the Site and at an elevation approximately 40–45 feet above mean sea level (msl).[43] But the core of the current PCE plume is substantially shallower, at about 55 feet msl.[44] Moreover, PCE concentrations are extremely low in the deepest groundwater samples, at about 30 feet msl. Thus, the vertical distribution of PCE is consistent with a post-1978 release.

Finally, both EKI and Moonlite Associates' consultant, West Environmental Services and Technologies ("West"), have concluded that the concentrations of PCE in groundwater indicate that contamination at the Site was not caused by a surface release of PCE, but rather by wastewater containing PCE that leaked from sewer lines beneath and near the Site.[45] If PCE had been spilled on the surface at the Site, it would have been released as a dense non-aqueous phase liquid ("DNAPL").[46] According to EPA guidance, groundwater that has been impacted by a DNAPL release would exhibit PCE concentrations above one percent effective solubility.[47] But PCE groundwater concentrations at the Site are below that threshold, with a maximum of about 0.51 percent effective solubility.[48] The concentrations of PCE at the Site are therefore indicative of a release of PCE in the *dissolved* phase in wastewater from the sewer system, rather than a surface release. This is significant because a pre-1978 *sewer* release undoubtedly would have resulted in a northwest trending PCE plume given the groundwater flow direction during that period. Because no such plume is evident at the Site, such a release could not have occurred.

Although the Staff Report responds to EKI's analysis, the response is full of unsubstantiated assertions, mischaracterizations, and omissions, many of which are catalogued in EKI's "Comments on Cleanup Staff Report Accompanying Moonlite Tentative Order," dated July 29, 2013 ("EKI Comments"), which is attached hereto as Attachment A. With respect to EKI's specific conclusions about the PCE release timing based on shifting groundwater flow, the Staff Report theorizes that PCE could have leaked onto and slowly seeped through the concrete floor, for as long as decades, before migrating through soil to groundwater. Staff Report at 6. Yet, the 2007 Santa Clara Valley Water District study ("2007 Study") on which the Staff Report heavily relies, explains that releases of PCE to concrete (so-called above-slab releases) are prone to volatize into air rather than penetrate a slab.[49] And EKI concludes that, if PCE had migrated

[43] *Id.* at 12.
[44] *Id.*
[45] EKI Report at 10, attached hereto as Ex. D; West, "Feasibility Study/Pilot Study Work Plan, 2640 El Camino Real, Santa Clara, California" 8, 25 (Sep. 20, 2012); West, "Site Investigation Report, 2640 El Camino Real, Santa Clara, California" 28–29 (Oct. 5, 2011).
[46] EKI Report at 10, attached hereto as Ex. D.
[47] *Id.*
[48] EKI Report at 10 n.3, attached hereto as Ex. D.
[49] *See* Santa Clara Valley Water District, "Study of Potential for Groundwater Contamination from Past Dry Cleaner Operations in Santa Clara County" 21 (2007). *See also* Environmental Protection Agency, National Risk Management Research Laboratory, "Groundwater Issue: Assessment & Delineation of DNAPL Source Zones at Hazardous Waste Sites" 11 (Sep. 2009) (fine grained materials like concrete present a barrier to non-aqueous phase liquid entry), attached hereto as Ex. E.

through the concrete floor, several feet of PCE would have had to accumulate before it would pass through the clay beneath the building. If that had happened, the PCE would have migrated quickly downward to groundwater, as opposed to sitting above the groundwater for decades.[50] Thus, the Staff Report's assertion that it took decades for a PCE surface release to reach groundwater is not scientifically possible. Either (1) PCE released at the surface never reached groundwater because not enough DNAPL was released to push it through the building slab and underlying clay, or (2) sufficient DNAPL was released such that its weight, due to the force of gravity, was able to push the DNAPL to groundwater much faster than several decades. If DNAPL had migrated to groundwater as a result of a pre-1978 release, remnants of a northwest trending plume still would be evident. Again, the absence of such a plume demonstrates that a pre-1978 release did not occur.

Similarly, the Staff Report's response to EKI's analysis of the potential for sewer releases is unconvincing. Importantly, the 2007 Study upon which Staff otherwise rely found that leaking sewer lines are the most frequent cause of PCE releases from dry-cleaning businesses.[51] In fact, three key pieces of evidence support the conclusion that PCE contamination at the Site is attributable to a release through the sewer:

1. PCE has been detected at elevated concentrations in groundwater samples taken cross-gradient from the former dry-cleaning premises and along the sewer lines (boreholes B6, B43, B44, B12, and MW2).

2. As explained above, the low effective solubility of sampled PCE concentrations indicates that the PCE was released in the dissolved phase, which would occur in a release of wastewater from sewers, rather than as a DNAPL, which would occur in a surface spill.

3. Video logging of the 8-inch diameter sewer line south of the Site, which was constructed by the City in 1960 or 1961, reportedly revealed compromised pipe integrity.[52]

In short, the concentration and distribution of PCE at the Site support the conclusion that PCE was released only after 1978, and from the sewer system, a conclusion that is exactly contrary to that reached in the Staff Report.

b) Use of PCE and "Common Industry-Wide Practices"

The Staff Report's second argument—that use of PCE at the Site and "common industry-wide practices" in the 1960s and 1970s indicate that a PCE release occurred prior to 1978—is equally unavailing. At the outset, it is important to recognize that what the Staff refer to as "common industry-wide practices" is actually a list of all the possible ways that PCE could enter groundwater from dry-cleaning operations and includes everything from dumping PCE onto soil

[50] *See* EKI Comments at 6–7, attached hereto as Attachment A.
[51] *See* 2007 Study at 20, Figure 5.
[52] *See* Letter from L. Gualco to N. King, "Former Moonlite Cleaners, 2640 El Camino, Santa Clara, California" 3 (Oct. 24, 2011), attached hereto as Ex. A.

to PCE seeping through concrete. Rather than providing an explanation for how and when PCE was discharged at this particular Site, the listing of these disparate, general mechanisms and pathways demonstrates that the Staff really have no idea how and when PCE entered the environment at the Site.

The danger in relying on generalities instead of site-specific data is that generalities can point in opposite directions. For example, the Staff Report's list of common industry-wide practices includes "leakage from sewer laterals," which EKI has demonstrated must have occurred after 1978. In addition, if the Regional Board is willing to make judgments about liability at the Site based on general trends and practices, the Regional Board could just as easily reach the conclusion that contamination at the Site was more likely to occur after 1978, as equipment and sewers aged.

It is inequitable and indefensible for the Staff Report to rely on the parts of the 2007 Study that are superficially consistent with the Staff Report's conjecture about a pre-1978 release and ignore the rest of the study, but that is precisely what the Staff Report has done. Not only does the Staff Report ignore the 2007 Study's conclusion that sewer releases are the principal source of PCE groundwater contamination, but it also disregards data in the 2007 Study that indicate that at least one quarter of historic dry-cleaning operations have never caused PCE contamination.[53] Similarly, the Staff ignore portions of the 2007 Study that acknowledge that changes in ownership and handling practices may have affected the amount of solvent used and released during a dry cleaner's operating life.[54] Thus, while the 2007 Study provides some useful background information about the dry-cleaning industry generally, it does not provide substantial evidence that a PCE release occurred at this Site before 1978.

c) Inefficiencies of Older Equipment

Finally, supposed "inefficiencies of older dry-cleaning equipment from the 1960s" also prove nothing about when PCE was released at the Site. Again, there is nothing in the record to connect this generality about dry-cleaning equipment to the actual equipment UATC's tenant used at the Site. The Staff Report offers no evidence, for example, of how UATC's tenant operated and maintained the equipment in use at the Site before 1978, or whether it was more or less reliable than other dry-cleaning equipment.

The Staff Report also claims, in reliance on the 2007 Study, that "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 practice[s] for that time period." *Id.* However, as EKI points out, the higher PCE loss rate in the 1960s was caused by greater air emissions, not greater discharges to the subsurface.[55]

[53] *See* 2007 Study at 6.
[54] *Id.* at 45.
[55] EKI Comments at 5, attached hereto as Attachment A.

3. There Is No Precedent for Reaching Conclusions as to the Timing of a Discharge Without Eyewitness Testimony or Technical Evidence.

After an extensive review, UATC has found no cleanup and abatement orders where the timing of a discharge was in dispute and a regional board made a finding on that issue based solely on the grounds that discharges of a detected chemical were common in the industry at issue. Instead, in the few cleanup and abatement orders where the timing of a discharge was directly in dispute, regional boards have relied on at least some direct evidence that the relevant contaminant was in fact spilled at the site in the relevant time period or on some technical evidence—such as a fate-and-transport analysis—to estimate the timing and location of the discharge.

For example, in *In re Stinnes-Western Chem. Corp.*, Cal. State Water Res. Control Bd. Order No. WQ 86-16, 5–10 (Sept. 18, 1986), the State Board affirmed a cleanup and abatement order issued by the Regional Board to the current owner of a contaminated site and the successor-in-interest of the former owner of the site based on eyewitness declarations about the timing of a PCE spill and a technical calculation of solvent-plume velocity to determine the timeframe in which a discharge occurred. In *In re Wenwest*, Cal. State Water Res. Control Bd. Order No. WQ 92-13, 1992 WL 12622783 at *2 (Oct. 22, 1992), the State Board affirmed a regional board's finding that discharges occurred while the site was owned by a former owner based on technical reports that, "considering the soil in the area and the distance the gasoline has travelled to reach the neighbor's well, discharges took place at least 12 years before it was detected by the neighbor," placing the discharge well within the period in which the site was owned by the former owner. Similarly, in *In re Sanmina Corp.*, Cal. State Water Res. Control Bd. Order No. WQ 93-14, 1993 WL 456494 at *4 (Oct. 19, 1993), the State Board found evidence sufficient to find the petitioner—a former tenant at the site—caused or permitted a discharge where the petitioner operated a manufacturing business in which volatile organic compounds ("VOCs") were typically used, documentary and testimonial evidence established that the petitioner stored or used VOCs, such compounds were detected beneath the petitioner's concrete "wet floor" at the facility, the petitioner had a history of repeated spills, and the contamination could not be attributed to an upgradient source. *See also In re Spencer Rental Serv.*, Cal. State Water Res. Control Bd. Order No. WQ 87-1 (Jan. 22, 1987) (lessee of contaminated site properly named as discharger despite claims that the contamination pre-dated his tenancy where contamination was detected directly beneath gasoline tank used by lessee, evidence showed that no such contamination was present when the tank was installed, and monitoring data was consistent with a more recent spill).

A finding in this case that UATC is a discharger requires the Regional Board to jettison these precedents and establish a new one. If the Regional Board concludes in this case that there is substantial evidence that a PCE release occurred while UATC owned the property, then it follows that <u>everyone</u> who owned commercial or industrial property in the 1960s and 1970s would be liable under Water Code Section 13304(a) so long as they or their tenants used the same chemicals that are later found at the Site, and the Staff can allege, as they always will, that historical handling practices were generally worse than they are today. Such a broad threat of liability contradicts the express terms of the statute, which requires evidence that prior owners "caused or permitted" a discharge, and makes no sense because former property owners have no

ability to control whether someone else later releases the same chemicals on their former property. The Regional Board should not use this case to expand the reach of Section 13304(a) beyond what the California State Legislature intended and what relevant State Board precedents have established.

B. The Staff Report Fails to Provide Substantial Evidence that UATC "Knew or Should Have Known" That PCE Was Discharged While UATC Owned or Leased the Site.

1. Legal Precedents Require Actual or Constructive Knowledge of a Discharge.

In addition to linking the timing of a discharge to UATC's ownership or tenancy at the Site, in order to conclude that UATC "caused or permitted" waste to be discharged under Water Code Section 13304(a), the Regional Board must have substantial evidence that UATC knew or should have known of the discharge and failed to prevent it. *See In re Logsdon*, WQ 84-6 at 10 (former landowners caused or permitted a tenant's discharge where they had "(1) actual knowledge of the dangerous condition and (2) an opportunity to obviate it"); *In re U.S. Dept. of Ag.*, Cal. State Water Res. Control Bd. Order No. WQ 87-5 at 3 n.1 (Apr. 16, 1987) (actual knowledge of a discharge is required "when a reasonable person would not have suspected that a problem could arise from the land use involved"; landowners are also liable without actual knowledge of a discharge "where the activity permitted on the property might be expected, by a reasonable and prudent landlord, to result in a discharge."); *In re Stuart*, WQ 86-15 at 6 n.3 (liability may attach under Section 13304 without proof of actual knowledge of contamination because the risk of leaking underground storage tanks was common knowledge in the oil industry in 1986); *see also Resolution Trust Corp. v. Rossmoor Corp.*, 34 Cal. App. 4th 93, 102 (Cal. App. 1995) (to be liable for a nuisance, "[t]he defendant must be aware of the specific dangerous condition and be able to do something about it before liability will attach."); *Redevelopment Agency of the City of Stockton v. BNSF Railway Co.*, 643 F.3d 668, 675 (9th Cir. 2011) (liability for nuisance may attach if the possessor of land knows or should know of the artificial condition and the nuisance). As a result, the Water Code requires some evidence of UATC's culpability for the discharge before UATC can be ordered to conduct remediation. The theory behind these cases is that a landlord in effect "permits" a nuisance, as the statute requires, if he knows of should know it exists or is threatened, has the authority to prevent it, and chooses not to. *See In Re Stuart*, WQ 84-6 at 6.

In evaluating when a landowner "should have known" about contamination caused by others, prior court decisions have focused on whether the landowner had a reasonable basis for undertaking an inspection for contamination, and if so, whether the contamination was discoverable by a reasonable inspection. *See Resolution Trust*, 34 Cal. App. 4th at 103 (evaluating liability under Section 13304(a) in accordance with the law of nuisance); *cf. City of Stockton*, 643 F.3d at 675–77 (evaluating common law nuisance claim). Importantly, the case law recognizes that a reasonable inspection does not oblige landowners to take extraordinary measures, such as extensive and expensive soil testing, to discover contamination on property they own or possess. *See City of Stockton*, 643 F.3d at 675–77; *Resolution Trust*, 34 Cal. App. 4th at 103–104.

The *Resolution Trust* case is particularly instructive. In that case, a landowner leased its property (through a subtenant) to a gas station. 34 Cal. App. 4th at 98. During the time that the gas station operator rented the property, substantial gasoline and diesel fuel leaks occurred, contaminating the plaintiff's neighboring property. *Id.* at 98–99. The plaintiff brought a nuisance claim against the landowner who had leased the property to the gas station operator. *Id.* at 98. The California Court of Appeals held that the landowner was not liable for a nuisance. *Id.* at 98. In so holding, the court specifically evaluated the circumstances under which a landlord has a duty to inspect for nuisances created by its tenant or subtenant. *Id.* at 102–104. The court stressed that "[t]he landlord need not take extraordinary measures or make unreasonable expenditures of time and money in trying to discover hazards unless the circumstances so warrant." *Id.* at 103. On this basis, the court went on to conclude that there was no reason to find that the landlord should have known that its tenant's gas station operations had caused subsurface contamination of adjoining property. *Id.* at 103–04.

Here, neither the Tentative Order nor the Staff Report even alleges that a reasonable inspection of the Site would have identified a PCE discharge into groundwater (or soil). And, in fact, none of the "common release" mechanisms identified by the Regional Board as possibly occurring at the Site—*e.g.*, colorless PCE seeping through concrete or leaking from sewer laterals buried beneath the building floor—would have been detected through a reasonable inspection.

2. The Tentative Order and Staff Report Advance Theories of Liability Predicated on Mischaracterizations of the Law and Unsupported Factual Assumptions.

Instead of following established legal precedents, the Tentative Order and the Staff Report advance two alternative grounds for finding that UATC caused or permitted the dry cleaner discharge: (a) UATC "was actively involved in the establishment of the dry cleaner site" and knew of the "hazardous nature of solvent handling" because of information contained in the State Fire Marshal Permit; and (b) based upon the "historical record," UATC "should have known of the use of chemicals at the Site and its dangers, including the potential for unauthorized discharges." Staff Report at 8. As set forth below, neither of these arguments is at all persuasive.

a. <u>There is No Evidence that UATC Had Actual Knowledge of a Discharge of PCE at the Site while UATC Owned or Leased the Site.</u>

The Staff's claim that UATC is liable because it somehow actually knew of the "activities that resulted in the discharge" is deficient on a number of grounds. If the Staff is arguing that the Regional Board can impose liability on UATC because UATC merely knew that dry cleaning occurred at the Site, that position is plainly inconsistent with State Board precedents and the court cases cited above. Those precedents require proof that the landowner knew or reasonably should have known of the <u>contamination</u> at issue. *See, e.g.*, *In Re Stuart*, WQ 86-15 at 6 n.3; *In re U.S. Dept. of Ag.*, WQ 87-5 at 3 n.1. For example, in *In re Stuart*, the State Board did <u>not</u> impose liability on Stuart Petroleum merely because it leased a site to a gas station operator but, rather because it was "common knowledge" when the discharge occurred,

especially in the oil industry, that underground storage tanks leaked, and Stuart Petroleum therefore should have known of the contamination caused by its tenant's leaking underground storage tank. *In Re Stuart*, WQ 86-15 at 6 n.3.

If the Staff is instead arguing that UATC actually knew of specific conduct by its tenant that resulted in releases of PCE to the surface around the Site, that assertion has no factual support whatsoever. Remarkably, the Staff Report infers that UATC was "actively involved" in the establishment of the dry cleaner site based solely on the (alleged) fact that UATC obtained a building permit for Moonlite Cleaners and subsequently received a certificate of occupancy "on behalf of Moonlite Cleaners." In truth, it appears that UATC had little or no involvement in obtaining the building permit, which merely lists "United Calif Theater" as the owner of the premises at 2640 El Camino Real and was signed by a construction contractor, not UATC. Moreover, the building permit only authorizes installation of interior "partitions," a minor improvement unlikely to require much, if any, attention from UATC. Similarly, the fact that UATC received a certificate of occupancy for a tenant says nothing about the level of UATC's involvement with the dry cleaner's operations. At most, the only conclusion that can be drawn from these documents is that UATC leased space to a dry cleaner.

The Staff's reliance on the Fire Marshal permit is similarly unpersuasive. There is no indication in the record that UATC ever received or reviewed the document, which is addressed only to "Moonlight Cleaners" and copied only to the Santa Clara Fire Department. Even if there were evidence that someone affiliated with UATC actually reviewed the Fire Marshal permit, there is no basis for inferring that the Fire Marshal permit actually notified UATC in 1961 (or at any other time before 1978) of the danger that California Water Code Section 13304 is concerned with: *groundwater contamination*. The Fire Marshal permit expressly authorizes Moonlite Cleaners to install equipment that uses solvents, but nothing in the permit precludes Moonlite from discharging "solvent" to the sewer system. In fact, the Fire Marshal permit does not impose any restrictions on solvent-disposal practices or mention the risk of groundwater contamination. To the contrary, the Fire Marshal permit's provisions are aimed at hazards associated with inhalation of vapors during the dry-cleaning process and—not surprisingly since the permit was issued by the Fire Marshal—the risk that solvent vapors could be flammable. The permit specifies how exhaust fans should be operated, requires use of breathing masks or floor-level ventilation under certain conditions, ensures that reclaimed solvent is transferred in enclosed rather than open piping, and requires fans to be in use during equipment operation. The State Fire Marshal most likely had jurisdiction to issue the permit to Moonlite Cleaners in the early 1960s because of the fire risk associated with dry cleaners at that time. Highly flammable petroleum-based cleaning solutions, such as Stoddard solvent, were used widely in the dry-cleaning industry until they were generally phased out in favor of chlorinated solvents.[56] Indeed, PCE replaced petroleum-based solvents in part due to the fire risk associated with petroleum-

[56] *See* State Coalition for Remediation of Drycleaners, "Chemicals Used in Drycleaning Operations" (Jan. 2002), attached hereto as Ex. F. *See also* "A Chronology of Historical Developments in Drycleaning" (Nov. 2007), enclosed as Ex. B to letter from S. Reisch to N. King, "Moonlite Associates LLC's Contentions as to United Artists Theatre Circuit, Inc.'s Liability for Contamination at 2640 El Camino Real, Santa Clara, California" (Dec. 17, 2012); State Compensation Ins. Fund, "Dry Cleaner Safety" 1, attached hereto as Ex. G.

based solvents.[57] It is plainly the risk of fire and the potential for occupational exposure to vapors, and not the risk of discharges to groundwater, that the Fire Marshal permit conditions are designed to guard against.

For all of the reasons set out in Section III.A above, the conclusion in the Staff Report that PCE was in fact discharged at the Site while UATC owned or leased it is not supported by the evidence. The further assertion in the Staff Report that UATC actually knew of the activities that caused that (alleged) discharge is even more far-fetched. There is simply no support in the documents cited by the Staff Report or anywhere else that suggests that UATC had actual knowledge that its tenant's operations released PCE into soil or groundwater at the Site.

b. The Staff's Conclusion that UATC Should Have Known that Chemicals Used by Dry Cleaners at the Site Presented a Risk of Groundwater Contamination Is Unfounded.

Perhaps because the Staff recognize that their "actual knowledge" theory of liability stretches the facts, the Staff Report advances the alternative argument that, "[e]ven if one accepts that UATC did not have actual knowledge, the historical record shows that UATC should have known of the use of chemicals at the Site and its dangers, including the potential for unauthorized discharges." Staff Report at 8. In making this assertion, the Staff charge UATC, on a cryptic and ill-defined basis, with knowing that dry-cleaning operations posed a risk of groundwater contamination long before that was common knowledge or anyone else appears to have been aware of that risk. Indeed, the Staff Report goes on to assert on the very next page—when analyzing the effect of UATC's bankruptcy—that the Regional Board did not have reason to know of a PCE release at the Site as late as 2001. Nowhere does the Staff even attempt to justify its absurd conclusion that a movie theater company was supposed to know in the 1960s and early 1970s that groundwater contamination was a hazard common to dry-cleaning operations when the Regional Board, which is charged with protecting water quality, apparently had no reason to know of contamination at the Site during the 1990s and early 2000s. The Staff's inequitable and illogical treatment of the Regional Board and UATC in this regard is indefensible.

