

Appendix B
Staff Report

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

**CLEANUP STAFF REPORT FOR TENTATIVE ORDERS FOR
625 JACKSON STREET, 622-630 JACKSON STREET, AND 712 MADISON STREET,
FAIRFIELD, SOLANO COUNTY**

This report provides the background for the Tentative Orders and summarizes the main issues raised by the Tentative Orders and in the associated Responses to Comments.

Summary

Two of the three TOs are contested over issues of “whom to name” and all three are contested over the relative contribution (from each source site) to groundwater pollution. The issue of which sites have caused or contributed to solvent pollution at and down-gradient of 625 Jackson Street is common to all three TOs.

Background

The locations of the three sites are shown on the attached map. The solvent release at the Fairfield Cleaners site at 625 Jackson Street was discovered as a result of a limited site assessment conducted in 2000. The 625 Jackson Street landowners subsequently conducted a business records search to locate additional dry cleaners and other potential release sites in the downtown Fairfield area. They submitted a map to the Regional Water Board showing the relative locations of each of these businesses and conducted limited investigations near several former dry cleaners near Fairfield Cleaners. Available information suggests that groundwater plumes resulting from releases at the above-referenced sites may have commingled. For that reason, we have developed the TOs for the three dry cleaner sites and propose presenting them to the Board at the same meeting. The 625 Jackson Street landowners have sued owners and operators at all three sites.

Dry cleaning began at 625 Jackson Street sometime in the early 1970s. The dry cleaning operations changed owners and operators several times since then. Jewel Hirsch, doing business as Fairfield Cleaners, operated for most of the period from 1975 until around 2003. John Blue, Obie Goins, and Ray Johnson purchased the business around August 1980 and owned it until sometime in 1981 when Ms. Hirsch took the business back because the Blue/Goins/Johnson partnership failed to make payments to her for the business.

Dry cleaning operations, printing operations, and retail auto sales (which did not provide repair service) were conducted at 622-630 Jackson Street under various business owners over several periods, beginning prior to 1946 and continuing to about 1973. The property has been used for office and other retail purposes for approximately the last 40 years. The dry cleaning operations by Gillespie Cleaners overlapped with the period of time that the partnership of Moore and Tegmeier owned the property.

The former Fairfield One Hour Cleaners and other dry cleaners operated at 712 Madison Street for nearly five decades, from around the late 1940s to the mid-1990s. The property has been used as an office building since about 2000.

Downtown Fairfield is in an area of low relief at about 10 feet above mean sea level (msl) about one-half mile north of Suisun Slough. Unconfined groundwater is encountered as shallow as two feet below ground surface (bgs). Groundwater flows generally southeastward at a gradient of less than 0.01 ft/ft. The subsurface geology is described as a thick sequence of sediment deposited by intermittent streams flowing southeast from the hills northwest of the city toward Suisun Slough, along with periodic flood deposits from the Sacramento River. Shallow soil is predominantly silt and clay flood deposits interspersed with occasional thin silty sand stringers that represent the buried channel deposits of small streams. With increasing depth, the sand units become more abundant and are generally coarser in texture, thicker, and laterally more continuous. Groundwater preferentially flows through the coarser-textured strata

The Dry Cleaning Industry and Use of Solvents

The commercial dry cleaning industry began in the late 1800s and early 1900s. The first dry cleaning solvent used was gasoline. It was later replaced by other petroleum distillates such as naphtha, kerosene and benzene. In the 1920s, Stoddard solvent, a petroleum-based solvent, began to be used. In the 1940s, the chlorinated solvent tetrachloroethylene (PCE) began to be used, and by the 1960s it was the primary dry cleaning solvent in use.

Dry cleaners historically have been known to discharge PCE to soil and groundwater through a variety of mechanisms including normal operations of older machines (e.g., “wet-to-dry” systems); dry cleaning equipment leakage or improper operation and maintenance, solvent transfer and storage; and discharge to leaky sanitary sewers or storm sewers. Dry cleaners today have greatly improved their handling of solvents; but older operations, especially prior to 1990, were more likely to have poor solvent handling and disposal practices, including separator water disposal, machines being installed without secondary containment, surface spillage, and incidental spillage from delivery transfer hoses. These events would have resulted in releases to soil and groundwater.

Once PCE is discharged to soil from a dry cleaner facility, it typically migrates vertically downward towards groundwater and further down into lower water-bearing zones. As PCE migrates through soil and saturated water-bearing sediments, it often becomes bound to clay or silt and where it can slowly dissolve (leach) into groundwater, often for decades. PCE is heavier than water and tends to be highly mobile when it reaches groundwater. Once PCE becomes dissolved in groundwater, it may migrate rapidly downgradient depending on local groundwater flow velocities.

