

APPENDIX A
REVISED TENTATIVE ORDER

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

REVISED TENTATIVE ORDER

ADOPTION OF SITE CLEANUP REQUIREMENTS for:

**CHEVRON U.S.A., INC.,
ALCATEL-LUCENT USA, INC.,
B.F. SAUL REAL ESTATE INVESTMENT TRUST, and
6400 SIERRA COURT INVESTORS, LLC**

for the property located at:

6400 SIERRA COURT
DUBLIN, ALAMEDA COUNTY

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

1. **Site Location:** The property is a 13.4-acre rectangular parcel, bordered on three sides by commercial property and on the west side by Alamo Canal, in the City of Dublin (the "Site"). Across Alamo Canal is a single-family residential neighborhood.

The Site includes one 320-foot by 560-foot (180,000-square-foot) warehouse surrounded by asphalt-paved parking areas and a loading dock. An approximately 20-foot by 25-foot former chemical storage area is attached to the northwest corner of the warehouse. A gravel-filled trench (likely a French drain) extends along the northern and western edges of the warehouse and leads to a culvert at the southwest corner of the Site, which drains into Alamo Canal. The Site is currently zoned for commercial/industrial use.

2. **Site History:** Western Electric Company leased and conducted telephone transmission equipment manufacturing at the Site from approximately 1970 to at least 1975, possibly as late as 1979. Drawings for the Western Electric manufacturing facility, obtained from the City of Dublin, identify an aboveground storage tank (AST) on the west side of the warehouse as a "Trico" tank. A 1973 National Institute for Occupational Safety and Health (NIOSH) report, titled "Health Hazard Evaluation/Toxicity Determination, Western Electric Company, Inc., Dublin, California," determined that vapors from trichloroethene (TCE) used at the printing wiring board processing area of the Site was toxic to workers at the concentrations and conditions at the time. When Western Electric vacated the property, the AST and some of the piping between the AST and the building were left in place.

Chevron U.S.A., Inc., (Chevron) became the Site owner in 1980 and used the warehouse as a document- and file-storage facility. There is no information to indicate that Chevron used the warehouse or the AST for chemical storage, use, handling, production, recycling, or disposal. South of the warehouse is a paved area that was leased by Chevron to Gettler-Ryan, Inc. (Gettler-Ryan) from 1993 to 2007. Gettler-Ryan is an environmental consulting firm that conducted cleanups, which included Chevron retail stations, and used the storage yard at the Site. According to a 2007 Final Baseline Environmental Site Assessment report, four 1,000-

gallon ASTs, located near the southeast corner of the Gettler-Ryan storage yard, were used to store purged groundwater from Chevron retail stations that were undergoing remediation. The report stated the ASTs, as well as rusted drums that stored used granular activated carbon, did not have secondary containment, and the asphalt pavement beneath them contained significant cracks.

In 1996, Chevron contracted with Ecology and Environment Inc. (E&E) to sample and remove the former AST. E&E reported that the 6-foot diameter by 23½-foot long AST was in poor condition and that the top of the tank was rusted out. The report did not indicate that the AST was “liquid tight” at the bottom. Samples collected from liquid at the spigot of the AST and two soil samples, one collected adjacent to the AST (under the asphalt) and one adjacent to the building (under the French drain rock), contained measurable concentrations of TCE. E&E also reported that the supply pipe line from the AST to inside the building contained liquid with an odor characteristic of concentrated TCE.

In October 2007, URS prepared a Final Baseline Site Assessment Report for Chevron. The report found TCE at the Site near the former AST in soil and groundwater at levels two to four orders of magnitude greater than the Regional Water Board’s Environmental Screening Levels (ESLs). The report stated that the “results of the subsurface investigation indicate that the area of the release includes the north end of the former [Trico] AST and extends to a point 20 feet west of the south end of the AST, but the current data is not adequate to evaluate the full horizontal and vertical extent of the impacted area.”

In May 2008, Chevron sold the property to 6400 Sierra Court Investors, LLC. In September 2008, the new owner contracted Cornerstone Earth Group to perform a hot-spot removal by excavation (see Finding 7). Prior to excavation, the concrete cradles of the former AST were still present, and Regional Water Board staff observed metal rust stains on the top and side of the cradles.