While it is unclear what the Staff Report means when it refers to the "historical record," it is indisputable that groundwater contamination was not identified as a hazard common to the dry-cleaning industry until the 1980s, several years after UATC's affiliation with the Site ended. For example, the 2007 Study on which the Staff Report repeatedly relies suggests that PCE contamination from dry cleaners was first detected in the Central Valley in California in approximately 1984 as a result of state-mandated groundwater testing.[58] Similarly, a 1992 publication by the Central Valley Regional Water Quality Control Board indicates that groundwater contamination from dry-cleaning operations in California was first identified in the late 1980s.[59] A publication of the State Coalition for Remediation of Drycleaners suggests the

[57] *See* State Coalition for Remediation of Drycleaners, "Chemicals Used in Drycleaning Operations" (Jan. 2002), attached hereto as Ex. F.
[58] *See* 2007 Study at 142.
[59] *See* Central Valley Regional Water Quality Control Board, "Dry Cleaners—A Major Source of PCE in Ground Water" 10 (Mar. 27, 1992), enclosed as Ex. A to letter from S. Reisch to N. King, "Moonlite

same.[60] And it appears that the State Board did not issue or uphold a cleanup and abatement order in connection with groundwater contamination caused by a dry cleaner until 1988. *See In re Spitzer*, 1989 WL 97148 at *1 (May 16, 1989). Based on these sources, the earliest that a landowner "should have known" about the risk of groundwater contamination from a dry-cleaning tenant is the mid-1980s, several years after UATC ceased owning or leasing the Site.

Comparing the State Board's decision in the *Stuart* case to the Staff's approach in the present dispute is instructive. In that case, in imposing liability on Stuart Petroleum, a sublessor of a gas station, the State Board did not rely on Stuart Petroleum's knowledge that the subtenant operated a gas station at the site, or on its knowledge that the subtenant handled gasoline at the site, or on its likely knowledge that ingesting gasoline was hazardous to human health. Instead, the State Board found Stuart Petroleum liable based on the fact that by 1986, "problems of leaking underground tanks have become common knowledge, particularly in the oil industry." *In Re Stuart*, WQ 86-15 at 6 n.3. Similarly, in the present case, it is not appropriate to impose liability on UATC merely because it leased the Site to a dry cleaner or because the Fire Marshal permit mentions solvent usage at the Site and the dangers associated with solvent inhalation or flammability. Instead, the Regional Board would have to find substantial evidence that, during UATC's ownership of and tenancy at the Site, it was "common knowledge" that dry cleaners contaminated groundwater with PCE. In reality, the possibility that PCE from dry cleaners could leach through concrete and soil into groundwater, or that sewers connected to dry cleaners could leak, was not understood by regulators in the 1960s and early 1970s, let alone by movie theater operators.

C. There is Not Substantial Evidence that UATC Had the Legal Ability to Prevent a PCE Discharge.

In determining whether a landlord has legal authority to prevent a tenant's discharge of waste, the State Board has focused on whether the terms of the relevant lease authorized the landlord to terminate the tenancy, enter the premises, or otherwise remediate the contamination. *See, e.g., In re Logsdon*, WQ 84-6 at 12 (lease authorized landlord to re-enter the premises if tenants violated lease provisions prohibiting tenant from creating a nuisance on the premises and requiring tenant to abide by all laws); *In re Spitzer*, WQ 89-8, 1989 WL 97148 at *4 (owners had right to regain possession of the site if the lessee failed to maintain the premises in good order and condition or failed to comply with all applicable laws).

The Staff Report postulates without any substantiation that "UATC would have had a lease with Moonlite Cleaners for operation of the dry cleaning business," and "[t]his lease would have given UATC legal control over Moonlite Cleaners' activities and would have given UATC the legal ability to prevent the discharge." Staff Report at 8 (emphasis added). But the Staff

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Associates LLC's Contentions as to United Artists Theatre Circuit, Inc.'s Liability for Contamination at 2640 El Camino Real, Santa Clara, California" (Dec. 17, 2012).

[60] *See* "A Chronology of Historical Developments in Drycleaning" 4 (Nov. 2007), enclosed as Ex. B to letter from S. Reisch to N. King, "Moonlite Associates LLC's Contentions as to United Artists Theatre Circuit, Inc.'s Liability for Contamination at 2640 El Camino Real, Santa Clara, California" (Dec. 17, 2012) (indicating that dry cleaners were not identified as a source of groundwater contamination until the City of Lodi detected PCE in groundwater samples in the late 1980s).

have no evidence whatsoever that a single lease, whether written or verbal, existed between UATC and its tenant, and there is nothing in the record that indicates whether or not movie theater owners typically entered into written leases with their tenants in the 1960s. Even if it were reasonable to assume that UATC entered into written leases with its tenant at the Site in the 1960s, nothing about the content of any such lease is known. The Staff Report engages in pure speculation when it claims that UATC's lease or leases "would have given UATC legal control over Moonlite Cleaners' activities." Staff Report at 8. There is absolutely no evidence from which to infer that any applicable leases would have included provisions allowing UATC to enter the premises, terminate the lease, or remediate contamination if, for example, a tenant operated in accordance with its permit but PCE somehow leaked from sewers serving the Site. Thus, the Regional Board simply lacks substantial evidence from which to conclude that UATC had the legal authority to prevent a discharge of PCE by its tenant, and the Regional Board accordingly cannot conclude that UATC "caused or permitted" a discharge under Water Code Section 13304(a).

IV. IF UATC HAD ANY LIABILITY FOR CONTAMINATION AT THE SITE, THAT LIABILITY WAS DISCHARGED IN UATC'S 2001 BANKRUPTCY.

Even if the Regional Board were to conclude that UATC is a discharger under Section 13304(a) of the Water Code, any and all claims against UATC by the Regional Board are barred as a matter of law because such claims were discharged by the Bankruptcy Court order confirming the Bankruptcy Plan.

As a general matter of bankruptcy law, any and all pre-bankruptcy claims against a debtor are discharged in bankruptcy. As courts universally recognize, "the purpose of bankruptcy law and the provisions for reorganization could not be realized if the discharge of debtors were not complete and absolute." *See, e.g., In re Penn Central Transp. Co.*, 771 F.2d 762, 767 (3d Cir. 1985). Here, the Bankruptcy Court order granted UATC a broad discharge from all claims against UATC. The order provides that:

> all Persons and Entities shall be precluded from asserting against the Debtors, the Debtors in Possession, the Estates, and the Reorganized Debtors, their successors and assigns, their assets and properties, any other Claims or Equity Interests based upon any documents, instruments, or any act or omission, transaction or other activity of any kind or nature that occurred prior to the Effective Date [of the Bankruptcy Plan].

Bankruptcy Court Order at 43.

The Effective Date of the UATC Bankruptcy Plan was March 2, 2001. Because UATC has not owned or leased the Site since 1978, any claims that may be asserted against UATC relating to the Site would necessarily be based on an "act or omission, transaction or other activity of any kind or nature that occurred prior to the Effective Date [of the Bankruptcy Plan]." Accordingly, any such claims have been discharged by the Bankruptcy Court Order and cannot now be asserted against UATC.

Indeed, further support that any claims against UATC relating to the Site were discharged can be found in the fact that the Bankruptcy Court Order provides for the following limited exception to its discharge provisions:

> Notwithstanding any language to the contrary in the [Bankruptcy] Plan or in this Order, nothing in the [Bankruptcy] Plan or this Order shall be construed as releasing or relieving any entity of any liability to a governmental entity under any police or regulatory statute as the owner or operator of property that the entity owns or operates after the date of this Order.

Bankruptcy Court Order at 23 (emphasis added).

Thus, the Bankruptcy Court Order expressly carves out of its discharge provisions governmental entity claims relating to property that is owned or operated by UATC "after the date of [the Bankruptcy Plan]." However, there is no such carve-out for claims (governmental or otherwise) relating to property that was not owned or operated by UATC after the date of the Bankruptcy Court Order (*i.e.*, January 25, 2001). The Bankruptcy Court's approach provides UATC with the "fresh start" promised by the Bankruptcy Code, while preserving the ability of regulators to protect the environment by holding those in possession of contaminated property responsible for ongoing compliance with environmental laws. *See Ohio v. Kovacs*, 469 U.S. 274, 283-285 (1985) (holding that claims against the debtor for cleanup costs were discharged, but noting that the Court did not "question that anyone in possession of the site . . . must comply with the environmental laws of the State . . . . Plainly, that person or firm may not maintain a nuisance, pollute the waters of the State or refuse to remove the source of such conditions."). In accordance with the Bankruptcy Court Order's terms, because UATC did not own or operate the Site at any time after January 25, 2001, any claims against UATC relating to the Site were discharged in UATC's bankruptcy.

Despite the plain language and clear intent of the Bankruptcy Order, the Staff Report takes the position that the Regional Board's claim against UATC is not discharged because, according to the Staff Report, (1) orders requiring cleanup of ongoing contamination are not "claims" within the meaning of the Bankruptcy Code; and (2) even so, the Regional Board's claim against UATC did not arise pre-petition and thus could not have been discharged by the Bankruptcy Court. Neither of these arguments is persuasive.

A. Cleanup Orders Are Claims Under the Bankruptcy Code.

As to the first argument, the Staff Report relies on *In re Chateaugay Corp.*, 944 F.2d 997 (2d Cir. 1991), a decision by the Second Circuit Court of Appeals, which lacks jurisdiction over California courts. According to the Staff Report, *In re Chateaugay* stands for the proposition that "an obligation to cleanup and ameliorate ongoing pollution is not a claim that is dischargeable through bankruptcy." Staff Report at 9. Importantly, the Staff Report wholly ignores the fact that the Bankruptcy Code expressly provides that the term "claim" includes "the right to an equitable remedy for breach of performance" if such breach "gives rise to a right to payment . . . ." 11 U.S.C. § 101(4)(B). And *Chateaugay* itself recognizes that equitable remedies, such as certain injunctions requiring environmental remediation, are, in fact, treated as

"claims" under the Bankruptcy Code where monetary damages may be paid as an alternative to the equitable remedy. *Id*. at 1007–08. Here, the Regional Board is plainly authorized under the Porter-Cologne Water Quality Control Act to perform any required cleanup itself and recover costs incurred from any "liable party." Cal. Water Code §13304(b)(1) & (2), (c). Thus, an order requiring UATC to remediate the Site can be a "claim" that is dischargeable in bankruptcy, even under *Chateaugay*.

It appears that the Staff may be relying on language in *Chateaugay* that states that "a cleanup order that accomplishes the dual objectives of removing accumulated wastes and stopping or ameliorating ongoing pollution emanating from such wastes is not a dischargeable claim" because EPA "has no authority to accept a payment from a responsible party as an alternative to continued pollution." *Id.* at 1008. Here, UATC has not owned or leased the Site for several decades and is not currently causing or allowing continuing pollution. In that regard, the Seventh Circuit's decision in *In re CMC Heartland Partners*, 966 F.2d 1143, 1147 (7th Cir. 1992), is instructive. In that case, which was decided after *Chateaugay*, the court expressly considered the different positions under the Bankruptcy Code of former and current property owners that are liable under sections 107(a)(2) and 107(a)(1), respectively, of the federal Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. § 9607 et seq. ("CERCLA") with respect to ongoing pollution that EPA claimed presented a current threat to human health and the environment. The court concluded that, because EPA cleanup orders issued under section 106 of CERCLA against prior owners and operators that are liable under section 107(a)(2) "require a person to pay money today because of acts before or during the reorganization proceedings," they are "claims" dischargeable under the Bankruptcy Code, whereas Section 106 orders issued to current owners and operators liable under CERCLA sections 107(a)(1) "depend not at all on the debtor's actions before or during the reorganization" and are therefore not dischargeable. *CMC Heartland Partners*, 966 F.2d at 1146–47. Here, the Regional Board seeks to require UATC, a former owner of the Site, to perform a cleanup based on occurrences before its bankruptcy, and those claims are therefore discharged.

Finally, while the Staff Report assumes that the exception carved out in *Chateaugay* for remedial orders relating to "ongoing" pollution applies in this case, *Chateaugay* is not controlling precedent in this case, has not been universally followed, and, in fact, has been expressly rejected by a district court within the Ninth Circuit, which includes California. In *In re Goodwin*, 163 B.R. 825, 829–833 (Bankr. D. Idaho 1993), the court undertook a thorough and careful review of the Bankruptcy Code and prior Supreme Court decisions and declined to follow *Chateaugay*. Instead, the court held that the only relevant question is whether the enforcing agency has an alternative right to perform the cleanup itself and seek damages from the debtor, a prior owner of the contaminated property. The Regional Board clearly has that option here. Cal. Water Code §13304(b)(1) & (2), (c). Thus, under the *Goodwin* court's analysis, the Regional Board's assertion that UATC is liable under Section 13304 would be a claim subject to discharge by UATC's bankruptcy.

If the Regional Board names UATC as a discharger at the Site in addition to Moonlite, it is effectively prosecuting a collection action on behalf of Moonlite and for Moonlite's benefit. Moonlite is already responsible for cleaning up the Site, so the only result of issuing a cleanup and abatement order to UATC would be to require UATC to share in Moonlite's costs. But

Courts plainly disfavor such efforts to repackage an injunction as a claim for damages in order to evade the effect of a bankruptcy proceeding. *See In re CMC Heartland Partners*, 966 F.2d at 1147 (EPA may not repackage a forfeited cleanup claim for damages as an injunction). Moreover, Moonlite does not deserve any special assistance from the Regional Board given that it leased the Site to dry cleaners until 1996, failed to investigate potential impacts from the former dry cleaners until 2004 (even after evidence of environmental impacts from dry cleaners was well known), and then failed to report the results of its discovery of PCE impacts at the Site to the state for almost five more years.

B. The Regional Board's Claim against UATC Arose before UATC Filed for Bankruptcy.

The Staff Report argues that, even if the Tentative Order is a claim under the Bankruptcy Code, under the "fair contemplation" test that the Staff contend applies to this case,[61] the Regional Board's claim was discharged in UATC's bankruptcy only if it is "based on pre-petition conduct that [could] be fairly contemplated by the parties at the time of [UATC's] bankruptcy." *In re Jensen*, 995 F.2d 925, 930 (9th Cir. 1993); Staff Report at 9. That is, the Staff Report asserts that a pre-petition claim is dischargeable only if the creditor reasonably should have anticipated that it had the claim because it knew or should have known of the facts underlying the claim by the time the bankruptcy plan was confirmed.

The Staff Report contends that the Regional Board did not fairly contemplate its claim against UATC by the time of UATC's bankruptcy because the Regional Board did not learn of contamination at the Site until 2009, years after UATC's bankruptcy was confirmed. Staff Report at 9. Even assuming that is true,[62] as the Staff acknowledge, the inquiry under the fair contemplation test does not end if the Regional Board lacked <u>actual</u> knowledge of contamination at the Site. If the Regional Board <u>should have known</u> of contamination at the Site by the time UATC's bankruptcy was confirmed—that is, had <u>constructive</u> knowledge of the contamination—its claim against UATC arose before the bankruptcy was confirmed and has been discharged. *See In re Jensen*, 995 F.2d at 930–931; *In re Chicago, Milwaukee, St. Paul & Pac. R.R. Co.*, 3 F.3d 200, 207 (7th Cir. 1993). In determining whether the Regional Board should have fairly contemplated its claim against UATC, knowledge of other state agencies may be imputed to the Regional Board. *See In re Jensen*, 995 at 931.

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[61] Not all courts apply the "fair contemplation" test, and UATC does not concede that it applies in this case. For example, under the "conduct" test applied by some courts, an environmental cleanup claim arises when the conduct occurred, even though the injury resulting from the conduct was not manifest at the commencement of the case. *See, e.g., In re Parks*, 281 B.R. 899, 902 (E.D. Mich.2002); *In re Jensen*, 995 F.2d at 930. In the environmental context, the test permits the discharge in bankruptcy where the release of hazardous substances occurred prepetition, regardless of when the release was discovered. *See, e.g., In re Chateaugay*, 944 F.2d at 1005.

[62] UATC is unable to independently determine when the Regional Board first learned that a dry cleaner operated at the Site. If, as the Regional Board appears to contend, actual knowledge of the existence of a dry cleaner at the Site is a basis for imposing liability under the Water Code, then such information is relevant to when the Regional Board "fairly contemplated" its claim against UATC. Accordingly, we respectfully request that the Regional Board make this information available in the public record.

It is plain that the Regional Board by 2001 had extensive knowledge of the risks of dry cleaner contamination. Certainly, if the Regional Board is prepared to conclude that UATC should have known before 1978 that its dry cleaner tenant had released PCE into the environment on the grounds that such releases were common knowledge, it must also inevitably true that the Regional Board should have known by 2001 that such a release had occurred at the Site.

In particular, the Regional Board undeniably knew by January 2001 that dry cleaners had released PCE into the environment throughout the Central Valley and in Santa Clara. In 1992, the neighboring Regional Board issued a study entitled "*Dry Cleaners – A Major Source of PCE In Ground Water*," and concluded that that "[t] data strongly indicate that leakage through the sewer lines is the major avenue through which PCE is introduced to the subsurface."[63] According to the 2007 Santa Clara Valley Water District study, the Regional Board had initiated 38 dry cleaner release cases in Santa Clara County by 2002. *Id.* at 115. The Regional Board also had by January 2001 the data necessary to identify historical dry-cleaning operations. By surveying records such as telephone, business, and shopping mall directories, the 2007 Study identified approximately 1,250 dry cleaner sites that operated in Santa Clara County between 1946 and 2001. *Id.* at 31–35. In fact, the survey specifically included the dry-cleaning businesses that operated in the Moonlite Shopping Center and identified them as a historical, medium-threat facility. *Id.* at 192. Lastly, data indicating that releases were common in the dry-cleaning industry was available to the Regional Board by 2001. The 2007 Study explains that a 2001 EPA survey estimated that 75 percent of active dry-cleaning facilities in the United States have caused soil and groundwater contamination. *Id.* at 13–14.

Moreover, it is undisputed that the California State Fire Marshal knew since the early 1960s that dry cleaning with solvents occurred at the Site. If as the Staff Report asserts, UATC "should have known of the use of chemicals at the Site and its dangers, including the potential for unauthorized discharges" because of the Fire Marshal Permit, Staff Report at 8, then the State Fire Marshal should have had the same knowledge in the 1960s and 1970s. And, just as the knowledge of a California regional water quality control board was imputed to the California Department of Health Services in *Jensen*, 995 F.2d at 931, then in this case the State Fire Marshal's knowledge should be imputed to the Regional Board.

Thus, if the Regional Board takes the position that UATC—a movie theater company that was operating well before the dawn of modern environmental law—should have known that a release of PCE occurred at the Site before 1978, the Regional Board indisputably should have drawn the same conclusion itself by 2001. Accordingly, to the extent the Regional Board has a viable claim against UATC under Section 13304, that claim must have arisen before UATC's bankruptcy was confirmed, and it was therefore discharged.

[63] Victor J. Izzo, *Dry Cleaners – A Major Source of PCE In Ground Water*, Sacramento: California Regional Water Quality Board, Central Valley Region (1992).

V. THE TENTATIVE ORDER SEEKS TO IMPOSE IMPRACTICABLE DEADLINES AND OTHER UNREASONABLE REQUIREMENTS.

UATC strongly believes that it is not a proper party in this matter. However, because the Regional Board's rules require that UATC raise any objections to the Tentative Order now, before a determination of liability is made, UATC offers the following additional comments on the Tentative Order without waiving any of the foregoing arguments or any of its rights.[64]

A. Deadlines

The Tentative Order is not scheduled to take effect until September 11, 2013, at the earliest, yet some of the tasks required by the Tentative Order must be completed by the end of September and October 2013, and other compliance dates flow from those initial deadlines. Compliance dates for all tasks should be extended by at least 90 calendar days to allow the dischargers to coordinate efforts and prepare the Additional Soil Gas Investigation Workplan, which is the first joint submittal under the Tentative Order.

B. Clean-Up Levels

Designation of specific cleanup levels is premature and should be omitted from any order in this matter. Pursuant to Section 13307 of the Water Code, the Regional Board is required to follow policies and procedures consistent with Section 25355.7 of the Health and Safety Code in supervising remedial actions at a hazardous substance release site. Section 25355.7(c) of the Health and Safety Code specifies that those procedures shall include identifying and utilizing the most cost-effective methods for carrying out remedial actions. A site-specific risk assessment may establish alternate cleanup levels that allow for a more cost-effective remedy than the cleanup levels identified in the Tentative Order, while still achieving the overall remedial action objectives stated in the Tentative Order. *See* Tentative Order at 8. Instead of setting cleanup levels now, the Tentative Order could establish a schedule and procedure for establishing them at a more appropriate time.

C. Individual Tasks

UATC also offers the following comments on specific tasks required by the Tentative Order.

Task 4. Completion of Soil Gas Investigation, p. 12.

The objective of this investigation should be limited to further delineating the extent of soil gas contamination without requiring characterization of VOC concentrations to Regional Board Environmental Screening Levels ("ESLs"). Characterizing VOC soil gas concentrations to ESLs may not be needed to develop and implement remedial actions that are protective of human health based upon the results of a site-specific risk assessment performed as part of Task 8, which entails preparation of a Remedial Action Plan.

[64] UATC reserves the right to present additional information to the Regional Board if new information relevant to this matter comes to light following submission of these comments.

Task 3. Workplan for Additional Indoor Air Sampling, p. 12.

The objectives of this work should be limited to further delineating indoor air contamination without requiring characterization of VOCs to ESLs. Indoor air typically contains VOCs from consumer products, building materials, and outdoor (ambient) air.[65] Contributions from these "background" sources may prevent characterization of VOC indoor air concentrations to ESLs.

Task 5. Workplan for Groundwater Monitoring Wells Installation, p. 13.

The objective of this investigation should be limited to further delineating the extent of groundwater contamination without requiring characterization of VOC concentrations to Maximum Contaminant Levels (MCLs). Characterizing VOC groundwater concentrations to MCLs may not be needed to develop and implement remedial actions that meet Applicable or Relevant and Appropriate Requirements and protect human health and the environment.

Task 7. Completion of Zero-Valent Iron Pilot Study, p. 13.

This task should be omitted from the Tentative Order. The compliance date for the technical report describing the pilot study is July 31, 2013, which is before the Tentative Order is scheduled to be adopted on September 11, 2013. Moonlite Associates has conducted the pilot study independently. Thus, Moonlite Associates should be solely responsible for preparing and submitting the technical report to the Regional Board.

Task 9. Implementation of Remedial Actions, p. 14.

This task requires, among other things, proof of system start-up for ongoing actions. As UATC has not been involved in any ongoing actions, it would not be in a position to document their initiation, and should be exempt from this requirement.

Tasks 10 and 11. Proposed Deed Restriction and Recordation of Deed Restriction, pp. 14-15

As UATC is not the owner of the Site, it will have no ability to record a deed restriction on the property, and should be exempted from these requirements.

Task 16. Evaluation of New Health Criteria, p. 17.

This task is routinely performed as part of a five-year review. Toxicity and other contaminant characteristics are examined for changes and the effects these changes have on

[65] EPA, Office of Solid Waste & Emergency Response, "Background Indoor Air Concentrations of Volatile Organic Compounds in North American Residences (1990-2005): A Compilation of Statistics for Assessing Vapor Intrusion," 1 (June 2011).

site-specific, risk-based cleanup levels are evaluated during the five-year review.[66] Task 16 should be deleted to avoid duplication of effort in preparing Five-year Status Reports under Task 13 of the Tentative Order.