PCE spilled or released by dry cleaners poses a significant threat to groundwater and human health. PCE is a highly toxic chlorinated solvent and is classified as a probable carcinogen. Its drinking water standard is 5 micrograms per liter, and the Public Health Goal for PCE is 0.06 micrograms per liter. PCE is one of the four most commonly detected pollutants in California water supply wells.

Site Pollution

The operators at the 625 Jackson Street and 712 Madison Street sites used PCE in their dry cleaning operations and released PCE as a result of their activities. The 622-630 Jackson Street site used Stoddard solvent in its dry cleaning operations and released Stoddard solvent as a result

of its activities. The Tentative Orders (and associated Cleanup Staff Responses to Comments) provide specific evidence of these releases.

Soil, groundwater, and soil gas samples have been collected at all three sites and analyzed for PCE, related volatile organic compounds (VOCs), and petroleum hydrocarbons. A total of 49 monitoring wells in the area of these three sites have been completed in the shallow, intermediate and deep groundwater zones. Petroleum hydrocarbons have been reported in groundwater samples from the shallow zone at all three sites, and high concentrations of VOCs have been reported in samples from the shallow and intermediate zones. To date, no contamination related to these sites has been reported in groundwater samples from the few wells in the deep zone.

The source area has been characterized at the 625 Jackson Street site but not at the other two sites. The lateral and vertical extent of groundwater contamination has not been delineated in the area surrounding these three sites. Current data suggests that the groundwater contaminant plumes from these sites may have commingled. Groundwater contamination extends from the upgradient 712 Madison Street site toward the 625 Jackson Street and 622-630 Jackson Street sites, and continues in a down-gradient direction (to the southeast) for at least 300 feet past the farthest downgradient site. Separate TOs have been prepared for these sites but staff is encouraging the dischargers to collaborate on the investigation and cleanup activities.

The high concentrations of VOCs associated with these three sites have the potential to impact a large volume of usable groundwater. Beneficial uses of groundwater in this area include municipal supply and recharge of surface water in the Suisun Slough area. In addition, VOCs in soil, soil vapor, and groundwater have the potential to produce unhealthy VOC levels in indoor air in overlying buildings – a phenomenon known as vapor intrusion. For these reasons, VOC pollution in soil and groundwater needs to be cleaned up to levels that will not threaten water quality or human health.

Named Dischargers

Water Code section 13304 allows the Regional Water Board to issue cleanup and abatement orders to any person who “causes or permits” waste to be discharged or deposited where it is, or probably will be, discharged into waters of the state and causes a condition of pollution or nuisance. We provide a detailed basis for naming specific dischargers in each of the Tentative Orders (and associated Response to Comments).

Issues Raised During the Public Comment Period

The following summarizes key issues that were raised during the public comment period. Full responses are included in the Responses to Comments in Appendix D for each of the three Board items.

1. *Should Jewel Hirsch doing business as Fairfield Cleaners, a former operator, be named as a discharger at 625 Jackson Street?*

Ms. Hirsch argues that she should not be named, citing insufficient evidence that her operation released PCE. Board cleanup staff concludes that there is substantial evidence that would justify naming her. She operated the dry cleaning business for more than 20 years, and used PCE in the

dry cleaning operation for all but three of those years. The following evidence supports that she discharged PCE:

- She discharged “separator water” (containing PCE) to a floor drain connected to the sanitary sewer
- She used a “wet to dry” system, with no secondary containment, from 1975 to 1998, a process that is likely to result in PCE spills onto the floor.
- She used a garment waterproofing process that required PCE-saturated garments to be transferred from one area to another, a process that usually results in PCE dripping onto the floor.
- There were cracks in the concrete floor of this facility, which would allow spilled PCE to seep into soil beneath the building.
- Inspection reports from the Fairfield-Suisun Sewer District and Solano County Department of Environmental Management from 1999, 2002, and 2003 state that she did not comply with pollution control requirements and found evidence of improper hazardous waste handling. Stains on the floor and near drains precluded the ability to observe and respond to leaks..
- PCE pollution in soil and shallow groundwater at 625 Jackson Street demonstrates that PCE was released at this location; PCE releases at other nearby dry cleaners may have impacted somewhat deeper groundwater (“intermediate zone”) but only releases at this site could have caused the shallow pollution found at this site.