Alameda County Auction leased the parking area to the west of the warehouse from 2009 to 2012 for storing vehicles and holding its auctions. Dublin Honda and El Monte RV currently lease portions of the parking areas north and south of the warehouse for storing vehicles.

3. **Named Dischargers:** Chevron U.S.A., Inc., is named as a discharger because it permitted waste to be discharged where it is or probably will be discharged into waters of the State and create a condition of pollution or nuisance. Chevron owned the Site for 28 years, from 1980 to 2008. For the first 16-year period of its ownership, it kept the AST at the Site. When it was removed, TCE was found in the AST’s supply pipe line and spigot, as well as in the soil under and around the AST. As evidenced by the rusted out top of the AST when it was removed in 1996, and staff’s observation of rust on the concrete cradles in 2008, the AST had been in poor condition and not properly maintained. An AST that had not been properly decommissioned and emptied, combined with its poor condition at the time of removal, suggests that TCE likely discharged into the environment during Chevron’s tenure. Even if it did not, Chevron nevertheless is a discharger because it permitted TCE to be discharged at the Site. Specifically, Chevron knew of the TCE contamination at the Site from the 1996 E&E report and the 2007 URS report. The TCE at the Site was, and continues to be, an ongoing discharge. As the

property owner at that time, Chevron had the ability to control the ongoing discharge and failed to do so. It, therefore, permitted waste to be discharged.

Alcatel-Lucent USA, Inc., is named as a discharger because Alcatel-Lucent is the successor to Western Electric's liabilities for issues pertaining to Western Electric's tenancy. There is substantial evidence that Western Electric discharged pollutants to soil and groundwater at the Site. Such evidence includes Western Electric's use of TCE at the Site, the presence of TCE in an AST at the Site, and the presence of TCE and its breakdown products in soil, soil vapor, and groundwater at the Site.

B.F. Saul Real Estate Investment Trust is named as a discharger because it owned the property during the time of the activity that resulted in the discharge (during Western Electric's tenancy), had knowledge of the activities that caused the discharge, and had the legal ability to prevent the discharge.

6400 Sierra Court Investors, LLC, is named as a discharger because it is the current owner of the property on which there is an ongoing discharge of pollutants, has knowledge of the discharge and the ability to control it.

Chevron U.S.A., Inc., Alcatel-Lucent USA, Inc., B.F. Saul Real Estate Investment Trust, and 6400 Sierra Court Investors, LLC, are collectively referred to as "Dischargers" in this Order.

If additional information is submitted indicating that other parties caused or permitted or causes or permits any waste to be discharged at the Site where it is or will be discharged into waters of the State, the Regional Water Board will consider adding those parties' names to this order.

4. **Regulatory Status:** The Site is currently not subject to a Regional Water Board order.
5. **Site Hydrogeology:** The Site is generally flat and paved. Adjacent to the Site on the west is Alamo Canal. This canal is an unlined channel, under the jurisdiction of the Zone 7 Water Agency, that drains several creeks in the vicinity and flows south to Arroyo de la Laguna, then into Alameda Creek through Niles Canyon, and to San Francisco Bay. The Site is located in the Dublin Subbasin of the Livermore Valley Groundwater Basin.

Soils encountered in the upper 15 to 20 feet beneath the Site are typically clays and silts, with thin clayey sand, sand, and silt lenses more common below those depths. A coarser-grained unit lies between approximately 35 and 45 feet below ground surface (bgs). Below this unit lies an approximately 5-foot thick clay unit that is interpreted to separate two water-bearing zones, designated as the shallow and deep zones. Static water levels range from approximately 11.5 to 17 feet bgs. In general, local shallow-zone groundwater flows to the west, where it discharges into Alamo Canal. Groundwater in the deep zone locally flows to the north.

There are no known municipal or domestic drinking water wells in the vicinity of the Site. However, the regional groundwater drains toward the south, where municipal water wells for the City of Pleasanton are located.