D. Provisions

Provision 3, Cost Recovery

Even if UATC is found to be liable under the Water Code, UATC objects to any allocation of liability that does not reflect the fact that (a) Moonlite owned the Site and leased it to a drycleaner for years after drycleaner contamination became common knowledge, and failed to investigate the Site until 2004; and (b) Moonlite failed to report contamination discovered in 2004 until 2009 despite a legal duty to do so.

Provision 4, Access to Site and Records

Because UATC does not own the Site, it cannot be responsible for providing access to the Site to the Regional Board or its authorized representatives, and should be excluded from this responsibility.

Provision 5, Self-Monitoring Program

The Self-Monitoring Program requires sampling and analysis of Saratoga Creek, and all existing and new monitoring wells on a quarterly basis. Quarterly sampling of Saratoga Creek and site wells has been conducted for five years. Review of available data shows VOC concentrations in surface water and groundwater are stable.[67] Quarterly sampling and reporting is not warranted to assess changes in site conditions. UATC recommends amending the sampling and reporting frequency in the Self-Monitoring Program to semi-annually rather than quarterly.

VI. CONCLUSION

The Regional Board should reject the Tentative Order and decline to name UATC as a discharger liable for cleaning up the Site under Water Code Section 13304(a). The case made against UATC in the Staff Report is predicated on a series of untenable inferences drawn from an inadequate record and unsound arguments based on mischaracterizations of the law. The Regional Board has not identified substantial evidence that a discharge of PCE occurred while UATC owned or leased the Site. It has not identified substantial evidence that UATC should have known by 1978 that groundwater contamination was a danger common to the dry-cleaning industry. And it has not identified substantial evidence that UATC had the authority to prevent a

[66] EPA, Office of Emergency and Remedial Response, "Comprehensive Five-Year Review Guidance," 4–7 (June 2001).

[67] P&D Environmental, Inc., "Quarterly Monitoring and Report: First Quarter 2013, File No. 43S1130 (NMK) Former Moonlite Cleaners, 2640 El Camino Real Santa Clara, California" Table 3A (Apr. 26, 2013).

tenant from discharging PCE into the environment. And, in any event, UATC's bankruptcy extinguished any liability that UATC could have in regard to the Site.

Finally, based on the reasoning set forth in the Staff Report, if the Regional Board names UATC as a discharger at the Site, it also must name the City of Santa Clara as a discharger. It is clear from EKI's analysis, and from the 2007 Study upon which the Staff puts so much weight, that discharges from the sewer system have significantly impacted the Site. It is equally clear that Staff's prior decision not to pursue the City was based on an inadequate review of the information provided by the City. Thus, if the Regional Board does not reject the Tentative Order and decline to name UATC as a discharger, UATC requests that the Regional Board also name the City of Santa Clara as a liable party.[68]

[68] William R. Attwater, Office of the Chief Counsel, State Water Resources Control Board, "Responsibility of Operators of Publicly Owned and Operated Sewer Systems for Discharges from Their Systems which Pollute Ground Water," (Apr. 27, 1992) ("Public agencies which own or operate sanitary sewer systems are responsible for discharges of waste from their collection and treatment systems. If the waste creates or threatens to create a condition of pollution or nuisance, the public agencies may be ordered to clean up the wastes or abate the effects thereof.").

ATTACHMENT A

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29 July 2013

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Subject: Review of Cleanup Staff Report attached to Tentative Order - Site Cleanup Requirements 2640 El Camino Real, Santa Clara, California

Dear Mr. Reisch:

The Staff of the Regional Water Quality Control Board, San Francisco Bay Region (Staff) transmitted the Tentative Order – Site Cleanup Requirements and accompanying Cleanup Staff Report for 2640 El Camino Real, Santa Clara, California to Moonlite Associates, LLP and United Artists Theatre Circuit, Inc. (UATC) on 25 June 2013. At the request of Hogan Lovells US LLP, Erler & Kalinowski, Inc. (EKI) has reviewed the documents. Upon review, we do not find technical support for Staff's contention that PCE was released before 1978 when UATC owned or leased the site.

In its 12 March 2013 report, EKI explained that existing data indicate that the distribution of PCE in the subsurface at the Site is consistent with a post-1978 release and that there is no evidence of a pre-1978 release at the Site. Staff nevertheless contend that PCE was discharged during UATC's ownership based on "the physical evidence of PCE at the Site and downgradient from it, the history of solvent usage beginning in 1961, common industry-wide operational practices, and the inefficiencies of older dry cleaning equipment from the 1960s." However, nothing in the Staff Report alters EKI's previous conclusions. In fact, the Staff Report contains numerous mis-statements and conflicts with scientific analysis by U.S. EPA, U.S. Geological Survey, and other recognized experts.

EKI's detailed technical comments on the Staff Report are attached.

Very truly yours,

ERLER & KALINOWSKI, INC.

Andrew N. Safford, P.E.
Vice President

ERLER & KALINOWSKI, INC. COMMENTS ON CLEANUP STAFF REPORT ACCOMPANYING MOONLITE TENTATIVE ORDER

Erler and Kalinowski, Inc. (EKI) has prepared comments on technical statements made in the Regional Water Quality Control Board, San Francisco Bay Region (RWQCB) Cleanup Staff Report, dated 24 June 2013, which accompanies the Tentative Order – Site Cleanup Requirements for 2640 El Camino Real, Santa Clara, California (site). For ease of reference, we have numbered our Comment Nos. 1 through 17 and presented our comments in the order in which the relevant statements are made in the Staff Report. Excerpts or EKI's synopses of statements made in the Staff Report are shown in blue lettering.

1. Section IV. Site History C, p. 3

"(the highest PCE concentrations in soil and groundwater are beneath the Site and downgradient from the Site)"

Comment: This statement is made in the context of the Staff Report's assertion that contamination at the site is due to perchloroethylene (PCE) that seeped through the building's concrete floor in the form of a dense non-aqueous phase liquid (DNAPL).[1] Available data do not support Staff's assertion.

Contrary to the statement made on page 3 of the Staff Report, no soil data exist for the site. In addition, the highest PCE groundwater concentrations are northeast and southeast of the former Moonlite Cleaners building, not directly beneath the building. Specifically, the highest PCE groundwater concentrations were measured at the site in 2011. Groundwater samples collected from monitoring wells MW4 and MW5A contained 1,280 µg/L and 1,130 µg/L of PCE, respectively.[2] The highest PCE groundwater concentration underneath the building was 160 µg/L in a grab groundwater sample collected from direct push boring B8 in 2009.[3] PCE groundwater concentrations at the site are consistent with releases of PCE dissolved in wastewater, not releases of PCE DNAPL, as asserted by Staff.

[1] DNAPLs are liquids that form a separate, immiscible phase when in contact with water. Differences in the properties of DNAPL and water result in the formation of a physical interface between the liquids that prevents the two fluids from mixing. DNAPLs have densities greater than that of water.

[2] West Environmental Services and Technologies (West). October 2011. *Site Investigation Report, 2640 El Camino Real, Santa Clara, California.* Table 3-6.

[3] *Ibid.*, Table 3-4.

U.S. EPA (2009, 1994, 1992) considers DNAPL to be present in groundwater at a site if the concentrations of DNAPL compounds in groundwater samples are greater than 1 percent of their pure phase or effective solubility.[4,5,6] One percent of the pure phase solubility of PCE is approximately 2,000 µg/L.[7] PCE concentrations in groundwater at the site are less than this threshold value.

2. Section V. Hydrogeology, p. 4

"The sediment beneath the Site is ancestral Saratoga Creek stream channel sediment overlying older Late Pleistocene alluvial plain sediment. The ancestral Saratoga Creek sediment is fine to coarse grained channel deposits, with fine grained flood deposits outside the channels. The pattern of fine and coarse grained lenses of sediment observed at the Site represent the deposits of the meandering ancestral Saratoga Creek flowing northward over the alluvial plain sediments."

Comment: Staff contend that channelized deposits cause contaminated groundwater to flow to the northeast irrespective of the direction of the groundwater gradient. This contention is unsupported. Review of available geologic data in three dimensions shows no pattern of northeast-trending coarse grained channelized deposits flanked by fine grained channelized deposits. The unconsolidated sediments in the saturated zone consist of a complex distribution of permeable sands, gravels, and silts, with lesser clays, consistent with a meandering distributory channel within an alluvial fan complex. A northeasterly preferential pathway is not evident. Consequently, groundwater at the site flows in the direction of the gradient.

[4] U.S. EPA. September 2009. *Ground Water Issue: Assessment and Delineation of DNAPL Source Zones at Hazardous Waste Sites*. National Risk Management Research Laboratory. EPA/600/R-09/119. p. 6.

[5] U.S. EPA. September 1994. *DNAPL Site Characterization*. Office of Solid Waste and Emergency Response. EPA/540/F-94/049. p. 10.

[6] U.S. EPA. January 1992. *Estimating Potential for Occurrence of DNAPL at Superfund Sites*. Office of Solid Waste and Emergency Response. Publication: 9355.4-07FS. p. 5.

[7] Based upon PCE solubility limit in water of 206,000 µg/L reported by U.S. EPA in its *Regional Screening Level (RSL) Chemical-specific Parameters Supporting Table*, dated May 2013.

3. Section V. Hydrogeology, p. 4

"The flow direction of groundwater at the Site is most likely controlled by north-trending Saratoga Creek, the north-trending ancestral Saratoga Creek stream deposits, the gently north sloping topography, and deep production wells located in the vicinity."

Comment: As discussed in Comment No. 2, groundwater flow direction is controlled by the groundwater gradient imposed by the Creek. Saratoga Creek can be a sink for water (gaining stream) or a source of water (losing stream) depending upon the surrounding groundwater levels. The Creek is currently a gaining stream and the predominant groundwater flow direction is northeast towards the Creek. The present landowner's consultant, West agrees with this finding and states: "Similarly, with the fluctuations in groundwater elevations, Saratoga Creek has fluctuated between a losing stream and a gaining stream…As groundwater elevations rose above the base of Saratoga Creek, groundwater flow shifted to the northeast toward the Saratoga Creek."[8]

Staff do not identify nor provide construction details of the deeper production wells that Staff surmise are influencing groundwater conditions at the site. Production wells screened in the deeper aquifer below the regional clay layer are unlikely to affect horizontal groundwater flow in the shallow zone above the clay layer. The top of the regional clay layer is encountered at an elevation of approximately 45 feet above mean sea level at the site.

4. Section V. Hydrogeology, p. 4

"Concentrations of PCE have been detected in groundwater down gradient of the Site to the north, from the northeast to the northwest."

Comment: It is true that PCE concentrations have been detected north-northwest of the site (i.e., locations B-2, B17, B-3, B32, B18, and B23), but the detections are 1 to 2 orders of magnitude less than concentrations detected in samples from within the PCE plume that is migrating northeast towards Saratoga Creek. The lower PCE concentrations at locations B-2, B17, B-3, B32, and B18 are not inconsistent with a post-1978 release and are likely due to PCE soil vapor migration or PCE dispersion in groundwater. West (2011) attributes PCE at location B23 to former Perfect Cleaners/Jim's Cleaners, which operated a dry cleaning establishment at 1520 Kiely Boulevard from the 1980s until at

[8] West, 2011, *op cit.*, p. 28.

least 2006.[9] Perfect Cleaners/Jim's Cleaners was permitted as a RCRA hazardous waste small quantity generator and PCE air emission source.[10,11]

5. Section VI. Investigation and Cleanup, pp. 4-5

"The highest historical detections of PCE in groundwater, soil gas, and indoor air are in the immediate vicinity of or directly beneath the Site, indicating a discharge directly beneath the dry cleaner . . . . The Site data clearly indicate that the highest concentrations of PCE are immediately beneath, down gradient, and downstream of the former dry cleaner, and decrease with distance away from the former dry cleaner. This pattern indicates that significant releases of PCE occurred directly beneath the former dry cleaner and are likely from common release mechanisms discussed in Section IV.C."

Comment: As discussed in Comment No. 1, the highest PCE groundwater concentrations are northeast and southeast of the former Moonlite Cleaners building, not directly beneath the building. Moreover, PCE groundwater concentrations are below 1% pure phase or effective solubility and do not indicate DNAPL (which is what a surface spill would consist of) was released beneath the former Moonlite Cleaners building. EKI and West agree that contamination at the Site was caused by PCE-containing wastewater that leaked from sewer lines beneath the former Moonlite Cleaners building and adjacent to the site.[12]

The Staff do not mention that SCVWD found leaking sewer lines to be the most frequent type of releases at dry cleaning establishments. SCVWD (2007) states: "PCE exfiltration from sewer lines connected to dry cleaners in the 1980s and earlier was a primary route of subsurface contamination from dry cleaners (Figure 5)."[13] This finding is

[9] West, 2011, *op cit.*, pp. 31-32.

[10] Department of Toxic Substances Control (DTSC). EPA ID Profile: Jim's Dry Cleaners, 1520 Kiely Boulevard, Santa, Clara, California. http://hwts.dtsc.ca.gov/report_search.cfm?id=2. Accessed 22 July 2013.

[11] Bay Area Air Quality Management District. Toxic Inventory 2004. http://www.baaqmd.gov. Accessed 22 July 2013.

[12] EKI. 12 March 2013. *Review of Environmental Data, Former Moonlite Cleaners, 2640 El Camino Real, Santa Clara, California*. p. 9; West. September 2012. *Feasibility Study/Pilot Study Work Plan, 2640 El Camino Real, Santa Clara, California*. pp. 8 and 25; West, 2011, *op cit*., pp. 28-29.

[13] Figure 5 in the SCVWD report is a chart that depicts leaks from sewer lines as the most common release mechanism based upon a survey of 40 dry cleaner sites.

corroborated by other studies of dry cleaners. RWQCB (1992) finds: "Where a source investigation has been done in connection with PCE contamination, the evidence has shown that dry cleaners have degraded the ground water. The data strongly indicate that leakage through the sewer lines is the major avenue through which PCE is introduced to the subsurface."[14] Lohman (2002) states: "The presence and distribution of perchloroethylene in the vicinity of dry cleaners are frequently associated with sewer laterals serving the facility."[15] SCVWD (2007) concludes: "Releases above slab versus releases above unpaved surfaces versus release below ground may have different characteristics…PCE releases from sewer lines may migrate to groundwater more readily due to leaching from the leaking line and vapors sinking to and dissolving into the water table."

SCVWD indicates releases above a slab are prone to volatilize into air inside the building rather than penetrate the slab. SCVWD (2007) states: "Releases above slab will volatilize more readily than subsurface releases." U.S. EPA reached the same conclusion. In a study of the dry cleaning industry, U.S. EPA (1995) found solvent spills, equipment leaks, and drips from transferring wet clothing from the washer to the dryer affect air inside the building.[16] In 1993, U.S. EPA began regulating air emissions from such release mechanisms under the National Emission Standard for Hazardous Air Pollutants (NESHAP) for Perchloroethylene Dry Cleaning Facilities.[17] The NESHAP restricted PCE air emissions, which resulted in the substantial decline in the PCE loss rate at dry cleaning facilities in the 1990s compared to that of the 1960s. Accordingly, the higher PCE loss rate in the 1960s was caused by greater air emissions, not greater discharges to the subsurface.

Review of available data supports the finding that a release of PCE-containing wastewater, as opposed to a DNAPL release, is the source of PCE in soil gas and groundwater at the site. Immediately beneath the building is approximately 4 to 7 feet of clay, organic clay, clayey sand, and silt. The sewer lines and gravel fill surrounding the lines are likely 5 feet deep or more and situated at the base of this clay layer. Thus,

[14] RWQCB. 27 March 1992. *Dry Cleaners – A Major Source of PCE in Ground Water*. Central Valley Region. p. 2.

[15] Lohman (2002). *A History of Dry Cleaners and Sources of Solvent Releases from Dry Cleaning Equipment*. Environmental Forensics. Vol. 3. pp. 35-58.

[16] U.S. EPA. September 1995. *EPA Office of Compliance Sector Notebook Project: Profile of the Dry Cleaning Industry*. Office of Enforcement and Compliance Assurance. EPA/310-R-95-001. pp. 26-27.

[17] See Title 40 of Code of Federal Regulations (CFR), section 63.320 *et seq.*

PCE-containing wastewater may have directly entered the sands and gravels beneath the clay and traveled almost immediately to groundwater. Wastewater also would have passed through the clay if it were present beneath the sewer lines. As explained more fully in Comment No. 7, soil moisture in the clay will attract PCE-containing wastewater but repel DNAPL. EKI estimates approximately 6 years were required for PCE dissolved in wastewater to migrate through the clay and reach groundwater.[18]

6. Section VII. Response to March 12, 2013, EKI Report A, p. 6

Staff contend that PCE seeped through the concrete floor of the building.

Comment: As described by EPA (2009), the fine grained nature of materials like concrete presents a barrier to NAPL entry.[19] NAPL would have spread across the floor rather than seep through the concrete.

7. Section VII. Response to March 12, 2013, EKI Report A, p. 6

Staff contend that decades were probably required for PCE to migrate through clay and PCE only reached the saturated zone after groundwater began to flow northeast towards Saratoga Creek.

Comment: If DNAPL had migrated through the floor (e.g., through pipe penetrations or cracks), the DNAPL still would have had to force its way through the clay underlying the building because DNAPL does not mix readily with water. The lack of miscibility causes soil moisture to repel DNAPL and to attract water.[20,21] This tendency is represented by the soil capillary pressure. DNAPL would need to accumulate on the order of several feet to overcome the capillary pressure and enter the clay. If DNAPL had entered the clay, downward movement of DNAPL to groundwater would have occurred rapidly. High density and low viscosity DNAPL, such as PCE, are driven downward through soil pores

[18] EKI, 2013, *op. cit.*, p. 10.

[19] EPA, 2009, *op cit*., p. 11.

[20] U.S. EPA. March 1991. *Ground Water Issue: Dense Nonaqueous Phase Liquids*. Office of Solid Waste and Emergency Response. EPA/540/4-91-002. p. 8.

[21] Mercer, J.W. and R.M. Cohen. 1990. *Review Paper. A Review of Immiscible Fluids in the Subsurface: Properties, Models, Characterization and Remediation*. Journal of Contaminant Hydrology. Vol. 6. pp. 112-113.

by gravity (ESTCP, 2008).[22] Further, as discussed in Comment No. 6, impacts to groundwater are explained by PCE-containing wastewater that leaked from the sewer lines beneath and south of the former Moonlite Cleaners establishment. Such a release would have taken 6 years or less to reach groundwater.[23]

8. Section VII. Response to March 12, 2013, EKI Report A, p. 6

"The EKI report assumes a continual leak of wastewater from a leaking sanitary sewer line as the driver for carrying PCE through soil to groundwater. Cleanup Staff disagree and assert that the extremely high PCE indoor air concentrations more likely indicate a direct release to the floor of the dry cleaner."

Comment: PCE soil gas and indoor air concentrations measured at the site are entirely explained by a release of PCE-containing wastewater from sewer lines beneath the building.[24] Moreover, PCE is not limited to indoor air within the building once occupied by Moonlite Cleaners, but also is found in indoor air within buildings to the east and west of the former dry cleaning establishment. The presence of PCE in the other buildings (where no dry cleaning equipment was present) suggests vapor intrusion of PCE from underlying soil and groundwater contamination, not volatilization of PCE DNAPL released during sloppy dry cleaning operations that somehow impregnated the concrete slab, as suggested by Staff.

[22] Environmental Security Technology Certification Program (ESTCP). July 2008. *Frequently Asked Questions Regarding Management of Chlorinated Solvents in Soils and Groundwater*. p. 3.

[23] EKI, 2013, *op. cit.*, p. 10.

[24] The maximum PCE soil gas and indoor air concentrations of 5,700,000 µg/m^3 and 150 µg/m^3, respectively, measured at the Moonlite site can be replicated with DTSC's screening level vapor intrusion model, GW-SCREEN, Version 3.0, assuming the source of contamination is sandy clay loam at a depth of 5 feet impacted by wastewater that has leaked from sewers beneath the building (see Comment No. 5 for discussion of this release mechanism). Inserting a PCE wastewater concentration of 8,000 µg/L (8 ppm) in GW-SCREEN yields a PCE soil gas concentration of 5,710,000 µg/m^3 and a PCE indoor air concentration of 163 µg/m^3. A PCE wastewater concentration of 8 ppm is a reasonable value, but may be conservatively low. SCVWD (2007) at p. 31 states: "Prior to the adoption of cradle-to-grave regulation of hazardous wastes in the mid-1980s, it was permissible and common for dry cleaning plants to discharge condensate wastewater laden with up to 150 ppm PCE to sanitary sewers."

9. Section VII. Response to March 12, 2013, EKI Report A, p. 6

RWQCB Staff do not discuss data and other information that contradict its contention that PCE released inside the building is the source of PCE in groundwater at the site.

Comment: The following data and other information support the finding that PCE-containing wastewater was released from sewer lines at the site:

1. PCE concentrations detected in groundwater samples throughout the area are below 1% pure phase or effective solubility, which indicates sampled groundwater has not come in contact with PCE in DNAPL form (which is what a surface spill would consist of), but rather PCE that was released in the dissolved phase (such as in wastewater from sewers).

2. PCE in groundwater samples collected from boreholes B6, B43, B44, B12, and well MW2. These boreholes and well are located approximately 160 and 350 feet in a direction that is east-southeast of the site (i.e., cross-gradient direction) along the orientation of the sewer lines.

3. Video inspection of the 8-inch diameter sewer line south of the site, which was constructed by the City of Santa Clara in 1960 or 1961, revealed offset joints, broken pipe, and sags.[25]

10. Section VII. Response to March 12, 2013, EKI Report B, p. 6

"Staff disagrees with EKI's analysis and concludes that PCE does exist to the north and northwest, as well as to the northeast."

Comment: Staff misrepresent EKI's report. EKI did not state that PCE does not exist to the north and northwest. Instead, EKI's report states that PCE groundwater concentrations north and northwest of the site are <u>much lower</u> than those observed to the northeast, indicating that the PCE plume in groundwater is moving to the northeast towards Saratoga Creek.[26]

[25] West, 2011, *op. cit.*, p. 23.

[26] EKI, 2013, *op. cit.*, pp. 10-11.

11. Section VII. Response to March 12, 2013, EKI Report B, p. 6

"The index well that EKI used to compare the Site with is a deep well located approximately six miles to the southeast and screened in a different aquifer. The index well is located in the recharge zone, while the Site is located in the confined zone. This is too great a distance away to be able to draw conclusions for shallow groundwater at the Site."