2. *Should Obie Goins and Ray Johnson, former owners/operators, be named as dischargers?*

Mr. Goins and Mr. Johnson argue that they should not be named, based on the short tenure of their operation and their passive role as investors. The Goins, Johnson, and Blue partnership bought Fairfield Cleaners from Hirsch in 1980, but gave it back to Hirsch sometime in 1981 because the partnership failed to make payments to her for the cleaners. Goins and Johnson claim Blue, who is deceased, conducted day-to-day operations. Even if this is true, Goins and Johnson, as general partners of the partnership, are liable for the obligations of the partnership.

The following evidence supports naming Goins and Johnson, the partners of Fairfield Cleaners:

- The partnership followed the common industry practice of disposing of PCE onsite because it purchased the cleaners from Hirsch, who employed common industry practices that resulted in onsite PCE disposal. Hirsch stated that she trained Goins’ step-daughter to operate the dry cleaning equipment.
- When the partnership purchased Fairfield Cleaners in 1980, it used the wet-to-dry transfer dry cleaner system, which lacked any secondary containment, and this likely resulted in PCE discharges on-site, especially since the facility’s unsealed concrete floor had cracks. This wet-to-dry system also entailed collecting separator water and disposing of it into the floor drains.

Finally, factors such as relative contribution to the pollution problem, relatively short period of operation, or limited financial means are not the test for naming a party to a cleanup and abatement order. Rather, the test is whether a person “caused or permitted” waste to be

discharged. Precedential State Water Board water quality orders state that it is appropriate and responsible for a regional water board to name all parties for which there is reasonable evidence of responsibility, even in cases of disputed responsibility. Goins' and Johnson's relative contribution to PCE contamination can and should be worked out among the responsible parties through the current litigation pending on this matter. The Water Board does not apportion liability among dischargers.

3. *Should the 622-630 Jackson Street TO name a prior landowner (Tegtmeier Associates)?*
Tegtmeier Associates, Inc., argues against being named, asserting that Gillespie moved to a different location prior to its predecessor's ownership of the property. However, Tegtmeier Associates, Inc.'s predecessor, Moore & Tegtmeier, owned the property from early 1945 until early 1972, and Gillespie Cleaners operated between 1934 and 1947, during Moore & Tegtmeier's ownership. Our basis for naming Tegtmeier Associates, Inc., a California corporation, is because it is the successor entity to Moore & Tegtmeier, a general partnership. Tegtmeier Associates, Inc., is a continuation of Moore & Tegtmeier. According to a grant deed, the partnership sought permission to convert to a corporation. Shallow soil and groundwater samples at the property show that Stoddard solvent was discharged at the property. Gillespie Cleaners likely used and discharged Stoddard solvent. Common industry practices during the period it operated typically resulted in discharges of solvent through spills and practices related to storage and transfer. The occurrence of Stoddard solvent in shallow soil and groundwater at the site indicates that this chemical was discharged there from a source that was at or near the surface. No business that occupied the site after Gillespie Cleaners is likely to have used Stoddard solvent.