6. **Remedial Investigations:** Several investigations, performed between 2007 and 2012, revealed the following:
- Former AST storage area and vicinity, south of the warehouse (former Gettler-Ryan lease area): Total petroleum hydrocarbons as diesel (TPH-d) in shallow soil samples and toluene and benzene in groundwater samples were all below ESLs.
 - Former AST and adjacent areas under the warehouse: TCE and its breakdown byproducts, cis-1,2-dichloroethene (cis-1,2-DCE), trans-1,2-dichloroethene (trans-1,2-DCE), and vinyl chloride, were above ESLs, while several other volatile organic compounds (VOCs) were below ESLs, in soil, soil vapor, and groundwater.
 - Former chemical storage area on the northwest corner of the warehouse: TCE and several other VOCs in groundwater (but not in soil) were below ESLs.
 - Alamo Canal downgradient (but not upgradient) of the Site: TCE and its breakdown byproduct cis-1,2-DCE in surface water were below ESLs
 - Warehouse: TCE and its breakdown byproduct cis-1,2-DCE in indoor air samples were below ESLs.

In addition to the above, the Feasibility Study/Remedial Action Plan (FS/RAP) completed in 2013 identified a “Potential Second Source Area,” which refers to the elevated TCE in shallow groundwater and soil vapor in the former Gettler-Ryan lease area. The FS/RAP suggests four possible sources of the TCE in this area: an unknown offsite source, releases from Gettler-Ryan’s operations, incidental disposal practices during Western Electric’s tenure, or from the AST through preferential pathways. The FS/RAP concludes that there is no strong evidence to support any one of the possibilities over the others.

The maximum detected concentrations of contaminants of potential concern are listed by medium in the table below:

Analyte	Maximum Detected Concentration				
	Groundwater (µg/L)	Soil (mg/kg)	Soil Gas (µg/m ³)	Indoor Air (µg/m ³)	Surface Water (µg/L)
TCE	66,000	61	4,000,000	0.48	17
cis-1,2-DCE	2,400	9.3	210,000	0.41	3.2
trans-1,2-DCE	490	1.6	84,000	<0.72	<0.5
vinyl chloride	<0.5 - <50*	0.084	550,000	<0.047	<0.5 - <5.0*

* Elevated detection limits.

7. **Interim Remedial Measures:** In 2008, an area of approximately 35-feet by 40-feet beneath the former AST was excavated to a maximum depth of 16 feet. The excavation was centered along the edge of the warehouse. This was a self-directed interim action performed on behalf of the current owner to help reduce the potential for vapor intrusion to indoor air and not intended as a final remedy to address contaminated soil vapor, soil, and groundwater. The bottom of the excavaton was backfilled with crushed rock overlain by a geotextile. This was covered with a concrete slurry. Inside the warehouse, this fill was topped with crushed rock and a vapor barrier

prior to pouring a new concrete floor. Outside the warehouse, imported fill and asphalt pavement were placed on top of the controlled-density fill. Slotted PVC pipe was placed in the crushed rock at the bottom of the interior and exterior areas of the excavation and the top of the excavation inside the warehouse. These pipes were connected through risers to separate surface ports for potential future use in soil vapor monitoring and extraction.

In 2012, risers were used to extract soil vapors from the bottom of the excavation. The TCE mass removal rate at startup was approximately 17.4 pounds per day, but soon dropped to below 1 pound per day. From May 24 to October 12, 2012, the system removed 68 pounds of TCE and 1.3 pounds of vinyl chloride. However, due to the decline in influent TCE concentration following startup and again after a carbon change out, full-time operation of the system has been discontinued.

8. **Adjacent Sites:** There are no regulated cases adjacent to the Site.
9. **Screening Level Risk Assessment:** A screening-level evaluation was carried out to evaluate potential human health and environmental concerns related to identified soil, groundwater, and soil gas impacts. Chemicals evaluated in the risk evaluation include TCE, DCE, and vinyl chloride, the primary constituents of concern identified at the Site.
 - a. **Screening Levels:** As part of the initial assessment, Site data were compared to the Regional Water Board's ESLs. The presence of chemicals at concentrations above the ESLs 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 based on an unrestricted land use scenario, and 3) migration and impacts to ecological receptors, specifically aquatic habitats associated with Alamo Canal. 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 based on an unrestricted land use scenario. 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 1×10^{-6} for carcinogens and a target Hazard Quotient of 1.0 for non-carcinogens. 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:

Media / Constituent	Result of Screening Assessment*					
	Human Health – Direct Contact	Leaching to Ground- water	Vapor Intrusion to Indoor Air	Ecological Receptors - Aquatic Life	Drinking Water	Nuisance
Soil:						
TCE	X	X				
cis-1,2-DCE		X				
trans-1,2-DCE		X				
vinyl chloride	X					
Indoor Air:						
TCE						
cis-1,2-DCE						
trans-1,2-DCE						
vinyl chloride			**			
Soil Gas:						
TCE			X			
cis-1,2,-DCE						
trans-1,2-DCE			X			
vinyl chloride			X			
Groundwater:						
TCE			X	X	X	X
cis-1,2-DCE				X	X	
trans-1,2-DCE					X	X
vinyl chloride			**		**	
Surface Water:						
TCE					X	
cis-1,2-DCE						
trans-1,2-DCE						
vinyl chloride					**	

* "X" indicates that ESL for that particular concern was exceeded

** Elevated detection limits prevent accurate assessment.

c. Conclusions: The contaminants exceeding these ESLs should be addressed by remediation and risk management.

10. Feasibility Study/Remedial Action Plan:

A Feasibility Study/Remedial Action Plan (FS/RAP) dated July 1, 2013, considered remedial alternatives independently for the source area (around the former AST), a canal barrier (to prevent/mitigate contaminant migration toward and into Alamo Canal), and the “Potential Second Source Area” (referring to the elevated TCE around the former Gettler-Ryan area).

For the source area, considered alternatives included no action, anaerobic reductive dechlorination, in-situ chemical oxidation, and electrical resistance heating. For the canal barrier, considered alternatives included no action, biowall, in-situ chemical oxidation, and anaerobic reductive dechlorination. Following an evaluation of alternatives, anaerobic reductive dechlorination was selected for the source area, and a biowall was selected for the canal barrier. In addition, anaerobic reductive dechlorination was proposed for the "Potential Second Source Area." The FS/RAP details the construction and injections required for implementation of the selected alternatives.

The source area will receive injections of diluted amendment solution and bioaugmentation solution at 15 locations in and around the former excavation area. The amendment solution will contain an electron donor (off-the-shelf materials such as EHC-L, 3D-Me, or proprietary lactate/cysteine mix). The bioaugmentation solution will be a mixed bacterial culture containing *Dehalococcoides*. Groundwater monitoring will be performed to assess the performance of the amendments. Additional amendment solution will be injected based on monitoring results (when total organic carbon <10 mg/L and solvents are still detected). The anticipated duration to attain cleanup levels is four to six years.

Groundwater monitoring was proposed to assess the performance of the biowall in treating contamination. General groundwater quality degradation and the generation of vapors as a result of the addition of amendments and bioamendments was not assessed or proposed as part of the FS/RAP. These may be specific concerns with respect to vapor intrusion to indoor air and discharges to Alamo Canal (e.g., generation of methane or hydrogen sulfide creating a health hazard or nuisance condition). The FS/RAP does not address the cleanup of VOCs present in soil vapor. As noted in Finding 7, soil vapor extraction was discontinued due to an abrupt decrease in influent TCE concentration about two weeks following startup and again after a carbon change out. This was the reason soil vapor extraction was excluded as a remedial option in the FS/RAP. However, the effectiveness of the system by the removal of 68 pounds of TCE was not assessed (soil vapor wells were not subsequently sampled to determine the residual concentrations of contaminants). In addition, soil vapor extraction was operated on a continuous basis and system optimization (e.g., cycling/pulsing) was not considered. Additional work will be required to address the unintended effects of the addition of amendments and bioamendments as noted above, as well as additional assessment of soil vapor extraction. The FS/RAP notes that an Underground Injection Control (UIC) permit will be filed with the Regional Water Board. However, the UIC permit is a federal permit. Regional Water Board approval for the injections proposed in the FS/RAP will be pursuant to this Order.

11. **Basis for Cleanup Levels**

- a. **General:** 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. This order and its requirements are consistent with Resolution No. 92-49.