Comment: EKI used the San Jose index well as a proxy for regional groundwater conditions. The index well simply demonstrates that regional groundwater levels were substantially lower in the past than they are today, a point with which Moonlite's consultant agrees.[27] Rising groundwater levels measured in wells at the Shell station on the east side of Saratoga Creek (which is 1,000 feet from the site) correspond to rising groundwater levels in the San Jose index well (see Figure 9 of EKI report). This correspondence ceases when Saratoga Creek becomes a gaining stream, at which point the shallow groundwater levels at the Shell station no longer rise. This pattern of gradual groundwater recharge throughout the Santa Clara Valley Basin also is seen in data compiled for the Chevron and Shell stations that were situated 800 feet west of the site, which further confirms groundwater levels rose throughout the area from the late 1980s through the 1990s, and significantly altered the regional groundwater gradient. The significant rise in Santa Clara Valley Basin groundwater levels in response to reduction in groundwater withdrawals beginning in the late 1960s has been studied extensively and is well known.[28]

12. Section VII. Response to March 12, 2013, EKI Report B, p. 6

"EKI used 1990 to 2000 groundwater data from a Shell gas station 1000 feet away from the Moonlite Cleaners Site, and on the opposite side of Saratoga Creek, to estimate the groundwater

[27] West, 2011, *op cit.*, pp. 27-28.

[28] Publicly available studies on this topic include:

Fio, J.L. and D.A. Leighton. 1995. *Geohydrologic Framework, Historical Development of the Ground-Water System, and General Hydrologic and Water-Quality Conditions in 1990, South San Francisco Bay and Peninsula Area, California.* U.S. Geological Survey Water-Resources Investigations Report 94-357.

Poland, J.F. and R.L. Ireland. 1988. *Land Subsidence in the Santa Clara Valley, California as of 1982.* U.S. Geological Survey Professional Paper 497-F.

RWQCB. 2003. *A Comprehensive Groundwater Protection Evaluation for the South San Francisco Bay Basins.* Groundwater Committee of the California Regional Water Quality Control Board, San Francisco Bay Region.

flow direction at the Moonlite Cleaners Site in the 1960s and 70s. The time and distance involved in this comparison is too large and could lead to variations in the correlations of groundwater flow directions between the two sites."

Comment: EKI chose to analyze water levels from the Shell station on the east side of Saratoga Creek for two reasons:

1. The Shell station is approximately the same distance from the Saratoga Creek as the Moonlite Cleaners site, and, thus, would be expected to experience a similar magnitude of effect from Saratoga Creek, but in an opposite direction due to symmetry across the Creek.

2. Groundwater level data were available from the Shell station for the period when Saratoga Creek was transitioning from a losing stream to a gaining stream. EKI did not rely on the Shell data to estimate groundwater flow direction specifically for the 1960s and 1970s as stated in the Staff Report; rather, EKI used the Shell data to show that when Saratoga Creek was a losing stream, groundwater gradients were generally in a direction away from the stream (i.e., northeast to east at the Shell station). This groundwater flow pattern, supported by the Shell data, is consistent with expectations for the behavior of an unconfined aquifer near a hydraulically connected stream. As explained by the U.S. Geological Survey (USGS): "For ground water to discharge into a stream channel, the altitude of the water table in the vicinity of the stream must be higher than the altitude of the stream-water surface. Conversely, for surface water to seep to ground water, the altitude of the water table in the vicinity of the stream must be lower than the altitude of the stream water surface."[29]

13. Section VII. Response to March 12, 2013, EKI Report B, p. 6

"EKI's depiction of a northwest trending groundwater plume in Figure 10 of the EKI report is not supported by the groundwater flow variations seen at the Shell gas station. Staff reviewed the groundwater flow directions from the Shell gas station contained in Attachment A of the EKI report and observed a roughly 45 degree variation in the groundwater flow direction from the time when Saratoga Creek was purportedly losing or gaining."

[29] USGS. 1998. *Groundwater and Surface Water: A Single Resource*. U.S. Geological Survey Circular 1130. p. 9.

Comment: Staff contend that the data in Attachment A does not demonstrate a sufficiently large shift in the groundwater gradient direction to cause the PCE plume in groundwater to migrate to the northwest when Saratoga Creek was a losing stream. Staff's rationale for this assertion appears to be based on a qualitative categorization of gradient directions presented by EKI in Table A-1 of our 12 March 2013 report into generalized compass points. It is unclear whether RWQCB staff performed any quantitative assessment of the hydraulic gradient data to support its assertion. EKI performed a Mann-Kendall test of the gradient direction time series presented in our 12 March 2013 report. The Mann-Kendall test demonstrates a statistically significant counter-clockwise shift (i.e., northeast to northwest) at the 95% confidence level in groundwater gradient direction over the period of record of the Shell station data.

EKI also calculated a moving average time series for the Shell gradient direction data. Between August 1991 and December 1993, the moving average gradient direction remained consistently in the northeastern quadrant, varying from a high of N 51° E in August 1991 to a low of N 19° E in May 1992. Beginning in February 1994, the moving average gradient shifted to the northwest for the first time. From this point through the remainder of the period of record, the gradient direction remained generally in the northwestern quadrant, varying between N 05° E in May 1994 and N 32° W in May 1996.

The moving average data show the gradient "crossed over" (i.e., when the hydraulic gradient shifted counter-clockwise from northeast to northwest at the Shell station) in February 1994. The average 1990-1993 gradient was N 36° E, and the average 1994-2001 gradient was N 05° W, thereby documenting a clear and dramatic shift in the gradient direction. Since the Shell station is on the opposite side of Saratoga Creek from the Moonlite Cleaners site, the groundwater gradient at the Shell station mirrors the gradient at the Moonlite Cleaners site (i.e., groundwater gradients on the Moonlite site have shifted from northwest to northeast).

Figure 10 of the EKI report depicts a PCE plume that is shifted approximately 60 degrees counter-clockwise from its present configuration. If PCE-containing wastewater had been released at the site before 1978, PCE in groundwater would have migrated to the northwest. Calculations performed by EKI with the REMChlor model indicates total chlorinated organic compound concentrations on the order of 100 µg/L to 200 µg/L still should persist in groundwater northwest of the site as evidence of this migration. Given no such chemical concentrations have been detected in groundwater northwest of the site, a pre-1978 PCE release did not occur.

14. Section VII. Response to March 12, 2013, EKI Report B, p. 7

"Using a 45 degree amount of variation in the groundwater flow direction from a losing to a graining creek, the groundwater flow direction at the Moonlite Cleaners Site could have varied from its present northeast direction under gaining-creek conditions to a northerly direction under losing-creek conditions. This is consistent with the areal spread of groundwater contamination seen in the current groundwater plume with groundwater concentrations in northerly borings, B2, B17, B18, and B32 at 27 µg/L PCE, 4.6 µg/L PCE, 18 µg/L PCE, and 96 µg/L PCE, respectively (see figure 3)."

Comment: Direct push borings B2 and B32 are located close to the building that Moonlite Cleaners formerly occupied. These borings are not useful in determining plume direction because they are within the PCE plume that most likely resulted from a sewer line release after 1978. Borings B17 and B18 are located northwest and north of the building, respectively. As explained in Comment No. 4, the low PCE concentrations in groundwater samples from borings B17 and B18 are not inconsistent with a post-1978 release and are likely due to PCE soil vapor migration or PCE dispersion in groundwater.

15. Section VII. Response to March 12, 2013, EKI Report B, p. 7

"EKI concludes that there is no evidence of groundwater contamination in the northwest direction."

Comment: RWQCB Staff misrepresent the EKI report. The report does not say that there is no evidence of groundwater contamination to the northwest. Rather, the report concludes that low PCE concentrations in groundwater samples collected north-northwest of the building are not inconsistent with a PCE plume that resulted from a post-1978 release and is oriented in the northeast direction.

16. Section VII. Response to March 12, 2013, EKI Report C, p. 7

Staff reiterate their contention that PCE DNAPL may not have reached groundwater until the 1990s. Thus, Staff contend that a PCE release before 1978 would not necessarily have resulted in a PCE plume in groundwater that migrated to the northwest before the gradient shifted.

Comment: As discussed in prior comments, review of available data supports the finding that a release of PCE-containing wastewater, as opposed to a DNAPL release, is the source of PCE in soil gas and groundwater at the site. EKI estimates approximately 6 years were

required for PCE dissolved in wastewater to reach groundwater.[30] If a pre-1978 release had occurred, sufficient time existed for a PCE plume to develop in groundwater and migrate to the northwest.

17. Section VII. Response to March 12, 2013, EKI Report D, p. 7

"EKI infers from a review of groundwater data that groundwater levels at the Site were deeper during the pre-1978 period, therefore if a PCE release occurred pre-1978, it would have resulted in a deeper groundwater plume, which according to EKI does not exist. This is incorrect. Groundwater in boring B32 located 50 feet north of the Site contained 96 µg/L PCE at approximately 40 feet below ground surface. Groundwater monitoring well MW5A located 50 feet northeast of the Site contained 1,130 µg/L PCE at approximately the same depth."

Comment: PCE concentrations in direct push boring B32 and well MW5A are attributable to downward vertical groundwater gradients in this portion of the site. As groundwater moves northeast to Saratoga Creek, a component of flow moves downward in the vicinity of boring B32 and well pair MW5/MW5A. The flow subsequently rises to enter the bottom of the Creek. The well pair MW5/MW5A has consistently shown a downward vertical groundwater gradient while the well pair MW4/MW4A next to Saratoga Creek has consistently shown an upward vertical groundwater gradient. PCE dissolved in groundwater moves both laterally and vertically in response to the gradients.

A PCE concentration of 1,130 µg/L was detected in the initial groundwater sample collected from well MW5A in September 2011. According to U.S. EPA: "Initial well measurements are sometimes highly variable during a 'break in' sampling and analysis period and potentially less trustworthy."[31] Subsequent testing demonstrates lower PCE groundwater concentrations in well MW5A. Eleven additional groundwater samples have been collected from this well and analyzed for chlorinated organic compounds between December 2011 and March 2013. The PCE concentrations of these samples ranged from 350 µg/L to 578 µg/L. As shown on Figure 6 of EKI's report, the PCE concentrations detected in the eleven subsequent sampling events at well MW5A and deeper groundwater samples (i.e., direct push borings B26 and B32, and well MW4A)

[30] EKI, 2013, *op. cit.*, p. 10.

[31] U.S. EPA. March 2009. *Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance*. Office of Resource Conservation and Recovery. EPA 530/R-09-007. p. 4-8.

are consistent with the bottom of a plume formed by a release of PCE-containing wastewater after 1978.[32]

[32] P&D Environmental, Inc.26 April 2013. *Quarterly Monitoring and Report: First Quarter 2013*. File No. 43S1130 (NMK) Former Moonlite Cleaners, 2640 El Camino Real Santa Clara, California. Table 3A.

EXHIBIT A

FRANK LAW GROUP, P.C.

David E. Frank

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October 24, 2011

VIA EMAIL

Nathan King, P.G.
California Regional Water Quality Control Board
San Francisco Bay Region
1515 Clay Street, 14th Floor
Oakland, CA 94612

Re: Former Moonlite Cleaners, 2640 El Camino, Santa Clara, California

Dear Mr. King,

Pursuant to our meeting on September 27, 2011, I am writing on behalf of my client, Moonlite Associates, LLC, to request that the California Regional Water Quality Control Board – San Francisco Bay Region (Regional Board) include United Artists as a discharger and require it to conduct investigation and remediation of the releases of tetrachloroethene (PCE) at and near the Moonlite Shopping Center located at 2610 to 2798 El Camino Real in Santa Clara, California ("the Site"). In addition, I request that the Regional Board pursue obtaining the additional information and data it believes is necessary to support including the City of Santa Clara as a discharger for releases from its sewer system that have impacted my client's property.

United Artists

In March 2011, my office, on behalf of Moonlite Associates, the current property owner, forwarded extensive documentation regarding United Artists' development and ownership of the subject property. As presented in the documents provided to the Regional Board, United Artists (formerly United California Theaters) developed the Moonlite Shopping Center in 1961. United Artists (as United Artists Theatre Circuit, Inc.) continued to own and operate the Moonlite Shopping Center until 1975. In 1975, United Artists sold the Moonlite Shopping Center, but continued as the Master Lessor until 1978, including subleasing tenant space to Moonlite Cleaners until 1978.

The former Moonlite Cleaners operated at the Site between 1961 and 1996. United Artists owned, controlled and/or operated the Moonlite Shopping Center with the dry cleaner as a tenant for 17 of those years, half the time of operation and when less sophisticated equipment and practices were used by operators. United Artists leased the tenant space to Moonlite Cleaners and had control over the tenants' operations from 1961 to 1978. In addition, United Artists through its lease agreement had knowledge of the activities that resulted in releases of PCE and had the authority to prevent such activities by the dry cleaners during this period.

Recent environmental investigations conducted at the Site have shown that the dry cleaner solvent PCE was released to soil, soil gas and groundwater beneath the Site during the period United Artists owned and managed the property, e.g., contamination at depth when groundwater elevations were lower. In addition, the distribution of PCE in the subsurface has been correlated to releases when flow directions were controlled by the lower groundwater elevations during the 1960s and 1970s.

In accordance with the State Water Resources Control Board (SWRCB) Policy on Naming Dischargers (Attwater, 1992), "prior landowners and lessees should be named if they owned or were in possession of the site at the time of discharge, had knowledge of the activities which resulted in the discharge, and had the legal authority to prevent the discharge (numerous orders, including WQ 85-7, 86-15, 91-7 and 92-13)." Based on the foregoing, we are requesting that United Artists be included as a named discharger for releases of PCE at the Moonlite Shopping Center and be required to investigate and remediate the contamination.

City of Santa Clara

Based on our discussions at the September 27, 2011 meeting, we understand that the Regional Board requires additional information before concluding the City of Santa Clara is a discharger of PCE. While we believe that the recent investigations provide definitive data showing releases have and are occurring from the City of Santa Clara wastewater collection system, the Regional Board has indicated that additional soil and/or groundwater data would support inclusion of the City of Santa Clara as a discharger of PCE that has impacted the Site.

Recent investigations have revealed higher concentrations of PCE in groundwater up to 1,280 micrograms per liter (µg/l) in samples collected near the City of Santa Clara sewers with lower concentrations found at and near the area of the former Moonlite Cleaners. As explained during our meeting, the presence of higher concentrations of PCE at distances farther from the dry cleaner than found near the dry cleaner can only reasonably be explained as having originated from releases from the sewer system. In addition, the recent investigations identified the co-presence of Methylene Blue Active Substances (MBAS) and PCE in groundwater. MBAS measures components of synthetic detergents, which are not naturally-occurring and can only reasonably be present in groundwater due to leakage of wastewater containing detergents. Further, during the July 2011 closed circuit television inspection (CCTV) of the sewer pipeline, the City of Santa Clara's sewer system was

observed to be currently discharging wastewater where it "probably will be discharged into waters of the state (Attwater, 1992)."

Moonlite Associates believes the information is conclusive and adequate to support naming the City of Santa Clara as a discharger pursuant to the SWRCB memorandum on the "Responsibility of Operators of Publicly Owned and Operated Sewer Systems for Discharges from their Systems which Pollute Ground Water" (Attwater, 1992). As summarized by the SWRCB, "it must be concluded that the owner or operator of a [publicly owned treatment works] is responsible for discharges from the sewer collection system." Based on this analysis, the SWRCB concluded to the extent the release of wastes creates or threatens to create pollution or nuisance, "the public agencies may be ordered to cleanup the wastes or abate the effects thereof." In addition, as the operator of the sewer system the City of Santa Clara has been in possession of the land where the discharges occurred, had knowledge of the operation of its sewer system and had the legal authority (and responsibility) to prevent such discharges. For these foregoing reasons, the City of Santa Clara should be required as a discharger to address the release of PCE from its sewers.

During our meeting, the Regional Board indicated that soil and/or groundwater data from samples collected from beneath or immediately adjacent to the sewer pipes would aid in its evaluations of the contributions from the City of Santa Clara. Therefore, to the extent that the Regional Board believes such data are necessary, we are requesting it take appropriate action to request the City of Santa Clara to obtain the requisite additional information regarding discharges of PCE near its sewer lines in the vicinity of the Moonlite Shopping Center.

If you have any questions, please contact me.

Very truly yours,

FRANK LAW GROUP, P.C.

Lori J. Gualco

LJG/slh
cc: Client
John Wolfenden, Regional Board
Scott H. Reish, Hogan Lovells US LLP, Attorneys for United Artists,
Julia Hill, Assistant City Attorney
Michael C. Severian, Esq., Rankin, Landsness

EXHIBIT B

Date: August XX, 2012
File No. 43S1090 (NMK)

Moonlite Associates, LLC
c/o SC Management
Attn: Mr. Bill Mehrens
1111 Bayhill Drive, Suite 450
San Bruno, California 94066
Bill_Mehrens@sclay.com

SUBJECT: Partial Approval of Feasibility Study/Pilot Study Work Plan and Request for Reports, Former Moonlite Cleaners, 2640 El Camino Real, Santa Clara, Santa Clara County

Dear Mr. Mehrens:

This letter responds to your March 16, 2012, Feasibility Study/Pilot Study Work Plan (Workplan) for the subject Site. As explained below, I partially approve the Workplan and request five reports.

The Workplan was voluntarily submitted to the Regional Water Board. The Workplan proposes to conduct a feasibility study and an in-situ enhanced biodegradation/chemical reduction pilot study.

Partial Approval
I approve Section 7 of the Workplan containing the Pilot Study Workplan. I am not able to approve the other sections of the report due to deficiencies as described below and in the attached comments.

Conceptual Site Model
We do not agree with the proposed Conceptual Site Model (CSM) that a significant release of the dry cleaning chemical tetrachloroethene (PCE) occurred from the City of Santa Clara sewer. The more likely scenario is that all or most of the release of PCE can be attributed to the former Moonlite Cleaners and not to the City of Santa Clara sewer. A CSM showing a significant release of PCE beneath the former Moonlite Cleaners is supported by the following Site data:

- The highest historical detections of PCE in groundwater, soil gas, and indoor air are in the immediate vicinity of or directly below the former Moonlite Cleaners and not in the immediate vicinity of the City of Santa Clara sanitary sewer.

- The high concentration of PCE in groundwater monitoring well MW-4 is most likely attributed to a release from the former Moonlite Cleaners and not from the City of Santa Clara sewer, since MW-4 is located down gradient of the former Moonlite Cleaners.
- Groundwater monitoring well MW-2 and surface water sampling location C2 are more accurately described as down gradient from the former Moonlite Cleaners. The assumption of these two locations being cross gradient from the former Moonlite Cleaners is used to support the statement that a separate release has occurred from the City of Santa Clara sewer. These two locations are better described as down gradient from the former Moonlite Cleaners if a typical model of a gaining stream is used with Site groundwater and surface water elevation data to explain groundwater flow. Concentrations of PCE collected in groundwater and surface water from these locations most likely originates from a release from the former Moonlite Cleaners.
- Our records indicate the City of Santa Clara has good maintenance practices for its sanitary sewer system, as indicated by its low rate and volume of sanitary sewer overflows and its high capital improvement budget per 100 miles of sewer (both relative to other sanitary sewer systems in the region).
- There is substantial disagreement between Moonlite Associates and the City of Santa Clara over the condition of the sanitary sewer in the immediate vicinity of the site, with the City arguing that its condition is generally good. (We will state our own position on this point when we respond to Moonlite Associates' request to name the City.)

Request for Reports
Please submit the following reports; the reports should address this letter's comments:

- Workplan for contaminated soil gas delineation, contaminated indoor air delineation, and groundwater monitoring well installation
- Pilot Study Completion report
- Revised Workplan

If you have any questions, please contact Nathan King of my staff at (510) 622-3966 [nking@waterboards.ca.gov].

Sincerely,

Bruce H. Wolfe
Executive Officer

Attachment: Feasibility Study/Pilot Study Workplan Comments
cc w/attachment: Mail List

Mail List

Mr. George Cook
Santa Clara Valley Water District
gcook@valleywater.org

Mr. David Parker
Santa Clara City Fire Department
Hazardous Materials Division
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Ms. Julia Hill
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Mr. Scott Reisch
United Artists Theatre Circuit, Inc.
c/o Hogan Lovells US LLP
Scott.reisch@hoganlovells.com

Mr. Peter Krasnoff
West Environmental
peterk@westenvironmental.com

Feasibility Study/Pilot Study Workplan Comments

Pg. 2, Section 1.1, Background, fourth paragraph: The preliminary remediation goal (PRG) of 14 ug/m3 PCE in indoor air for this Site is not sufficiently protective of human health. We recommend using the Regional Water Board Environmental Screening Level for PCE in indoor air of 0.69 ug/m3, which corresponds to a 10^{-6} excess cancer risk (the point of departure value for acceptable risk under Cal/EPA and USEPA guidance).

Pg.8, Section 2.4, Historical Site Use: The discussion regarding the ownership history of the Site is not complete. Update this section with a full ownership history of the Site.

Pg. 8, Section 2.4.1, Dry Cleaning: It is unclear how the use of PCE and disposal of the PCE waste to the sanitary sewer can be inferred from building department records and telephone directories. Clarify this section.

Pg. 9, Section 2.4.3, Subsurface Utilities: There is no mention of any other utilities and utility trenches that may also be acting as preferential pathways for soil gas. Address this possibility since it is important to consider when developing the Conceptual Site Model (CSM).

Pg. 11, 3.1 Indoor Air Sampling: Indoor air samples have not been collected from within the next tenant space to the east (Rite Aid); soil gas samples collected beneath Rite Aid on March 20, 2009, contained concentrations of PCE at 240,000 ug/m3, more than 570 times higher than the associated ESL. Soil gas has not been delineated beneath the Palo Alto Medical Group tenant space to the west and indoor air samples have not been collected from this tenant space. Soil gas could similarly be contaminated with PCE at the same concentrations as beneath Rite Aid due to the similar distance from the former dry cleaner facility. Submit an indoor air sampling workplan to further delineate the extent of PCE in the breathing space by collecting samples from these tenant spaces.

Pg. 14, Section 3.2, Soil Gas Sampling and corresponding figures: Soil gas contamination is not delineated to the adjacent tenant spaces within the Moonlite Shopping Center, and is not delineated off-Site to the east before the residences, to the south before the residences, or downgradient across El Camino Real. Submit a soil gas sampling workplan to delineate the soil gas plume down to or below the corresponding ESL for PCE in soil gas (410 ug/m3 residential, 1,400 ug/m3 commercial).

The western extent of soil gas contamination is sampling locations SG5 (580 ug/m3 PCE), SG6 (45,000 ug/m3 PCE), and SG13 (190,000 ug/m3 PCE) located beneath the adjacent western tenant space. The extent of the soil gas contamination to the west of these sampling locations beneath 2652 El Camino Real has not been delineated (Palo Alto Medical Group).

The eastern extent of soil gas contamination is sampling locations SG11 (530 ug/m3 PCE) and SG12 (2,800 ug/m3 PCE), located two tenant spaces to the east. The extent of soil gas contamination to the east of these sampling locations beneath Savemart has not been delineated. Additionally, the soil gas contamination has not been delineated east of Savemart to Bowe Avenue.