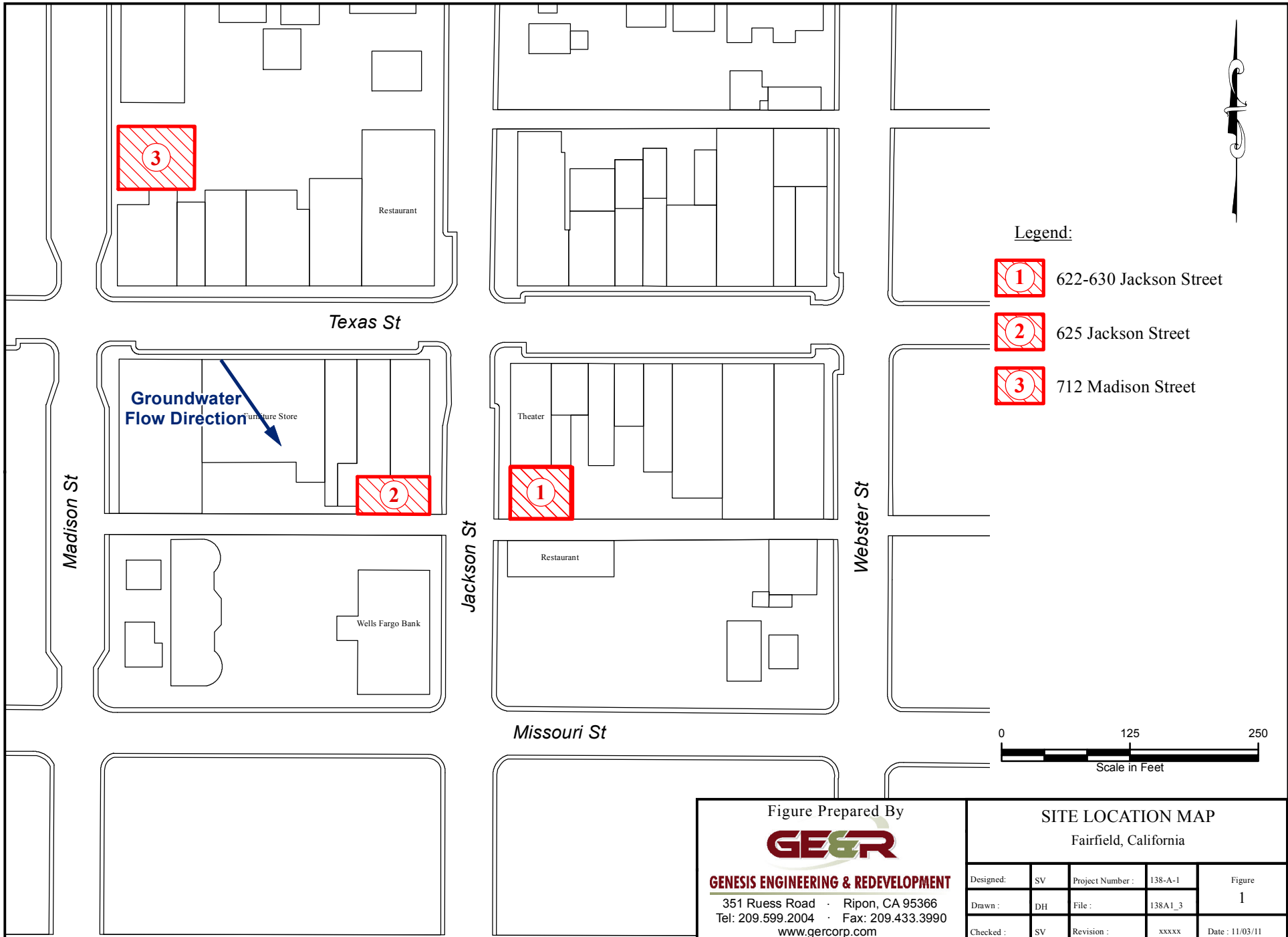
The 622-630 Jackson Street parties also assert that Tegtmeier Associates, Inc., should not be named because it does not have the financial resources to undertake any work ordered by the Water Board. We assert that the Water Board should name Tegtmeier Associates, Inc., to the Tentative Order because precedential State Water Board orders hold that it is appropriate to name all parties for which there is reasonable evidence of responsibility, regardless of a party's financial capability.

In conclusion, we assert that there is sufficient evidence to name Tegtmeier Associates: evidence of an on-site release of Stoddard solvent; evidence of dry cleaner operations during ownership by Moore & Tegtmeier; evidence that dry cleaner operations at that time were likely to have caused a Stoddard solvent release; and evidence that Tegtmeier Associates is a successor in interest to Moore & Tegtmeier.

4. *Which sites have caused or contributed to solvent pollution at and down-gradient of 625 Jackson Street?* Jewel Hirsch argues that there has been no PCE release at 625 Jackson Street. The current landowners argue that most of the groundwater PCE pollution found at and down-gradient of this site is attributable to other sources (upgradient source at 712 Madison Street and possibly additional unknown upgradient sources, plus the cross-gradient 622-630 Jackson Street site). Board cleanup staff concludes that the 625 Jackson Street parties are over-simplifying the complex geology in the area, and subsurface conditions are too complex to support this interpretation. We conclude that there has been a PCE release at this site (see item #1 above) and this release is sufficient to explain PCE concentrations

found in groundwater in the vicinity. While the 712 Madison Street site appears to have contributed to PCE pollution in this area, we conclude that releases at 625 Jackson Street have also contributed to the problem. There may be one or more additional upgradient source, but further investigation is needed before additional sources can be identified. Further, there is insufficient evidence of a PCE release at 622-630 Jackson Street.

Attachment: Map of part of downtown Fairfield showing locations of the three sites



Legend:




-  622-630 Jackson Street
-  625 Jackson Street
-  712 Madison Street



Figure Prepared By



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SITE LOCATION MAP
Fairfield, California

Designed:	SV	Project Number:	138-A-1	Figure 1
Drawn:	DH	File:	138A1_3	
Checked:	SV	Revision:	xxxxx	Date: 11/03/11