State Water Board Resolution No. 68-16, "Statement of Policy with Respect to Maintaining High Quality of Waters in California," applies to this discharge and requires high quality waters to be maintained until it has been demonstrated that any change will be consistent with the maximum benefit of the people, will not unreasonably affect present and anticipated beneficial uses of such water, and will not result in water quality less than prescribed in water quality control policies.

- b. **Beneficial Uses:** The 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 total dissolved solids (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

At present, the only existing beneficial use of the groundwater underlying the Site is freshwater replenishment to Alamo Canal.

The existing and potential beneficial uses of Alamo Canal include:

- o Groundwater recharge
- o Water contact and non-contact recreation
- o Wildlife habitat
- o Cold freshwater and warm freshwater habitat
- o Fish migration and spawning

- 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 based on protection of human health and ecological receptors and are intended to prevent leaching of

contaminants to groundwater. For the contaminants of concern, the most stringent of these is the prevention of leaching to groundwater, except for vinyl chloride, which is based on protection of human health.

- e. **Basis for Soil Gas Cleanup Levels:** The soil gas cleanup levels for the Site are intended to prevent vapor intrusion into occupied buildings in an unrestricted land use scenario and will prevent unacceptable residual risk to humans.
 - 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 in an unrestricted land use scenario as a result of vapor intrusion. These levels will apply to existing and future buildings that are designated for human occupancy.
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. Any future changes to the cleanup levels in this Order must be consistent with applicable policies and requirements.
13. **Risk Management:** The Regional Water Board considers the following human health risks to be acceptable at remediation sites: a cumulative hazard index of 1.0 or less for non-carcinogens and a cumulative excess cancer risk of 10^{-6} to 10^{-4} or less for carcinogens. The screening level evaluation for the 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 the Site during (and possibly after) active remediation to assure protection of human health. Long-term risk management measures may include engineering controls (such as engineered caps) and institutional controls (such as deed restrictions that prohibit certain land uses), as appropriate.

The following risk management measures are needed at the Site:

- a. During remediation: A risk management plan that notifies current and future owners of sub-surface contamination, prohibits the use of shallow groundwater beneath the Site as a source of drinking water until applicable groundwater and soil cleanup levels are met, and prohibits sensitive uses of the Site such as residences and daycare centers until applicable soil gas and soil cleanup levels are met. The risk management plan shall include protocols for establishing engineering controls/mitigation as warranted for other site uses. The risk management plan should include protocols for air monitoring, and soil/groundwater handling and disposal, as warranted by site use and remedial activities. The risk management plan should also include protocols for the protection, operation, and maintenance of any remedial system, including monitoring/extraction wells.
- b. Post remediation (contingent upon the Regional Water Board's conclusion that cleanup levels will not be attained prior to potential future site uses that may be affected): 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 applicable soil and groundwater cleanup levels are met, and prohibits sensitive uses of the Site such as residences and daycare centers (as applicable) until applicable soil and soil gas cleanup levels are met.

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 be remediated such that maximum contaminant levels (designed to protect human health and ensure that water is safe for domestic use) are met in existing and future supply wells.
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, heard and considered all comments pertaining to this discharge.

IT IS HEREBY ORDERED, pursuant to section 13304 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. CLEANUP LEVELS

1. **Groundwater Cleanup Levels:** The following groundwater cleanup levels shall be met in all wells identified in the attached Self-Monitoring Program and in any additional monitoring wells that may be installed as part of this Order:

Constituent	Level (µg/L)	Basis
Trichloroethene (TCE)	5	U.S. EPA Primary MCL
cis-1,2-Dichloroethene (DCE)	6	U.S. EPA Primary MCL
trans-1,2-DCE	10	U.S. EPA Primary MCL
Vinyl chloride	0.5	U.S. EPA Primary MCL

µg/L = microgram per liter

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

Constituent	Level (mg/kg)	Basis
TCE	0.46	Leaching to Groundwater
cis-1,2-DCE	0.19	Leaching to Groundwater
trans-1,2-DCE	0.67	Leaching to Groundwater
Vinyl Chloride	0.032	Direct Exposure

mg/kg = milligram per kilogram

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

Constituent	Level (ug/m ³)	Basis
TCE	300	Human Health – Vapor Intrusion
cis-1,2-DCE	3,700	Human Health – Vapor Intrusion
trans-1,2-DCE	31,000	Human Health – Vapor Intrusion
Vinyl Chloride	16	Human Health – Vapor Intrusion