The southern extent of soil gas contamination is sampling location SG25 (1,500 ug/m3 PCE, 10-foot sample) located in the alley before the residences behind the strip mall. The extent of soil gas contamination before the residences to the south of this sampling location has not been delineated.

Off-site soil gas has not been delineated before the residences in the parking lot to the north across El Camino Real. Concentrations of PCE in soil gas at 3,400 ug/m3 at 10' at the downgradient (southern) side of the residences indicates that further investigation is required. Please submit an off-Site soil gas investigation workplan to further delineate the extent of contaminated soil gas.

The soil gas data is not discussed in the context of characterization, but discussed chronologically by investigations. Provide the following:

- Soil gas isoconcentration figure for each depth (5' and 10')
- Discussion of the lateral and vertical extent and source of soil gas contamination and use this in developing the CSM

Pg. 15, Section 3.2.2, Soil Gas Sampling – December 2009: Please use the common name of vinyl chloride in the text and in the corresponding figures. The term chloroethene is not widely used and can lead to confusion.

Pg. 21, Section 3.8, Soil Vapor Extraction System: There are no vertical soil vapor extraction wells beneath the facility, only horizontal extraction wells, which potentially will not be able to remove PCE in soil and soil gas down to groundwater. Please discus how the design of the soil vapor extraction system immediately beneath the facility can be expected to remediate the vadose zone, which will continue to release PCE to groundwater unless addressed.

Pg. 25, section 4.0, Data Evaluation, and figure 4-1, Conceptual Site Model (CSM): The most significant source of PCE at the site, the dry cleaner, is not shown on the CSM. Soil gas concentrations beneath the dry cleaner are up to 5,700,000 ug/m3, while soil gas concentrations near the sewer line are up to 110,000 ug/m3. Indoor air concentrations in the dry cleaner were up to 150 ug/m3 PCE. These concentrations indicate that the dry cleaner is by far the most significant source at the site. Revise figure 4-1 to reflect this. Show the dry cleaner on figure 4-1 and depict the much greater concentrations discharged directly from the dry cleaner to soil and groundwater.

Pg. 25, section 4.1, Historic Groundwater Elevations, first sentence: Should it be 75 feet "below" mean sea level?

Pg. 26, Section 4.2, Hydrogeology of the Site: The discussion of MW-2 and Saratoga Creek sample location C2 as being located cross-gradient from the former dry cleaning facility is not entirely accurate. Groundwater monitoring well MW-2 and surface water sampling location C2 are more accurately described as down gradient from the former Moonlite Cleaners. The assumption of these two locations being cross gradient from the former Moonlite Cleaners is used to support the statement that a separate release has occurred from the City of Santa Clara sewer. These two locations are better described as down gradient from the former Moonlite Cleaners if a typical model of a gaining stream is used with Site groundwater and surface water

elevation data to explain groundwater flow. Concentrations of PCE collected in groundwater and surface water from these locations most likely originates from a release from the former Moonlite Cleaners. Provide a groundwater elevation figure with contours with an interpretation of the flow of groundwater into the gaining stream.

Pg. 27, Section 4.3.1, Former Moonlite Cleaners: The possibility of a PCE release directly beneath the facility from the dry cleaning machines and equipment is not discussed. This is the most likely scenario given the extremely high soil gas and indoor air concentrations beneath the former dry cleaning facility. Include this scenario in the discussion and update the CSM to reflect this.

It is stated that PCE wastewater was discharged to the sanitary sewer lateral beneath Moonlite Cleaners prior to discharging into the City of Santa Clara's sewer system main in the alley south of the shopping center. Please discuss how the Moonlite lateral sewer has been investigated and the likelihood of the sewer lateral causing a release of PCE to the environment.

Pg. 27, Section 4.3.2, City of Santa Clara Sewers: It is again stated that MW-2 and surface water sampling point C2 are located cross gradient from the former dry cleaning facility. This is not entirely accurate and requires further discussion – see comment above.

Pg. 28, section 4.3.2, City of Santa Clara Sewers, second and third full paragraphs: The most significant source of PCE to groundwater at the site is the dry cleaner as demonstrated by the soil gas concentrations referenced above. The current direction of groundwater flow is from the dry cleaner to the northeast towards the intersection of El Camino Real and Bowe Avenue. PCE detected in groundwater beneath the parking lot north of the SaveMart is most likely from a release directly from the dry cleaner. PCE in Saratoga Creek at locations C4 and C5 is most likely from the groundwater plume from the dry cleaner discharging to the creek since the creek is a gaining creek and the groundwater gradient is from the dry cleaners towards the creek. Revise these sections to reflect this.

Our records indicate the City of Santa Clara has good maintenance practices for its sanitary sewer system. We think it is less likely that the release of PCE was from the sanitary sewer.

The assumption that the presence of PCE and methelyne blue active substances (MBAS), an indicator for anionic surfactants such as detergents, can only be reasonably explained as emanating from sewer releases is not accurate. Another possibility of two separate releases is not discussed: (1) a PCE release from the dry cleaning facility and (2) MBAS release from a broken sewer pipe beneath the facility or the sewer main. The lateral is not maintained by the City and a leaking lateral could be the cause of the release. Revise these sections to reflect this.

Pg. 29, section 4.3.2, City of Santa Clara Sewers, second paragraph: The most significant source of PCE to groundwater at the site is the dry cleaner as demonstrated by the very high soil gas concentrations referenced above. Boring B33 at 1,059 ug/L PCE does not have the highest concentrations of PCE, monitoring well MW-5A at 1,130 ug/L PCE does near the dry cleaner. Revise this paragraph to state that the PCE in groundwater in the northern portion of the site is most likely from a release from the dry cleaner. We note that MW-5A is no longer the highest concentration well, which we attribute to the soil vapor extraction in the area of MW-5A.

Pg. 30, section 4.4, Lateral Extent of PCE: Include the lateral extent of PCE in soil gas and indoor air. See comments above.

Currently, the existing monitoring wells do not adequately define the extent of contaminated groundwater for monitoring purposes through time. Additional shallow zone monitoring wells should be installed down gradient of the existing wells. MW-4 contained 1,020 ug/L PCE in the most recent monitoring event, yet this is the furthest down gradient monitoring well.

Additionally, a deeper well should be installed to monitor this deeper zone – two wells are insufficient to monitor a water bearing zone. MW-5A had up to 1,130 ug/L PCE and MW-4A had up to 21.5 ug/L PCE. The deeper water bearing zone may flow in a more northerly direction and be less affected hydraulically by Saratoga Creek.

Submit a monitoring well installation workplan to address these deficiencies.

Pg. 32, section 5.0, Feasibility Study Objective, second sentence: Include indoor air in the list of media with VOCs.

Pg. 32, section 5.1, Development of Remedial Action Objectives, second sentence: Include indoor air in the list of media with VOCs.

Pg. 33, section 5.1, Development of Remedial Action Objectives, first bullet: Also include monitoring of indoor air.

Pg. 33, section 5.1, Development of Remedial Action Objectives, third paragraph, third sentence: Also include indoor air results when developing PRGs.

Pg. 35, section 5.4, Screening Level Assessment, third paragraph: Also include PRGs for soil and indoor air.

Pg. 35, section 5.4, Screening Level Assessment, third paragraph: Also include maximum contaminant levels and Regional Water Board environmental screening levels as screening levels.

Pg. 35, section 5.4.1, Exposure Pathways Evaluation, second sentence: Also include human exposure to indoor air.

Pg. 35, section 5.4.1, Exposure Pathways Evaluation, third sentence: Also include screening for soil.

Pg. 36, section 5.4.2, Identification of PRGs: Also include PRGs for indoor air.

Pg. 36, section 5.4.2, Identification of PRGs: PRGs are narratively mentioned but not numerically stated. Include numerically what the specific PRGs are for each chemical of concern and for each media. A table would be helpful.

Pg. 36, section 5.4.2.1, Environmental Screening Levels, first sentence: ESLs are also available for soil.

Pg. 37, section 5.5, Evaluation of Findings: Also include a section on indoor air conditions.

Pg. 38, section 5.5.2, Soil Gas Conditions: Include a summary of soil gas data and a comparison to ESLs.

Pg. 38, section 5.5.3, Groundwater Conditions: Also include a comparison of PCE groundwater concentrations to MCLs.

Pg. 41, Section 6.2.2, and Preliminary Screening: The Feasibility Study and Remedial Action Plan should address soil, soil gas, indoor air and groundwater, not just groundwater. Include an evaluation of the interim remedial action using soil vapor extraction currently ongoing at the Site, as well as proposing a final soil cleanup plan.

Pg. 47, section 6.4.1.8, Regulatory Acceptance: Regulatory acceptance of the RAP won't be known until after submittal of the RAP.

Pg. 48, section 6.5, RAP Preparation, and Pg. 53, section 7.4, Remedial Action Plan: It is unclear if a feasibility study (FS) will be submitted. The Workplan contains a workplan to conduct an FS, but then these sections only include submittal of a RAP and not an FS. Discuss whether an FS will be submitted.

Pg. 53, section 7.4, second sentence: Also include a summary of indoor air investigations in the FS/RAP.

Table A-1, Pg. 1, feasibility of air sparging: Correct the site address in this section.

EXHIBIT C

From: King, Nathan@Waterboards <Nathan.King@waterboards.ca.gov>
Sent: Tuesday, October 09, 2012 6:23 PM
To: Reisch, Scott H.; Lori J. Gualco (ljgualco@gualcolaw.com)
Subject: Moonlite Cleaners

Scott and Lori,

We are planning on moving forward with issuing an order that names Moonlite and UA as dischargers. Management believes there is enough circumstantial evidence to also name UA to this case. An Order is required at this point since cleanup of sites are not allowed under Section 13267 of the Water Code. Section 13304 allows us to require cleanup, and allows us to name multiple dischargers (amongst other things).

Prior to this occurring, we need to respond to the Feasibility Study/Pilot Study Workplan (Workplan) submitted by Moonlite. Moonlite wants to proceed with getting the site cleaned up and this is an important step.

Regarding the Workplan, there are three possibilities 1) respond to Workplan and address our letter to Moonlite only 2) respond to Workplan and address our letter to both parties, which requires a 30 day notice since UA is then named or 3) delay our response by requiring this work as a task in the pending order, which also requires a 30 day notice.

I have been instructed that we only want to have one comment period, which eliminates the second possibility.

If possible, it would be constructive if Moonlite and UA could first correspond regarding these issues before responding. If it would help, I can facilitate this.

Please contact me to discuss as soon as possible. I will be in tomorrow after lunch, all day Thursday, and off all day Friday, returning Monday.

Sincerely,

Nathan King, PG
Engineering Geologist
San Francisco Bay Regional Water Quality Control Board
Toxics Division
(510) 622-3966

EXHIBIT D

Review of Environmental Data

Former Moonlite Cleaners
2640 El Camino Real
Santa Clara, California
(EKI B10003.00)

12 March 2013

Submitted to:

California Regional Water Quality Control Board
San Francisco Region

On Behalf of:

United Artists Theatre Circuit, Inc.

Erler & Kalinowski, Inc.

Consulting Engineers and Scientists
1870 Ogden Drive
Burlingame, California 94010
(650) 292-9100
Fax: (650) 552-9012

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EXECUTIVE SUMMARY

United Artists Theatre Circuit, Inc. or its predecessors ("UATC") formerly owned the property located at 2640 El Camino Real in Santa Clara, California (the "subject property" or "Site") from at least 1962, when a drycleaner allegedly began operating at the Site, until November 1975. At that time, UATC sold the subject property and then leased it until September 1978, with no involvement with the Site subsequent to that time. A drycleaner continued to operate at the Site until October 1996. In September 2004, the current owner of the Site discovered perchloroethylene contamination, which is believed to have originated from the onsite drycleaner. In the absence of groundwater quality data or eyewitness testimony of perchloroethylene spills during the period of UATC's ownership or tenancy at the Site, UATC asked Erler & Kalinowski, Inc. ("EKI") to assess the likelihood of a pre-1978 release based on the currently available technical data.

Hydraulic conditions at the Site through time can be inferred based upon a correlation between groundwater elevation data from the Santa Clara Subbasin Index Well hydrograph (Figure 8) and local groundwater elevation data from a former Shell Service Station located in close proximity to the Site. This correlation leads EKI to conclude that from 1962 to the mid-1990s, groundwater elevations at the Site were relatively low and that Saratoga Creek was a losing stream, resulting in a northwest-trending groundwater gradient at the Site. As a result of that gradient, and because there is no evidence of any subsurface conditions that would alter groundwater flow directions, a hypothetical chemical release that reached groundwater during this time period (1962 to the mid 1990s) would have experienced a northwest groundwater gradient and resulted in a northwest-trending plume.

Analysis of chemical migration travel times indicates that if a release had occurred between 1962 and 1978, the period when a drycleaner allegedly operated on the property while UATC owned or leased the Site (the "relevant time period"), the release would have reached the groundwater table within approximately six years, generating a northwest-trending plume. Calculations show that evidence of a northwesterly-trending plume would be evident in the current analytical data for groundwater. As there is no evidence of a northwest-trending plume in the currently available analytical data for groundwater, EKI concludes that a pre-1978 release of chemical laden wastewater did not occur.

Instead, the documented chemical plume in groundwater trends northeast consistent with the currently measured groundwater gradient to the northeast that was initially established in the mid-1990s. A chemical release from the ground surface at the Site would have required several years to reach the groundwater table and establish a plume. Thus, a chemical release in approximately 1990 may have been the cause of the plume shown on Figure 13. Alternatively, a somewhat older release to groundwater, e.g., originating in the late 1980s, in the vicinity of the sewer line in the alley south of the former drycleaner operation may have reached groundwater with a northwesterly gradient and then shifted to a northeasterly gradient in 1994, giving rise to the plume shown on Figure 13. Given such release dates, calculations indicate that there was adequate time for the approximately 600-foot long plume observed today to become established.

The conclusion that the chemical plume post-dates the period when UATC owned or leased the Site is further supported by the vertical distribution of contaminants in shallow

groundwater that are more consistent with a post-1978 release when the water table was shallow than a pre-1978 release when the groundwater table was deep. Releases that occurred during a pre-1978 time period would have resulted in a deep groundwater plume consistent with groundwater elevations at the time. There is no evidence to support the occurrence of releases during this pre-1978 time period.

1 INTRODUCTION

On behalf of United Artists Theatre Circuit, Inc. and its predecessors ("UATC"), Erler & Kalinowski, Inc. ("EKI") is pleased to present to the California Regional Water Quality Control Board, San Francisco Bay Region ("Water Board") this report that presents a review of available environmental data for the former Moonlite Cleaners property at 2640 El Camino Real in Santa Clara, California (the "subject property" or "Site").

UATC owned or leased the subject property during the period from 1962, when a drycleaner allegedly began operating at the Site, until November 1975. At that time, UATC sold the subject property and then leased it until September 1978, with no involvement at the Site subsequent to that time. A drycleaner continued to operate at the Site for approximately eighteen years, from 1978 until October 1996. In September 2004, the current owner of the Site discovered perchloroethylene ("PCE", also known as tetrachloroethene) contamination, which is believed to have originated from the onsite drycleaner. Given the absence of groundwater quality data or eyewitness testimony of PCE spills during the period of UATC's ownership or tenancy at the Site, UATC asked Erler & Kalinowski, Inc. ("EKI") to assess the likelihood of a pre-1978 release based on the currently available technical data.

As discussed, below, our conclusion is that the current distribution of chemicals in the subsurface is consistent with a post-1978 release and that there is no evidence of a pre-1978 release.

2 SITE LOCATION AND SETTING

The former drycleaner operation was situated within a retail/commercial building (Moonlite Shopping Center) located at 2640 El Camino Real in Santa Clara, California (Figure 1).

The Moonlite Shopping Center is bounded to the north by El Camino Real, to the east by Bowe Avenue and Saratoga Creek beyond Bowe Avenue, to the south by a bowling alley and multi-family residential development, and to the west by Kiely Boulevard. The Site is located between Dynasty Food to the east and a Korean barbecue restaurant to the west.

The Site is located approximately 400 feet west of Saratoga Creek and approximately 2,500 feet east of Calabazas Creek. Review of topographic maps prepared by the United States Geological Survey ("USGS") for 1899 and 1953 (Figures 2 and 3) confirms that the locations of these creeks have remained largely unchanged during the past 100 years. Given the close proximity of the Site to Saratoga Creek, it is expected that groundwater elevations and flow directions at the Site would be strongly influenced by hydrologic conditions of Saratoga Creek.

3 GEOLOGIC SETTING

In investigating current and historical groundwater flow conditions, it is important to understand the geology of the Site, specifically whether low permeability sediments are present at the Site that could affect groundwater velocities and flow directions.

The geology at the Site is depicted on a recent geologic map of the Cupertino and San Jose West Quadrangles (Dibblee, 2007), a portion of which is reproduced on Figure 4. The Site is directly located on silty clay and organic clay interpreted to represent an intra-alluvial fan area. These are relatively low permeability materials. However, the results of on-Site investigations indicate that these low permeability units are limited to the shallow subsurface and are largely above the water table (West, 2012). Sedimentary units at the Site below the water table are more permeable.

To assess the possible presence of low permeability units at the Site, EKI generated two cross-sections: cross section locations A1-A1' and B1-B1' as shown on Figure 5. Cross section A1-A1' (Figure 6) is oriented southwest-northeast, sub-parallel to the orientation of the alluvial fan bodies indicated on Figure 4. Cross section B1-B1' (Figure 7) is oriented northwest-southeast, transverse to the orientation of the alluvial fan bodies.

Review of cross section A1-A1' (Figure 6) indicates that the ground surface at the Site is at an elevation of approximately 80 feet above mean sea level ("msl"). There are approximately 6 feet of clay in the shallow subsurface beneath the Site that, combined with a silt unit, appear to thicken to the northeast toward Saratoga Creek. The 6-foot thick clay at the Site is underlain by approximately 30 feet of sands, silty sands and gravel with limited clayey intervals down to an elevation of approximately 43 feet msl. Below 43 feet msl, a clay body is present with a minimum thickness of 15 feet. As discussed below, the groundwater elevation during the third quarter 2012 was at approximately 68 feet msl at the Site and the local groundwater gradient was to the northeast, parallel to this line of section (P&D, 2012). The saturated subsurface sediments at the Site are sufficiently permeable that chemicals released to the subsurface have been able to migrate to the northeast parallel to the current groundwater gradient direction (Figures 6 and 13).

Cross section B1-B1' (Figure 7) depicts the subsurface sediments in a northwest-southeast transect beneath the Site. Drilling is somewhat limited at depth northwest of the Site. However, at both locations B17 and B22, silts and sands are encountered at and below the current water table. The subsurface sediments along this northwest-southeast cross section are similar to those observed on cross section A1-A1' and also appear to be relatively permeable. There is no evidence of a substantial clay body in the saturated zone that would deflect groundwater flow paths. Accordingly, if, as discussed below, a groundwater gradient to the northwest existed historically, chemicals released to the subsurface at the Site would have migrated to the northwest.

4 HYDRAULIC SETTING

Historical Hydraulic Conditions

Groundwater elevation data for the Site do not exist prior to 2009. However, historical groundwater elevation data at the Site can be estimated based on (1) groundwater elevations measured in the Santa Clara Subbasin Index Well ("Index Well") (Figure 8), located approximately 5 miles to the south-southeast of the Site from the 1930s through the present and (2) groundwater elevations measured between 1990 and 2000 at the former Shell Service Station located at 2540 El Camino Real, Santa Clara, CA, on the opposite side of Saratoga Creek from the Site (Figures 9 and 10). This service station is located at nearly the same distance from Saratoga Creek as the Site, and would therefore be expected to experience similar, yet mirrored, groundwater conditions (i.e., due to symmetry across Saratoga Creek).[1]

During the period 1962 to 1978, groundwater elevations within Santa Clara Valley were substantially lower than at present (SCVWD, 2001). Based on review of groundwater elevations measured in the Index Well (Figure 8), groundwater elevations in the area were at their lowest point on record in the early to mid-1960s and generally rose thereafter in response to active recharge and reduced pumping of the basin.[2] Between 1962 and 1978, groundwater elevations in the Index Well fluctuated within a range that was typically about 45 to 165 feet lower than current conditions.

To determine how these changes in the subbasin would have impacted groundwater conditions at the Site, EKI examined the correlation between groundwater elevations at the Index Well and those at the former Shell Service Station well for which there are groundwater elevation data for the period 1990 to 2000. Inspection of Figure 9 shows that when groundwater elevations in the Index Well are less than approximately 70 feet msl, a positive correlation exists between those groundwater levels and local groundwater levels, as measured in the former Shell Station monitoring well. This positive correlation is indicated by the upward sloping pattern of points on the left side of Figure 9. At a groundwater elevation of approximately 70 feet msl in the Index Well, a break in slope occurs. Above that elevation (i.e., on the right side of Figure 9), the paired local and Index Well groundwater elevation data indicate a lack of correlation; that is, at higher Index Well groundwater elevations, the local groundwater elevations do not increase. Rather, the local groundwater elevations appear to reach a maximum elevation of approximately 63 to 65 feet msl.

The change in the correlation pattern between local groundwater levels and (regional) Index

[1] The groundwater elevation data for this former Shell Service Station were obtained from the Geotracker website maintained by the State Water Resources Control Board. The groundwater elevation data for the former Shell Service Station shown on Figure 9 have been adjusted to account for the use of a local datum by subtracting 23 feet from the original measuring point data, thereby placing both sets of data on the same datum by comparison. The 23-ft adjustment was determined by comparing the reported top of casing elevation data (i.e., approximately 100 ft) with the ground surface elevation as determined from topographic maps (i.e., approximately 77 feet msl).

[2] Santa Clara Valley Groundwater Management Plan (2001) states on p. 12: "While groundwater elevations in the well are not indicative of actual groundwater elevations throughout the County, they demonstrate relative changes in groundwater levels."

Well groundwater levels (i.e., from being positively correlated when Index Well elevations are less than 70 feet msl to being uncorrelated when Index Well elevations are greater than 70 feet msl) can be attributed to the local effect of Saratoga Creek. As discussed below, the key feature of Saratoga Creek that bears on this issue is the elevation of its streambed at approximately 62 feet msl.

When the Index Well groundwater elevation is less than approximately 70 feet msl and the local former Shell Station groundwater elevation is less than the elevation of the Saratoga Creek streambed (i.e., approximately 62 feet msl), Saratoga Creek is a losing stream. Under losing stream conditions, local groundwater elevations are correlated (i.e., rise and fall in concert) with regional groundwater elevations.

When the Index Well groundwater elevation is greater than approximately 70 feet msl and the local former Shell Station groundwater elevation is above the elevation of the Saratoga Creek streambed (i.e., approximately 62 feet msl), Saratoga Creek becomes a gaining stream and begins to act as a drain for groundwater, preventing further large increases in groundwater levels. For this reason, local groundwater levels tend to reach a maximum just a few feet above the elevation of the streambed, regardless of whether regional groundwater levels are still increasing.

As stated above and shown on Figure 9, this transition from losing to gaining conditions occurs when Index Well groundwater elevations are at approximately 70 feet msl. The timing of this transition can be seen on Figure 8 which shows that Saratoga Creek was a losing stream prior to the mid-1990s and has been a gaining stream for most time periods thereafter.

Groundwater Elevation Configuration with Low Water Table and Saratoga Creek a Losing Stream

Based on the Index Well hydrograph (Figure 8) and the correlation to local conditions shown on Figure 9, during the entire period from 1962 to the mid-1990s, including the relevant time period (1962 to 1978), the groundwater table would have been below the bottom of Saratoga Creek, and the creek would have been a source of recharge to groundwater (i.e., a losing stream) when surface flows were present (i.e., typically in the wet winter months). Figure 10 illustrates the approximate groundwater elevations and gradients that would have prevailed under such losing conditions at Saratoga Creek. As shown on Figure 10, a hypothetical chemical release at the Site that reached groundwater during the 1962 to 1978 time period would have resulted in a northwest-trending plume.

Evidence for Groundwater Gradient Shift, Former Shell Service Station, East of Saratoga Creek

Based on the above analysis, Saratoga Creek would have been a losing stream from the 1940s until the mid-1990s, producing a northwest groundwater flow direction at the Site, and a gaining stream from the mid-1990s until 2000, yielding a northeastern groundwater flow direction at the Site. Because groundwater elevation data for the former Shell Station Site were available for both the period 1990 to mid-1990s and the period mid-1990s to 2000, EKI reviewed groundwater elevation data from the former Shell Station Site to determine if in fact a shift in groundwater gradient direction occurred as expected. Based on the results of 3-point

gradient calculations for monitoring wells MW-1, MW-2, and MW-3 at the former Shell Station site (see Attachment A), the data show that the gradient shifted from being, on average, to the northeast in the early 1990s, to the north/northwest in the later part of the decade. Because the former Shell Station is located on the opposite side of Saratoga Creek from the Site and the creek acts as a line of symmetry, the gradient directions at the Site are generally mirror images of the directions at the former Shell Station. Therefore, at the Site, the gradient shifted from being, on average, to the northwest in the early 1990s to the northeast in the later part of the decade.

This change in groundwater gradient direction on the east side of Saratoga Creek is consistent with EKI's conclusion that the general rise in groundwater levels observed over the 1990s caused Saratoga Creek to transition from losing stream conditions to gaining stream conditions, with a resulting shift in groundwater gradients and groundwater flow directions.

Groundwater Elevation Configuration With High Water Table and Saratoga Creek a Gaining Stream

Current conditions are depicted on Figure 11, reflecting the condition where Saratoga Creek is a gaining stream. Under such conditions, the groundwater gradient at the subject property is to the northeast rather than to the northwest. Accordingly, a chemical release to groundwater under the hydraulic conditions that have existed at the Site since the mid-1990s would result in a plume oriented to the northeast rather than to the northwest.

5 CONTAMINANT DISTRIBUTIONS

Data for PCE in soil gas samples collected from 1 foot below ground surface are reported in West (2012) and are posted on Figure 12. These data show that the most elevated concentrations of PCE in soil gas are from beneath the subject property, strongly suggesting that chemical releases occurred in this general area sometime in the past.

Data for PCE in grab groundwater samples from all depths as reported in West (2012) and P&D (2012) are posted on Figure 13 and contoured according to concentration. Review of the 200 microgram per liter ("ug/L") PCE contour suggests that there is a plume of PCE that emanates from near the former Moonlite Cleaners and potentially a second plume related to a chemical release associated with a nearby sewer line. (There has been no sampling in the area between the two contour lines so it is not possible to tell if there is one plume or two distinct plumes.) The fact that PCE was detected at concentrations above 20 ug/L in most samples collected along the sewer line alignment, even in locations that would have been upgradient or cross-gradient from the former dry cleaners operation, suggests that the sewer line itself may have been a source of contamination to local groundwater. Previous video logging of portions of the sewer pipe (described in West, 2011) reportedly indicated compromised pipe integrity which may have resulted in leaking of wastewater from the sewer into the unsaturated zone soils. It is also possible that wastewater was conveyed in the granular backfill around such sewers.

Data for PCE in grab groundwater samples as reported in West (2012) and P&D (2012) are also posted on cross sections A1-A1' and B1-B1' (Figures 6 and 7). As shown on cross section A1-A1', the core of the PCE plume occurs at an elevation of approximately 55 feet msl and extends down-gradient to the northeast. In contrast, as shown on cross section B1-B1', PCE concentrations in groundwater northwest of the Site at boreholes B17 and B22 are low. This suggests that the PCE was discharged to the subsurface at or near the subject property and impacted groundwater when the groundwater table was relatively shallow and when the groundwater gradient was to the northeast rather than the northwest.

There are no available analytical data for soil.

6 DATA EVALUATION

In this section, the available data are evaluated with respect to timing of chemical releases.

The available chemical data for soil gas and groundwater indicate that PCE was released to the subsurface at and in the vicinity of the onsite drycleaner operation. The concentrations of PCE detected in groundwater are relatively low, consistent with a discharge of PCE dissolved in wastewater rather than as a separate phase dense non aqueous phase liquid[3]. A release of wastewater would have migrated primarily vertically downwards through the unsaturated zone to the groundwater table beneath the Site (Stephens, 1996). In addition, it appears that some wastewater may have been conveyed along sewer lines, possibly in backfill, to locations distant from the Site (see 200 ug/L PCE contour south of Savemart on Figure 13), where it migrated vertically downward through the unsaturated zone to the groundwater table.

Assessment of Fate and Transport of Hypothetical Release During the Period 1962 to 1978

During the relevant time period of 1962 to 1978, the groundwater table was significantly deeper than it is today. In order for a release during this time period to have not resulted in a northwest-trending plume, it would have had to not reach the groundwater table before the mid-1990s, when the current northeasterly gradient was established. This means the release would have had to have taken more than approximately 16 to 33 years to travel through the vadose zone (i.e., unsaturated zone above the water table) to reach the groundwater table by 1995.

To evaluate the timing of such a hypothetical release, EKI performed travel time calculations for a dissolved solute released in the shallow subsurface and traveling vertically downwards through the unsaturated zone to the groundwater table. The physical transport processes considered in the evaluation include steady-state advection and sorption. Details of the analysis, including the method and assumptions, are included in Attachment B. Results from the analysis indicate that advective transport of PCE through the vadose zone to the groundwater table would have occurred within approximately six years under a loading rate of approximately 5.8 feet per year. The loading rate is limited by the saturated hydraulic conductivity of the least permeable soil within the soil profile. Previous studies by others (e.g., USEPA, 1989b) of leakage rates from older vitrified clay sewer pipes in northern California indicate that loading rates of this magnitude or greater are reasonable.

[3] U.S. Environmental Protection Agency (1989a) guidance indicates that "sampled groundwater concentrations in excess of 1% effective solubility…indicate that the sampled groundwater may have come in contact with DNAPL [Dense Non-Aqueous Phase Liquid]". The concentrations of volatile organic compounds, including PCE, detected in groundwater at the Site are less than 1% effective solubility. For example, the most elevated concentrations of volatile organic compounds detected to date in groundwater from the Site were from groundwater sample B33-W which contained PCE at a concentration of 1,020 ug/L and TCE at a concentration of 30.6 ug/L (West, 2012). These concentrations are at 0.51% effective solubility, significantly less than 1% effective solubility. Therefore, there is no evidence of DNAPL discharge to the subsurface and a release of PCE in wastewater is the likely source of the site contamination.

Therefore, if a release had occurred between 1962 and 1978, it would have reached the groundwater table within approximately six years, arriving between approximately 1968 and 1984. Under the groundwater conditions prevailing during that period (1968 to 1984), the groundwater gradient and flow direction would have been to the northwest. Therefore, a pre-1978 release of chemical-laden wastewater that reached the groundwater table would have experienced a northwest groundwater gradient and would have begun to spread into a northwest-trending plume. The absence of such a plume today suggests that no such release occurred.

Given the change in gradient to the northeast in the mid-1990s, the question arises whether evidence of a northwest-trending plume would still be evident today if a release occurred prior to 1978. Accordingly, EKI specifically considered whether such a plume would have dissipated or migrated to the northeast once the gradient shifted in the mid-1990s. Calculations of saturated zone transport of chemicals of concern performed using the REMChlor model (Falta, 2007) were performed and indicate that evidence of a northwesterly-trending plume would be observable in the current analytical data for groundwater if a pre-1978 release had occurred (see Attachment C). Specifically, total chlorinated compound concentrations on the order of 100 ug/L to 200 ug/L should be detected in groundwater at locations northwest of the Site. As there are no such chemical concentrations detected in the currently available analytical data for groundwater to the northwest of the Site (see Figure 13), EKI concludes that a pre-1978 release of chemical-laden wastewater did not occur at the Site.

Documented Northeast-Trending Chemical Plume in Groundwater Consistent with Post-1978 Release

Having concluded that the current plume is inconsistent with a pre-1978 release date, EKI considered whether the plume could be explained by a release of chemical-laden wastewater in the period from the late 1980s through October 1996. As discussed in Section 4, starting in the mid-1990s onward, the groundwater table at the Site was relatively high, estimated to be approximately 65 feet msl. Since the streambed elevation of Saratoga Creek in this area is approximately 62 feet msl, the local groundwater gradient on the west side of Saratoga Creek would have been to the northeast reflecting the condition where Saratoga Creek was a gaining stream.

Review of Figure 13 shows that the existing chemical plume in groundwater trends to the northeast, consistent with the current northeasterly groundwater gradient which was initially established in the mid-1990s. A chemical release at or just below the ground surface would likely have required fewer than six years to reach the shallow groundwater table and establish a plume because the groundwater table in the 1990s was shallower than it was during the relevant time period. Thus, a chemical release from the former drycleaner operation in the early 1990s would explain the plume shown on Figure 13. Alternatively, a somewhat older (e.g., mid-1980s) release to groundwater, in the vicinity of the sewer line in the alley south of the former dry cleaner operation may have reached groundwater with a northwesterly gradient and then shifted to a northeasterly gradient in the mid-1990s, giving rise to the plume shown on Figure 13. Calculations indicate that a release during the period from the mid-1980s through October 1996 would have had adequate time to form the approximately 600 foot long

plume observed today.[4]

Measured Elevated PCE Concentrations in Shallow Subsurface Consistent with Post-1978 Release

As shown on Figures 6 and 7, most of the elevated concentrations of PCE detected in grab groundwater samples and monitoring wells are from elevations in the shallow subsurface at approximately 55 feet msl.

Because of the substantially lower groundwater levels during the period of UATC Site ownership or tenancy and the corresponding thick vadose zone, a pre-1978 release of wastewater would have migrated vertically downward through the vadose zone under gravity. Thus, it is expected that significant contamination would be present at depth, having penetrated down at least as far as the thick clay that underlies former Moonlite Cleaners at an elevation of approximately 40 to 45 feet msl. Instead, the core of the plume appears to be at an elevation of 55 feet msl and PCE concentrations decline substantially with depth. Therefore, the vertical distribution of contaminants in groundwater are more consistent with a post-1978 release when the water table was shallow than a pre-1978 release when the groundwater table was deep.

Finally, the data for the deepest groundwater samples collected at the Site, from an elevation of approximately 30 feet msl, (Figure 12) do not support the concept of a deep contaminant plume related to a pre-1978 release:

- B26A-W from 48 – 50 feet below ground surface, collected 7/28/2010:
  - 0.55 ug/L PCE
  - 0.59 ug/L TCE
  - <0.5 ug/L cis-1,2-DCE
- B32A-W from 48 – 50 feet below ground surface, collected 7/27/2010:
  - <0.5 ug/L PCE
  - <0.5 ug/L TCE
  - <0.5 ug/L cis-1,2-DCE
- MW-4A from 45 – 50 feet below ground surface, collected 9/19/2012:
  - 2.39 ug/L PCE
  - 17.5ug/L TCE
  - <0.5 ug/L cis-1,2-DCE

PCE concentrations in groundwater samples from 30 feet msl range from below the detection limit to 2.39 ug/L. Such low PCE concentrations are consistent with a post-1978 release into shallow groundwater.

[4] A release reaching groundwater in the early 1990s would have had approximately 20 years to grow to its current dimensions. The center of mass of the plume appears to be approximately 375 feet from the assumed source (i.e., the former drycleaner operation), which implies a solute advective velocity of approximately 19 feet per year. That velocity, when compared to a computed water velocity of 68 feet per year (based on hydraulic conductivity of 11 feet per day, gradient of 0.0057, and effective porosity of 0.353), implies a retardation coefficient of 3.611 which is a reasonable value for this area and this chemical. Hydraulic conductivity and effective porosity values are for loamy sand (Carsel and Parrish, 1988). Hydrodynamic dispersion has resulted in the leading edge of the plume extending further than the center of mass.

7 CONCLUSIONS

Hydraulic conditions at the Site through time can be inferred based upon a correlation between groundwater elevation data from the Santa Clara Subbasin Index Well hydrograph (Figure 8) and local groundwater elevation data from a former Shell Service Station located in close proximity to the Site. This correlation leads EKI to conclude that from 1962 to the mid-1990s, groundwater elevations at the Site were relatively low and that Saratoga Creek was a losing stream, resulting in a northwest-trending groundwater gradient at the Site. Thus, a hypothetical chemical release during this time period would have experienced a northwest groundwater gradient and resulted in a northwest-trending plume.

Analysis of chemical migration travel times indicates that if a release had occurred between 1962 and 1978, the period when UATC owned or leased the Site while dry-cleaning operations allegedly occurred, it would have reached the groundwater table within approximately six years, generating a northwest-trending plume. Calculations show that evidence of a northwesterly-trending plume would be evident in the current analytical data for groundwater. As there is no evidence of a northwest-trending plume in the currently available analytical data for groundwater, it is concluded that a pre-1978 release of chemical laden wastewater did not occur.

Instead, the documented chemical plume in groundwater trends northeast consistent with the currently measured groundwater gradient to the northeast that was initially established in the mid-1990s. A chemical release at or just below the ground surface at the former drycleaner operation would have required several years to reach the groundwater table and establish a plume. Thus, a chemical release from the early 1990s would explain the plume shown on Figure 13. Alternatively, a somewhat older (e.g., mid-1980s) release to groundwater in the vicinity of the sewer line in the alley south of the former drycleaner operation may have reached groundwater with a northwesterly gradient and then shifted to a northeasterly gradient in 1994, giving rise to the plume shown on Figure 13. Given such release dates, calculations indicate that there was adequate time for the approximately 600 foot long plume observed today to become established.

The conclusion that the chemical plume post-dates the period when UATC owned or leased the Site is further supported by the vertical distribution of contaminants in shallow groundwater that are more consistent with a post-1978 release when the water table was shallow than a pre-1978 release when the groundwater table was deep. Releases that occurred during a pre-1978 time period would have resulted in a deep groundwater plume consistent with groundwater elevations at the time. There is no evidence to support the occurrence of releases during this time period.

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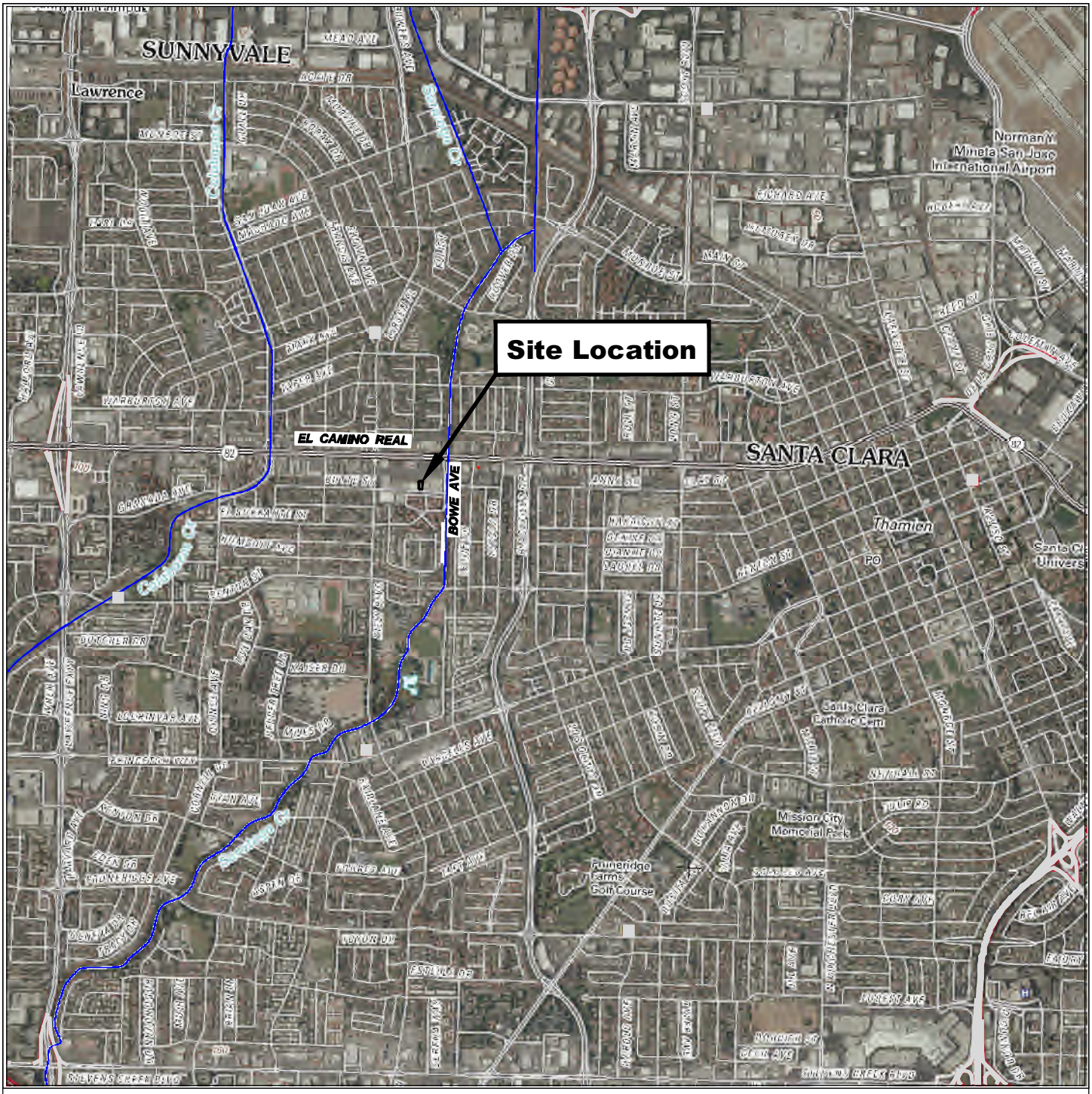

Notes:

1. All locations are approximate.
2. USGS = United States Geological Survey
3. Basemap source: USGS GeoPDF, San Jose West, CA. 2012

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Site Location

N

0 2,500 5,000

(Approximate Scale in Feet)

Former Moonlite Cleaners
2640 El Camino Real
Santa Clara, CA
March 2013
EKI B10003.00

Figure 1

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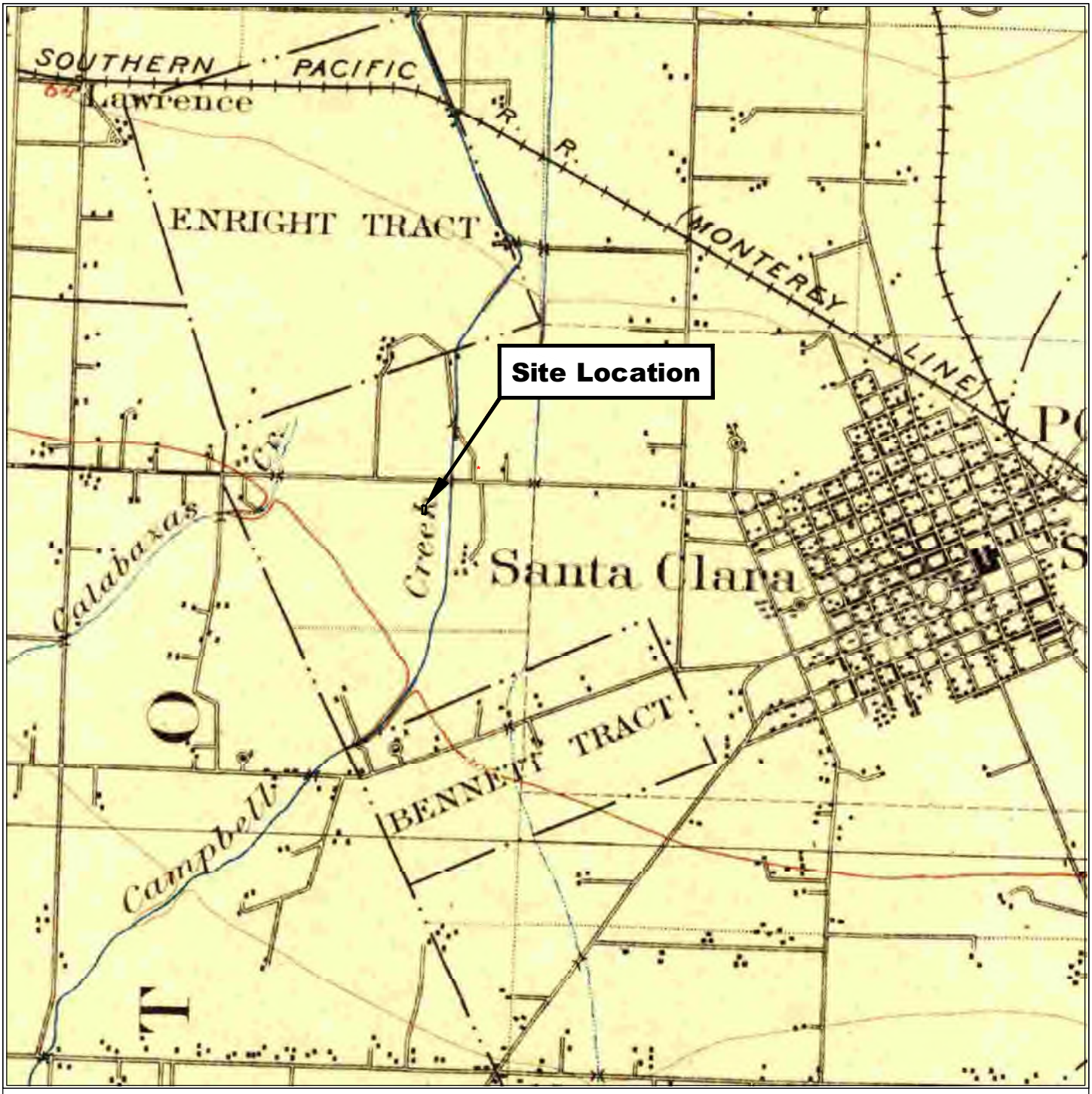

Notes:

1. All locations are approximate.
2. USGS = United States Geological Survey
3. Basemap source: USGS Topographic Map, San Jose, CA. May 1, 1899.