µg/m³ = microgram per cubic meter

4. **Indoor Air Cleanup Levels:** The following indoor air cleanup levels shall be met in occupied onsite buildings and will only be applied if the current building or any future buildings are considered for occupancy prior to soil gas cleanup levels being achieved:

Constituent	Level (ug/m ³)	Basis
TCE	0.59	Human Health - Inhalation
cis-1,2-DCE	7.3	Human Health - Inhalation
trans-1,2-DCE	63	Human Health - Inhalation
Vinyl Chloride	0.031	Human Health - Inhalation

µg/m³ = microgram per cubic meter

C. TASKS

1. AMENDED REMEDIAL ACTION PLAN

COMPLIANCE DATE: August 1, 2014

Submit a workplan, acceptable to the Executive Officer, amending the FS/RAP to address the potential of general groundwater quality degradation, human health and nuisance conditions for vapor intrusion to indoor air, and discharges to Alamo Creek as a result of in-situ injection remedial actions as noted in Finding 10. The Amended FS/RAP shall include the following:

- a. An evaluation of general groundwater quality and the potential for the generation of vapors (volatile chemicals) as a result of the addition of amendments and bioamendments.
- b. Additional monitoring and contingency plan(s) based on this evaluation.
- c. An evaluation of soil vapor extraction effectiveness and system optimization.

An acceptable Amended FS/RAP must demonstrate a likelihood of attaining cleanup standards within a reasonable timeframe. The Amended FS/RAP shall describe all significant implementation steps and shall include an implementation schedule.

2. IMPLEMENTATION OF AMENDED REMEDIAL ACTION PLAN

COMPLIANCE DATE: 180 days after Executive Officer approval of Task 1 workplan

Submit a technical report acceptable to the Executive Officer documenting completion of necessary tasks identified in the Task 1, Amended Remedial Action Plan. Proposals for further system expansion or modification may be included in Self-Monitoring Program reports (see attached Self-Monitoring Program).

3. RISK MANAGEMENT PLAN

COMPLIANCE DATE: August 1, 2014

Submit a Risk Management Plan, acceptable to the Executive Officer, to address public awareness of sub-surface contamination and prohibit certain uses of the Site until cleanup levels are met as noted in Finding 13.a. The Risk Management Plan shall include:

- a. Notifications to current and future owners of sub-surface contamination.
- b. Prohibition of the use of groundwater beneath the Site as a source of drinking water until applicable groundwater and soil cleanup levels are met.
- c. Prohibition of sensitive uses of the Site such as residences and daycare centers until applicable soil gas and soil cleanup levels are met.
- d. Protocols for establishing and protecting engineering controls/mitigation as warranted for other site uses.
- e. Protocols for air monitoring, and soil/groundwater handling and disposal, as warranted by site use and remedial activities.
- f. Protocols for the protection, operation, and maintenance of any remedial system, including monitoring/extraction wells.

4. **RISK MANAGEMENT PLAN IMPLEMENTATION REPORT**

COMPLIANCE DATE: August 1, 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 May 30. The report shall include a detailed comparison of Risk Management Plan elements and implementation actions taken. The report shall 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.

5. **STATUS REPORT**

COMPLIANCE DATE: August 1, 2016, August 1, 2018, August 1, 2020, and every five years thereafter

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

- a. Summary of effectiveness in controlling contaminant migration and protecting human health and the environment, including the application and effectiveness of any contingency plan for in-situ remediation;
- 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, if applicable);
- e. Cost effectiveness data (e.g., cost per pound of contaminant removed, if applicable);

- f. Summary of additional investigations (including results) and significant modifications to remediation systems; and
- g. Additional remedial actions proposed to meet cleanup levels (if applicable), including a time schedule.