N

0 2,500 5,000

(Approximate Scale in Feet)

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Site Location on 1899
USGS Topographic Map
Former Moonlite Cleaners
2640 El Camino Real
Santa Clara, CA
March 2013
EKI B10003.00
Figure 2

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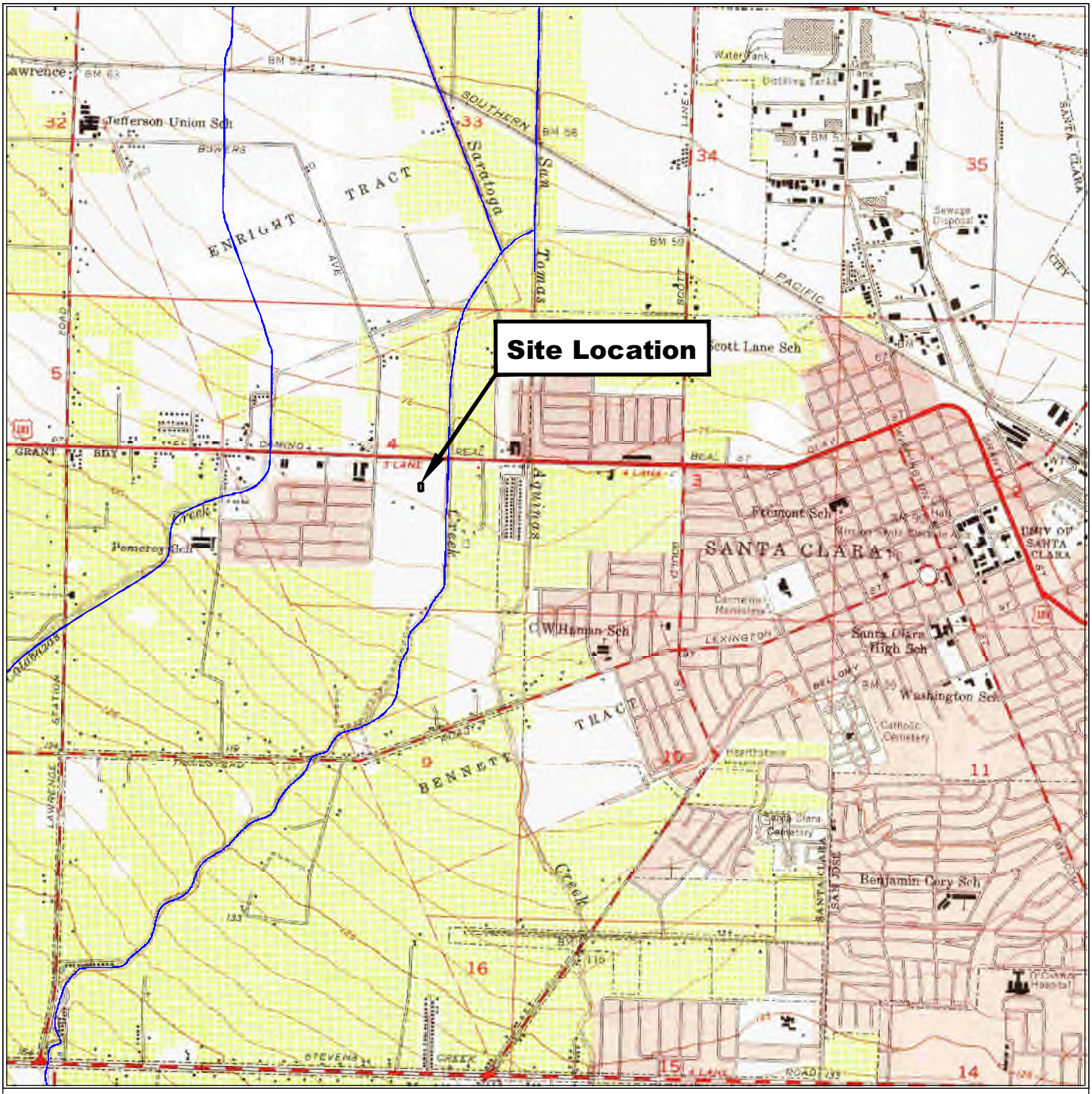

Notes:

1. All locations are approximate.
2. USGS = United States Geological Survey
3. Basemap source: USGS Topographic Map, San Jose West, CA. 1953.

N

0 2,500 5,000

(Approximate Scale in Feet)

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Site Location on 1953
USGS Topographic Map
Former Moonlite Cleaners
2640 El Camino Real
Santa Clara, CA
March 2013
EKI B10003.00

Figure 3

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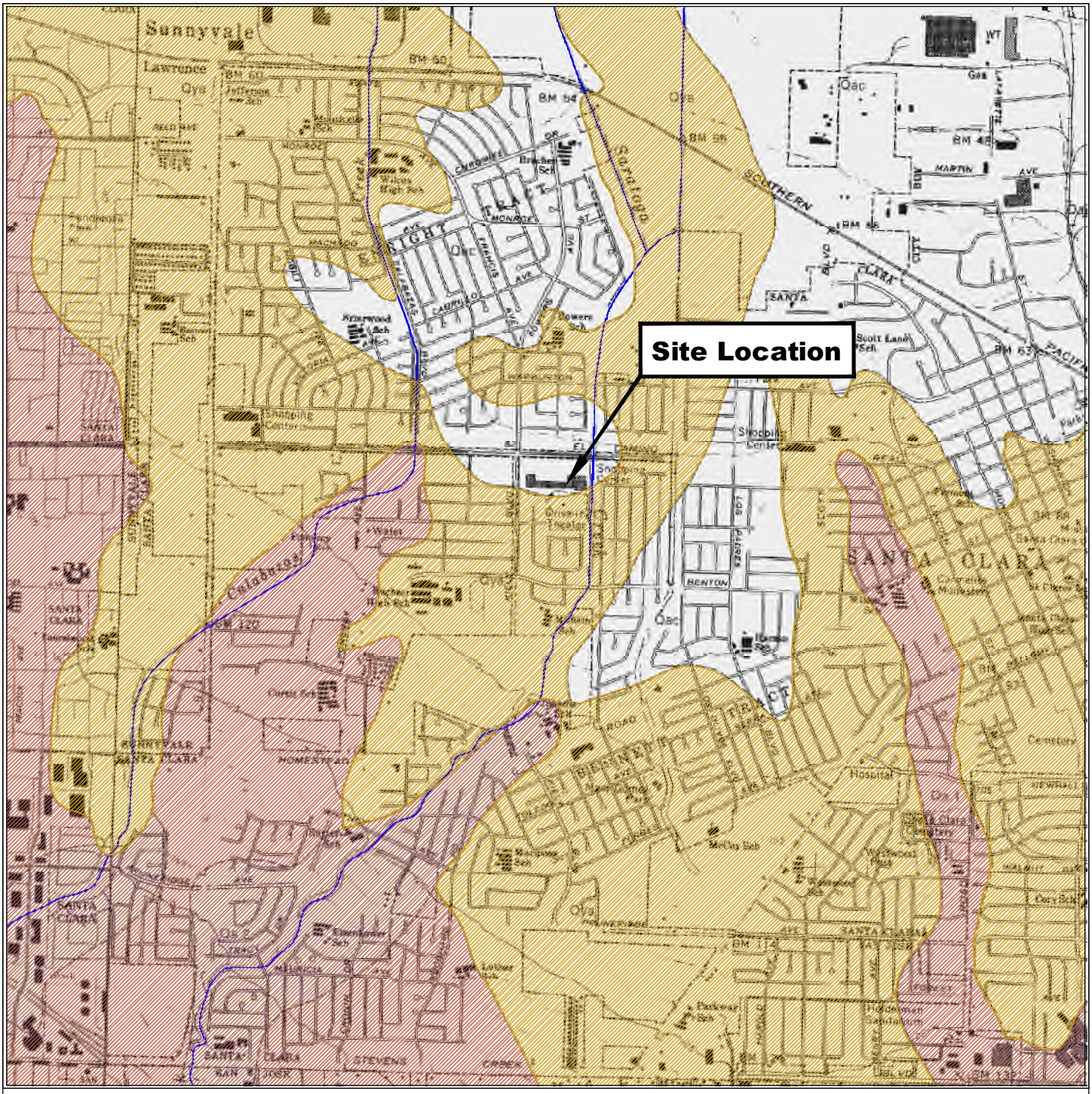

Legend:

- Intra-Fan Area
- Distal Alluvial-Fan
- Upper Alluvial-Fan

Notes:

1. All locations are approximate.
2. Basemap source: Dibblee 2007.

N

0 2,500 5,000

(Approximate Scale in Feet)

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Site Location Relative to Surficial Geology

Former Moonlite Cleaners

2640 El Camino Real

Santa Clara, CA

March 2013

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Figure 4

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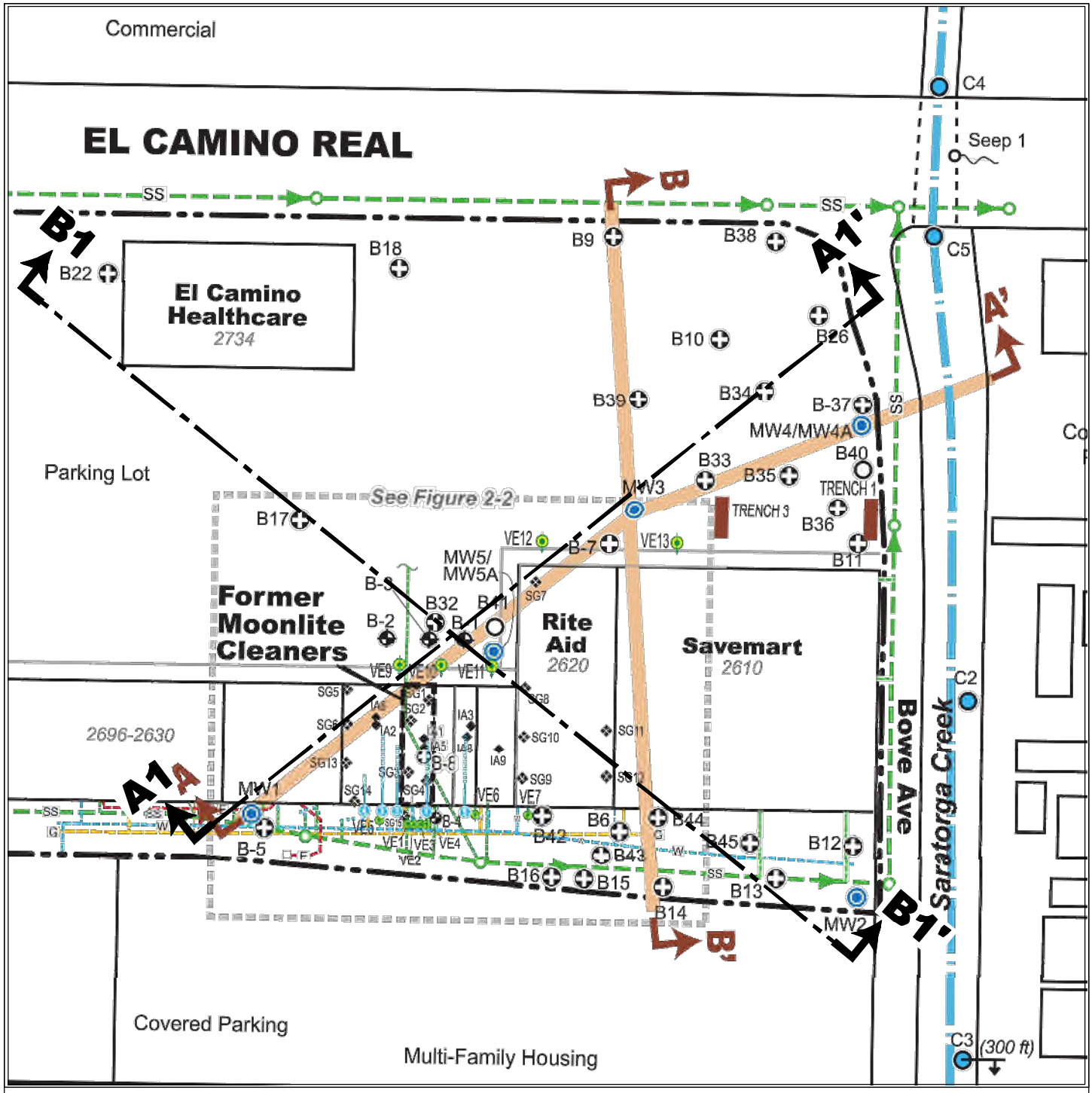

EXPLANATION

- Vertical SVE monitoring well
- Monitoring well location
- Water sample location
- P&D indoor air sample collection location (3/2009)
- Approximate PSI boring location
- P&D groundwater sample location
- P&D soil gas sample location
- P&D vapor well location
- P&D lithologic boring location
- Trench location
- Sub-slab horizontal piping showing slotted interval / ID
- Gas line
- Water line / cleanout
- Sanitary Sewer line / flow direction / manhole
- Electrical line
- Subject property line
- Geologic cross-section locations

Notes:

1. All locations are approximate.
2. Basemap source: WEST, Feasibility Study/Pilot Study Work Plan, Dated Sep. 2012.

N

0 120 240

(Approximate Scale in Feet)

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Site Plan and
Cross-Section A1-A1' and B1-B1' Locations

Former Moonlite Cleaners
2640 El Camino Real
Santa Clara, CA

March 2013
EKI B10003.00

Figure 5

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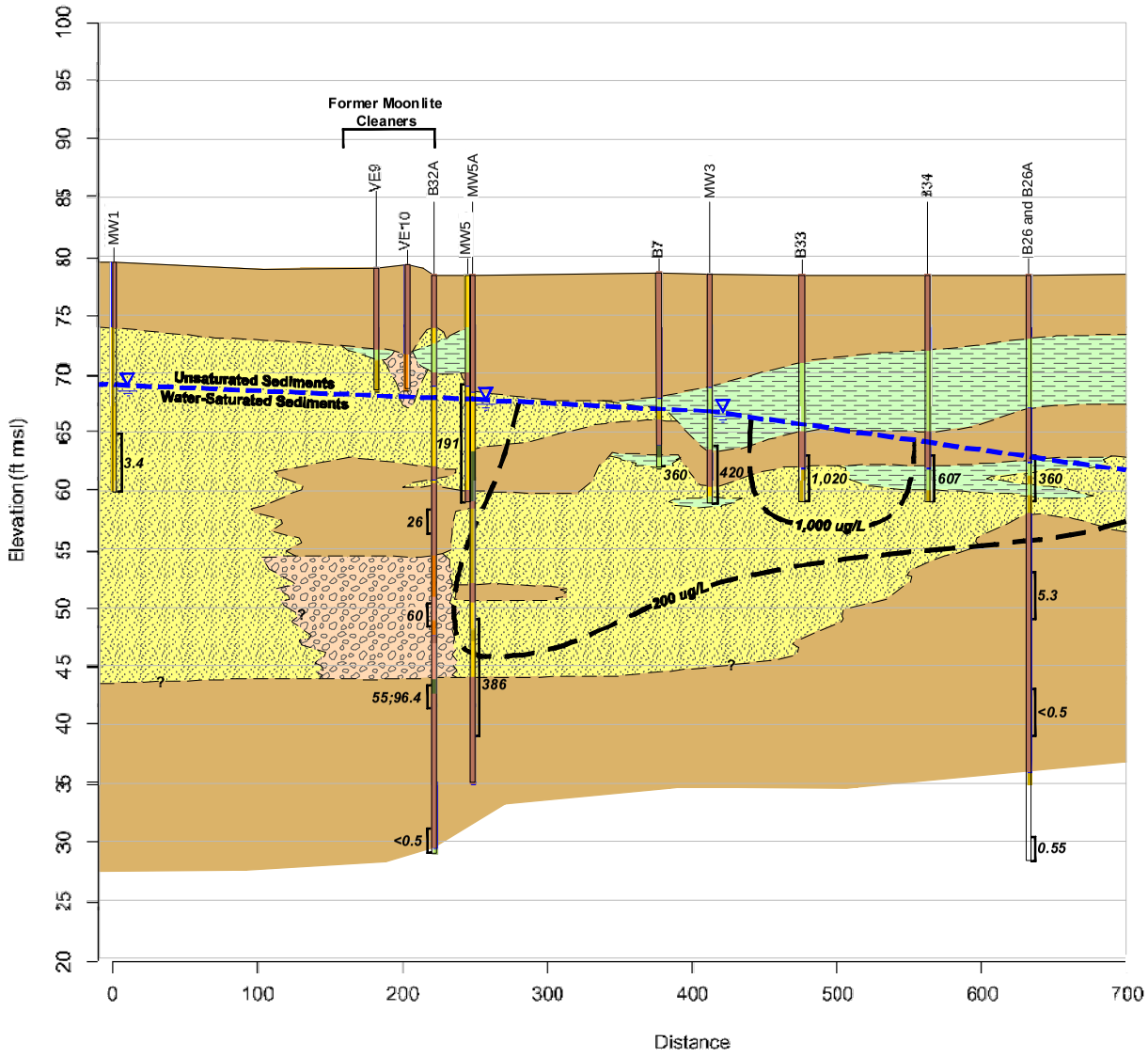

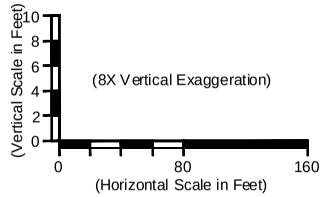

Legend:

Lithologic Interpretation

- Clay + Clayey Sand
- Silt
- Sand
- Gravel

Borehole Lithology (USCS Classification)

- CL
- ML
- SM
- SW
- SP
- GW
- GC
- SC
- GM

- Approximate Water Table (19 September 2012)
- 200 ug/L PCE Isoconcentration Contour
- 26 PCE Concentration (ug/L)

Notes:

1. All locations are approximate.
2. Units in micrograms per liter (ug/L).
3. Groundwater monitoring well data for MW1, MW3, MW5, and MW5A from P&D (2012); grab groundwater data collected 2009-2010 from West (2012).

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Cross Section A1-A1'

Former Moonlite Cleaners
2640 El Camino Real
Santa Clara, CA
March 2013
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Figure 6

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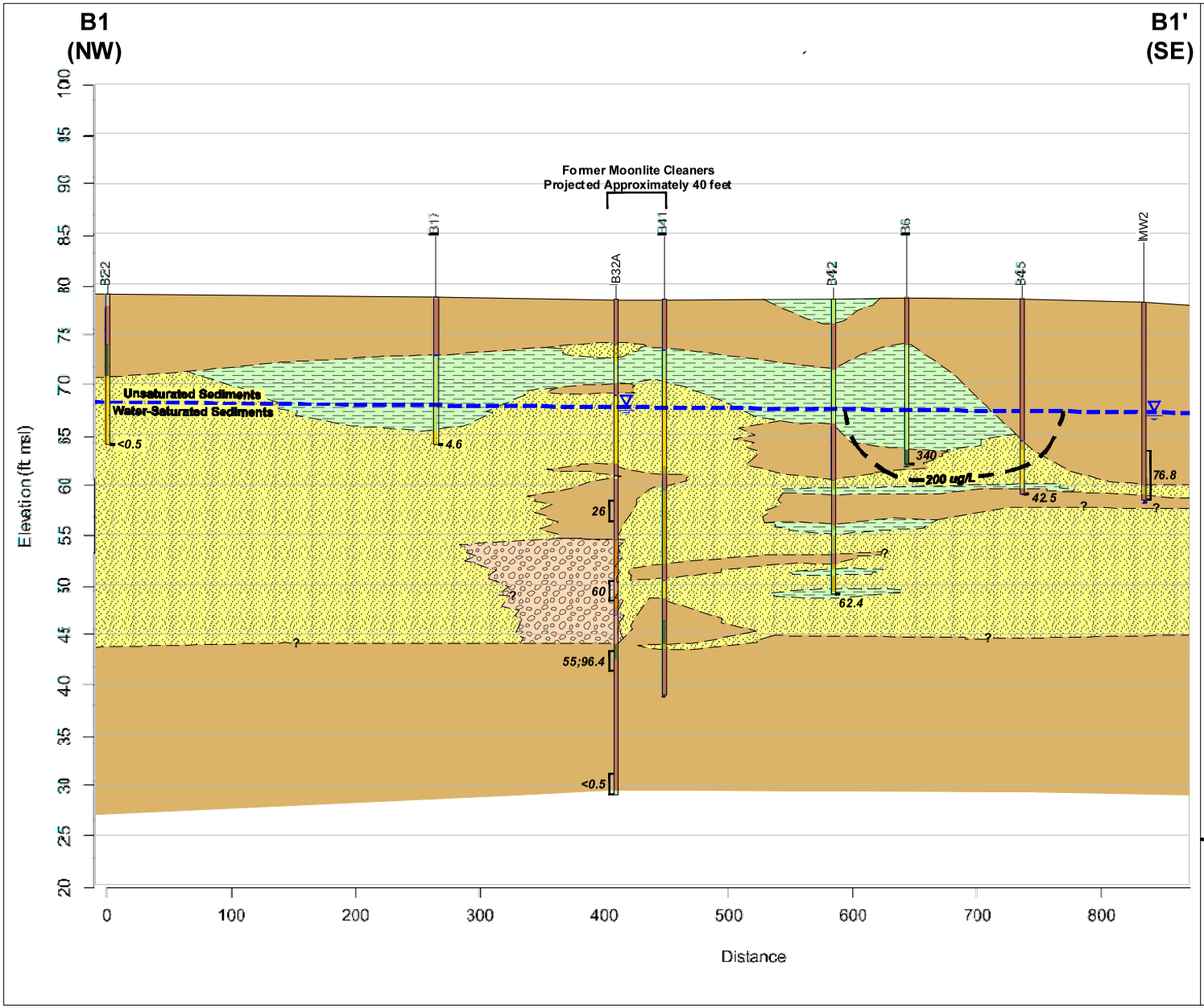

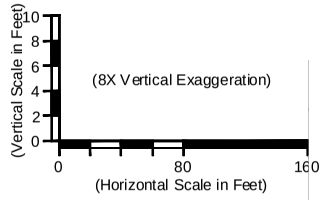

Legend:

Lithologic Interpretation

- Clay + Clayey Sand
- Silt
- Sand
- Gravel

Borehole Lithology (USCS Classification)

- CL
- ML
- SM
- SW
- SP
- GW
- GC
- SC
- GM

- Approximate Water Table (19 September 2012)
- 200 ug/L — PCE Isoconcentration Contour
- 26 — PCE Concentration (ug/L)

Notes:

1. All locations are approximate.
2. Units in micrograms per liter (ug/L).
3. Groundwater monitoring well data for MW2 from P&D (2012); grab groundwater data collected 2009-2011 from West (2012).

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Cross Section B1-B1'

Former Moonlite Cleaners
2640 El Camino Real
Santa Clara, CA
March 2013
EKI B10003.00

Figure 7

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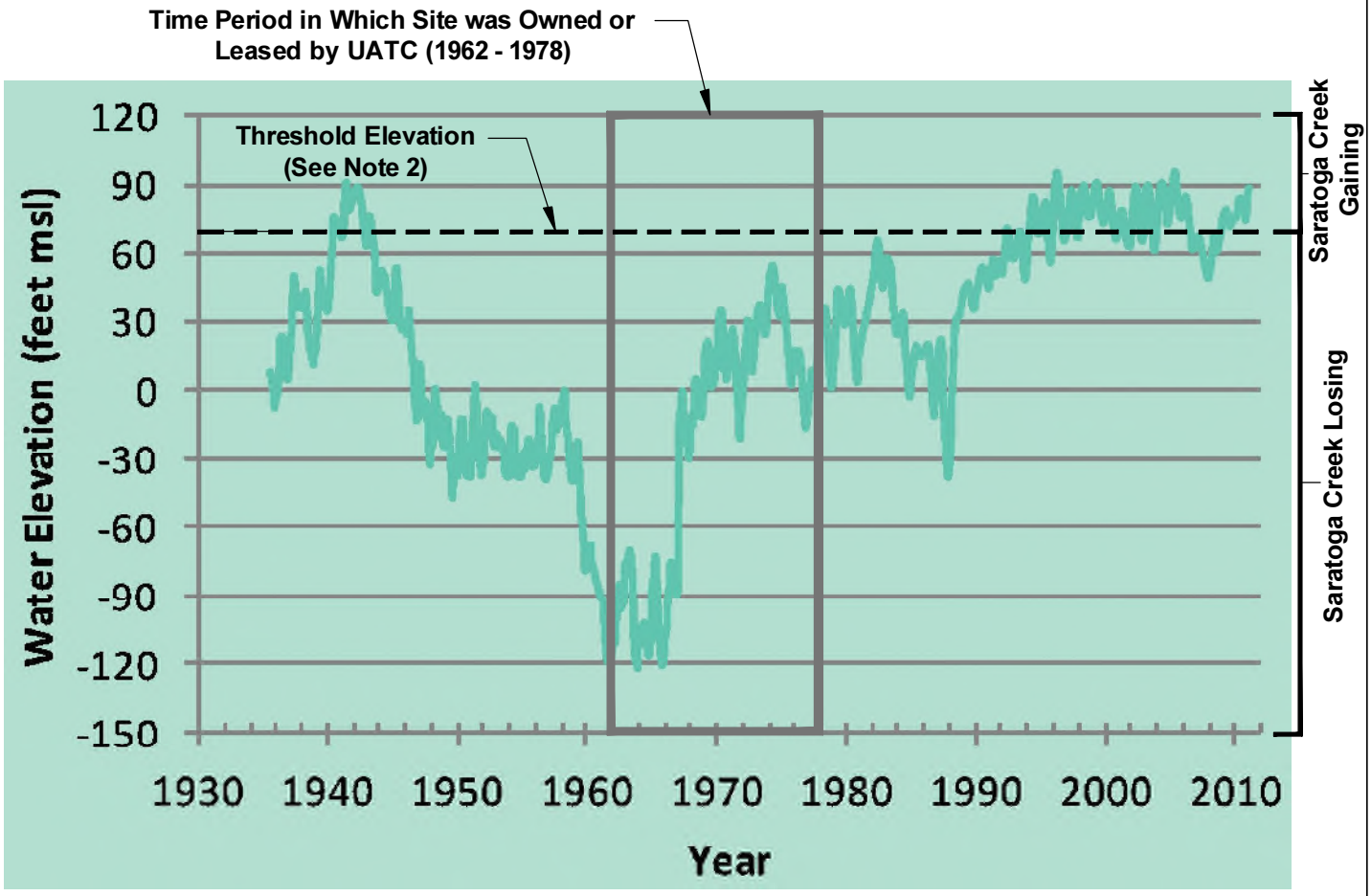

Notes:

1. Reference: Santa Clara Water District, 2012, 41st Annual Report, FY 2012-13 Protection and Augmentation of Water Supplies, February 2012, Figure 1-2.2.
2. Approximate groundwater elevation threshold above which Saratoga Creek is gaining stream and below which Saratoga Creek is a losing stream in vicinity of Site.

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Groundwater Elevations in Santa Clara Subbasin Index Well

Former Moonlite Cleaners
2640 El Camino Real
Santa Clara, CA

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Figure 8

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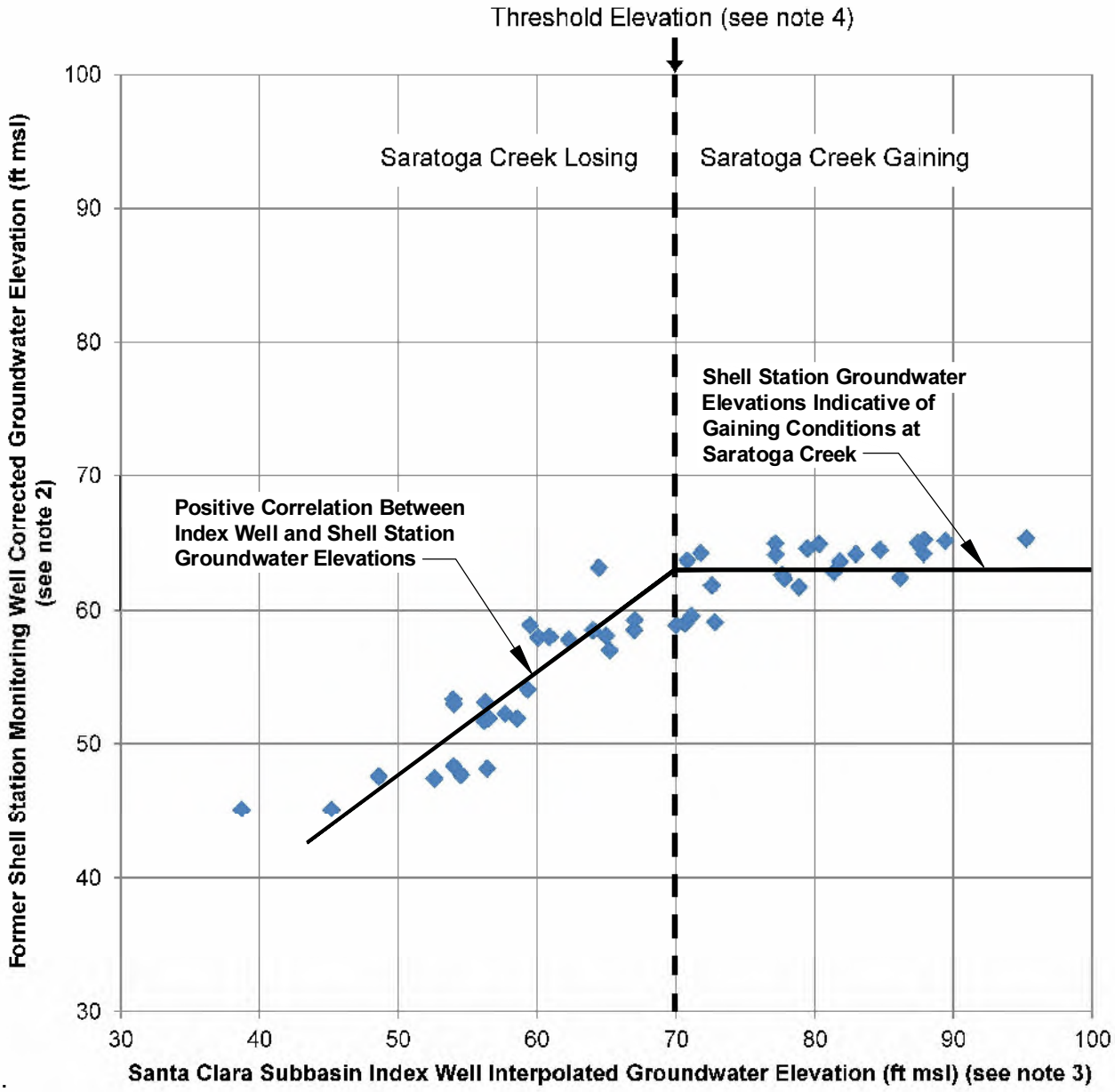

Notes:

1. Groundwater elevation data from 1990 - 2000.
2. Groundwater elevation data from the former Shell Station located at 2540 El Camino Real, Santa Clara, California were adjusted downward by 23 ft to correct for the use of a local vertical datum in the data tables included in the Site Closure Summary report.
3. Santa Clara Subbasin Index Well groundwater elevations are interpolated from the data shown on Figure 8 to the dates when monitoring wells at the former Shell Station were monitored.
4. The threshold elevation is the approximate elevation of groundwater in the Santa Clara Subbasin Index Well below which Saratoga Creek is a losing stream and above which Saratoga Creek is a gaining stream. The elevation is estimated from the break in slope in the data shown on this figure.
5. "ft msl" = feet above mean sea level.

Legend:

◆ MW-1

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Santa Clara Subbasin Index Well Groundwater Elevations vs. Groundwater Elevation Data for Shell Service Station at 2540 El Camino Real, Santa Clara, CA

2640 El Camino Real
Santa Clara, CA

March 2013
EKI B10003.00

Figure 9

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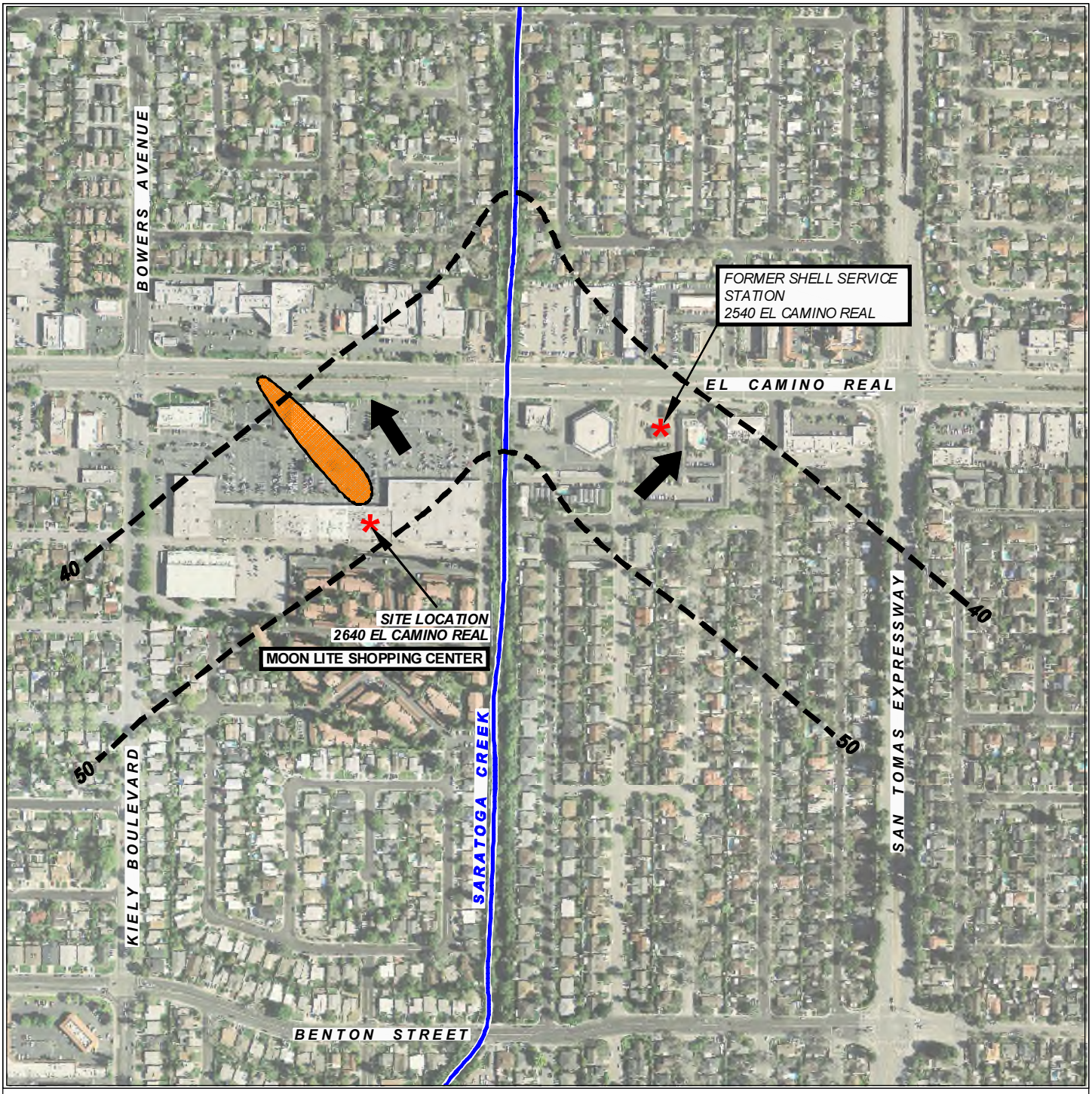

Legend:

40 — Conceptual Groundwater Elevation Contour when Saratoga Creek is a Losing Stream

Hypothetical Chemical Plume in Groundwater

Groundwater Gradient Direction

Notes:

1. All locations are approximate.
2. Basemap source: USGS Aerial April 2011.

N

0 500 1000

(Approximate Scale in Feet)

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Site Relative to Saratoga Creek Under Losing Conditions

Former Moonlite Cleaners
2640 El Camino Real
Santa Clara, CA

March 2013
EKI B10003.00

Figure 10

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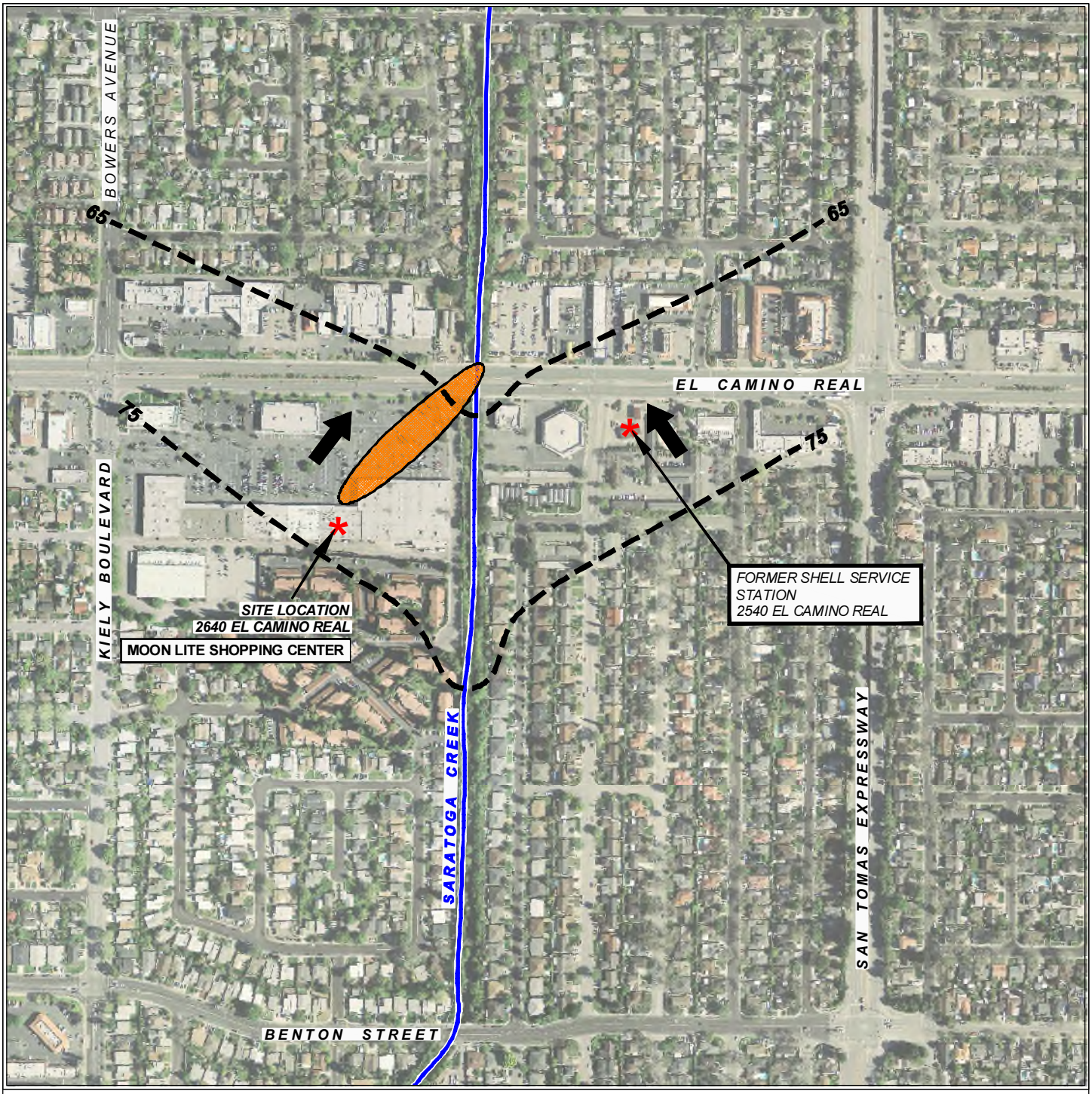

Legend:

65 — Conceptual Groundwater Elevation Contour when Saratoga Creek is a Gaining Stream

Documented Chemical Plume in Groundwater

Groundwater Gradient Direction

Notes:

1. All locations are approximate.
2. Basemap source: USGS Aerial April 2011.

N

0 500 1000

(Approximate Scale in Feet)

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Site Relative to Saratoga Creek Under Gaining Conditions

Former Moonlite Cleaners
2640 El Camino Real
Santa Clara, CA

March 2013
EKI B10003.00

Figure 11

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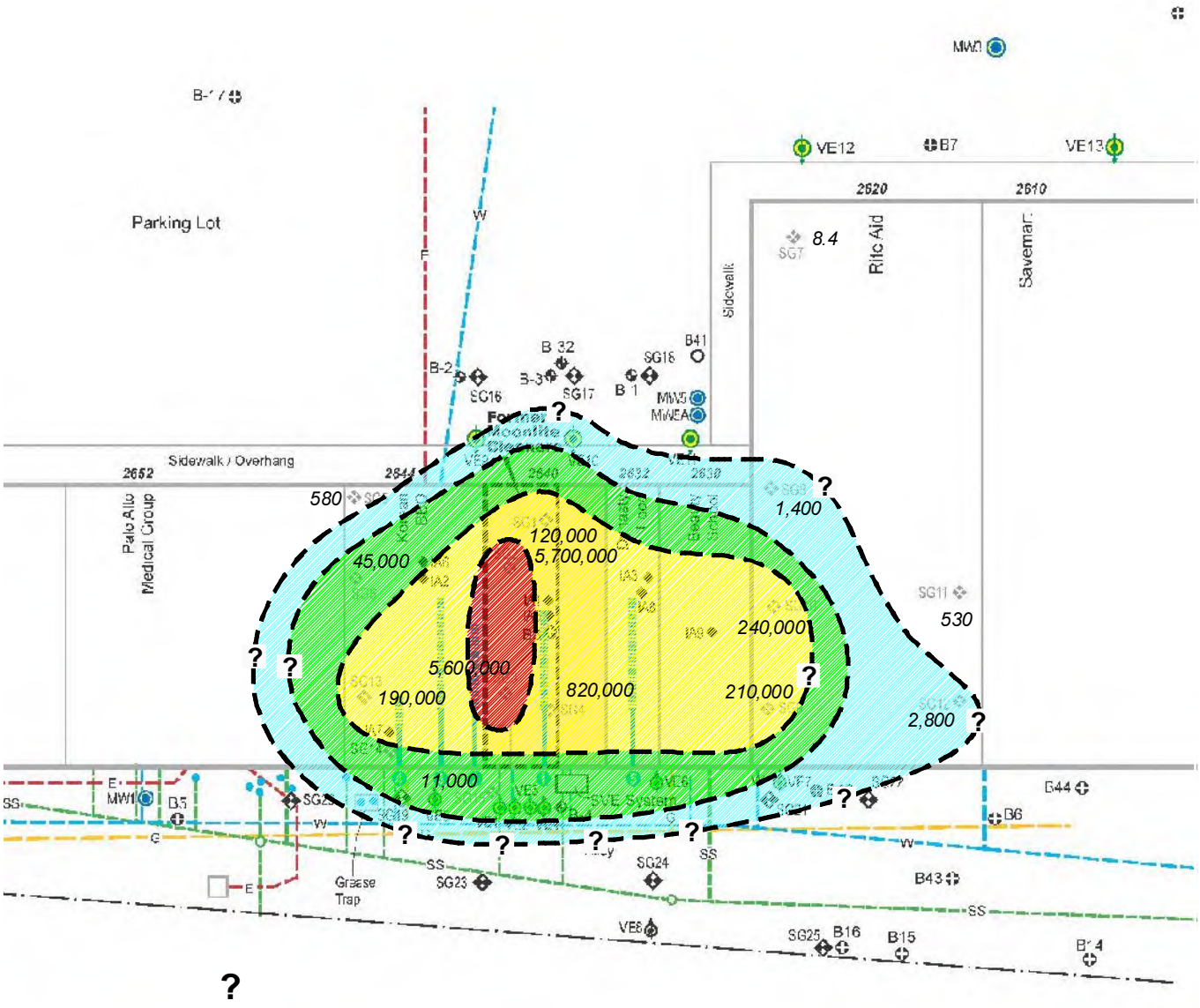

EXPLANATION

- Vertical SVE monitoring well
- Soil gas sample location
- P&D monitoring well location
- Approximate PSI boring location
- P&D groundwater sample location
- P&D soil gas sample location
- P&D indoor air sample collection location
- Property line
- Gas line
- Water line / cleanout
- Sanitary Sewer line / manhole
- Electrical line
- Sub-slab horizontal piping showing slotted interval / ID

Notes:

1. All locations are approximate.

Source:

Base Map Source: West, *Feasibility Study/Pilot Study Work Plan* (2012).

PCE Concentrations (µg/m³) in Soil Gas Samples Collected in 2009
(Collected 1 Foot Below Ground Surface)

- > 1,000,000
- > 100,000 -1,000,000
- > 10,000 -100,000
- > 1,000 -10,000

0 60 120

(Approximate Scale in Feet)

N

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PCE Concentrations in Shallow Soil Gas Samples

Former Moonlite Cleaners

2640 El Camino Real
Santa Clara, CA

March 2013
EKI B10003.00

Figure 12

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