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

6. PROPOSED DEED RESTRICTION

COMPLIANCE DATE: 60 days after deed restriction required by Executive Officer

Submit a proposed deed restriction, acceptable to the Executive Officer, whose goal is to limit onsite occupants' exposure to Site contaminants to acceptable levels. The Executive Officer shall require a proposed deed restriction if the Executive Officer concludes, based on the Task 5 status report and other relevant information, that cleanup levels will not be attained prior to potential future site uses that may be affected. The proposed deed restriction shall prohibit the use of shallow groundwater beneath the Site as a source of drinking water until applicable soil and groundwater cleanup levels are met and prohibit sensitive uses of the Site such as residences and daycare centers (as applicable) until applicable soil and soil gas cleanup levels are met. 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. The deed restriction shall include the risk management plan, amended as warranted, to propose any combination of engineering controls, mitigation, additional monitoring or remediation.

7. RECORDATION OF DEED RESTRICTION

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

Submit a technical report acceptable to the Executive Officer documenting that the deed restriction has been duly signed by all named parties and has been recorded with the appropriate county recorder. The report shall include a copy of the recorded deed restriction. Since only the Site owner can record the deed restriction, this task only applies to 6400 Sierra Court Investors, LLC. In the event the Site transfers to another owner prior to recordation and/or cleanup of the Site, this Order will be amended to include the new owner as a named discharger, as appropriate.

8. 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 injection but wells retained), and significant system modification (e.g., major reduction in injection rates). The report shall include the

rationale for curtailment. Proposals for final closure shall demonstrate that cleanup levels have been met, contaminant concentrations are stable, and contaminant migration potential is minimal.

9. **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 8.

10. **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.

11. **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 that bears on the approved remedial action plan, cleanup levels, or risk management plan for the Site. In the case of a new cleanup technology, the report shall 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.

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

3. **Cost Recovery:** The Dischargers shall be liable, pursuant to Water Code section 13304, to the Regional Water Board for all reasonable costs actually incurred by the Regional Water Board to investigate unauthorized discharges of waste and to oversee cleanup of such waste, abatement of the effects thereof, or other remedial action, required by this Order. If the Site 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 onsite (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 Dublin, Public Works Department
 - b. County of Alameda Department of Environmental Health
 - c. Zone 7 Water Agency

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 Site ownership.
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 _____.

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 Map
Self-Monitoring Program

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

SELF-MONITORING PROGRAM for:

**CHEVRON U.S.A., INC.,
ALCATEL-LUCENT USA, INC.,
B.F. SAUL REAL ESTATE INVESTMENT TRUST, and
6400 SIERRA COURT INVESTORS, LLC**

for the property located at:

6400 SIERRA COURT
DUBLIN, ALAMEDA 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-XXXX-XXXX (site cleanup requirements).
2. **Monitoring:** The Dischargers shall measure groundwater elevations quarterly in all monitoring wells, 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	MW-2a	Q	8260B
MW-2	Q	8260B	MW-4a	Q	8260B
MW-3	Q	8260B	OW-1	Q	8260B
MW-4	Q	8260B	OW-2	Q	8260B
MW-5	Q	8260B	OW-3	Q	8260B
MW-1a	Q	8260B			

Key: Q = Quarterly 8260B = U.S. EPA Method 8260B or equivalent

This monitoring is in addition to monitoring required for the implementation of the Amended Remedial Action Plan. However, this monitoring may be performed in conjunction with these requirements as applicable.

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 July 30, 2014. The reports shall include:

- a. **Transmittal Letter:** The transmittal letter shall discuss any violations during the reporting period and actions taken or planned to correct the problem. The letter shall be signed by the Dischargers' principal executive officer or his/her duly authorized representative and shall include a statement by the official, under penalty of perjury, that the report is true and correct to the best of the official's knowledge.
 - b. **Groundwater Elevations:** Groundwater elevation data shall be presented in tabular form, and a groundwater elevation map shall be prepared for each monitored water-bearing zone. Historical groundwater elevations shall be included.
 - c. **Groundwater Analyses:** Groundwater sampling data shall be presented in tabular form, and an isoconcentration map shall be prepared for one or more key contaminants for each monitored water-bearing zone, as appropriate. The report shall indicate the analytical method used, detection limits obtained for each reported constituent, and a summary of QA/QC data. Historical groundwater sampling results shall be included in each report. 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, shall be included in electronic format only.
 - 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, interim 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. **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.