SIXTH FIVE-YEAR REVIEW REPORT FOR SYNERTEK, INC. (BUILDING 1) SUPERFUND SITE SANTA CLARA COUNTY, CALIFORNIA

PREPARED BY

U.S. Army Corps of Engineers

Seattle District

FOR

U.S. Environmental Protection Agency Region 9

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Executive Summary

This is the sixth Five-Year Review of the Synertek, Inc. (Building 1) Superfund Site (Site). The purpose of this Five-Year Review is to review information to determine if the remedy is and will continue to be protective of human health and the environment.

The Site is located in Santa Clara, California, and covers approximately 1.5 acres. Chlorinated volatile organic compounds used in semiconductor manufacturing were released from the underground tanks located at the Synertek building. Environmental sampling performed in 1985 indicated that volatile organic compound contamination from the tanks had affected groundwater. The Site overlies the Santa Clara Valley groundwater basin, which in 1989 provided nearly half of the drinking water supply for 1.4 million residents. The Synertek Site was placed on the National Priorities List primarily because of the past chemical releases' potential threat to the regional drinking water supply. The 1991 Record of Decision reported that land use adjacent to the Site was industrial park, and that the nearest residential area was located 3,600 feet south of the Site. Within the past five years, some of the adjacent areas have been redeveloped from industrial park to residential and mixed-use buildings with residential units. The nearest residential building is now located 1,100 feet to the northeast of the Site and downgradient of the groundwater contamination plume.

In 1991, EPA selected the following remedy for the Site: Operation of a groundwater extraction and treatment system to address the volatile organics contamination with the objectives of preventing exposure of human receptors to contaminated groundwater, control of contaminant migration, and restoration of the contaminated groundwater for future use as potential drinking water.

By 2000, operation of the groundwater extraction and treatment system had reduced the average concentration of trichloroethene in the shallow aquifers by more than 90%. At that time, groundwater monitoring data indicated that volatile organic compound concentrations had stabilized, suggesting that further reduction of volatile organic compounds in groundwater using the treatment system would not be feasible. In 2001 the treatment system was shut down. Since shutdown of the groundwater treatment system, there have not been significant changes in the size or location of the plume. A Revised Focused Feasibility Study was submitted to the California Regional Water Quality Control Board, San Francisco Bay Region and EPA in 2018, which evaluated alternative treatment technologies (including in-situ bioremediation and monitored natural attenuation) to achieve the remedial action objectives in the 1991 Record of Decision.

To address residual contamination above cleanup levels, Honeywell (Site responsible party) proposed enhanced in-situ bioremediation treatment followed by monitored natural attenuation. Honeywell installed new injection wells at the Site in December 2019, with subsequent injection of carbon substrate and cultured bacteria in February 2020. Honeywell conducted performance monitoring of the enhanced in-situ bioremediation through April 2021.

The toxicity data, cleanup levels, and remedial action objectives used at the time of remedy selection are still valid. The Record of Decision did not consider vapor intrusion; subsequent vapor intrusion

evaluations at on-Site and off-Site commercial/industrial buildings determined that this pathway is incomplete, or insignificant, and thus not a source of exposure of commercial/industrial workers to Site contaminants.

Construction of nearby residential buildings has occurred in the past five years. Residential buildings are now closer to the Site than was the case at the time of the Record of Decision. However, vapor mitigation systems were installed at the four closest newly constructed mixed use/residential buildings. There is no potential for vapor intrusion to be an issue based on the chemical concentrations near the new development.

The remedy at Synertek, Inc. (Building 1) Superfund Site currently protects human health and the environment because the restrictive covenant is preventing exposure. However, for the remedy to be protective in the long-term, a new remedy needs to be selected since the groundwater extraction and treatment system is no longer operating, and a new deed restriction needs to be put in place.

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List of Acronyms and Abbreviations

CH2M	CH2M HILL, Inc., engineering firm and consultant for Honeywell
EPA	United States Environmental Protection Agency
Honeywell	Honeywell International, Inc., responsible entity
Jacobs	Jacobs Engineering Group, Inc., engineering firm and consultant for Honeywell
ROD	Record of Decision
RWQCB	California Regional Water Quality Control Board, San Francisco Bay Region
Site	Synertek, Inc. (Building 1) Superfund Site
USACE	United States Army Corps of Engineers

1. Introduction

The purpose of a Five-Year Review is to evaluate the implementation and performance of a remedy in order to determine if the remedy will continue to be protective of human health and the environment. The methods, findings, and conclusions of reviews are documented in Five-Year Review reports. In addition, Five-Year Review reports identify issues found during the review, if any, and document recommendations to address them.

The U.S. Environmental Protection Agency (EPA) is preparing this five-year review pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act Section 121, 40 Code of Federal Regulation Section 300.430(f)(4)(ii) of the National Contingency Plan and EPA policy.

This is the sixth Five-Year Review for the Synertek, Inc. (Building 1) Superfund Site. The triggering action for this policy review is the completion of the previous Five-Year Review on September 27, 2017. The Five-Year Review has been prepared because hazardous substances, pollutants, or contaminants remain at the Site above levels that allow for unlimited use and unrestricted exposure. This FYR addresses the entire Site.

The Synertek, Inc. (Building 1) Superfund Site Five-Year Review was led by Katherina Diemer, EPA Region 9 Remedial Project Manager. Participants included Cynthia Wetmore, EPA Region 9 Superfund Five-Year Review Coordinator and from the U.S. Army Corps of Engineers (USACE): Jacob Williams, project manager; Jayson Osborne, remediation biologist; Justin McNabb, hydrogeologist and Matt Wetter, environmental engineer. The review began on November 15, 2021.

Table 1. Five-Year Review Summary Form

SITE IDENTIFICATION		
Site Name: Synertek, Inc. (Building 1)		
EPA ID: CAD0990832735		
Region: 9	**State:** CA	**City/County:** Santa Clara, Santa Clara
SITE STATUS		
National Priorities List Status: Final		
Multiple Operable Units? No	**Has the site achieved construction completion?** Yes	
REVIEW STATUS		
Lead agency: State ***(California Regional Water Quality Control Board, San Francisco Bay Region)***		
Author name (Federal or State Project Manager): Katherina Diemer, Remedial Project Manager		
Author affiliation: Environmental Protection Agency, Region 9		
Review period: 11/15/2021 - 7/15/2022		
Date of site inspection: 6/29/2022		
Type of review: Policy		
Review number: 6		
Triggering action date: 9/27/2017		
Due date *(five years after triggering action date)*: 9/27/2022		

1.1. Background

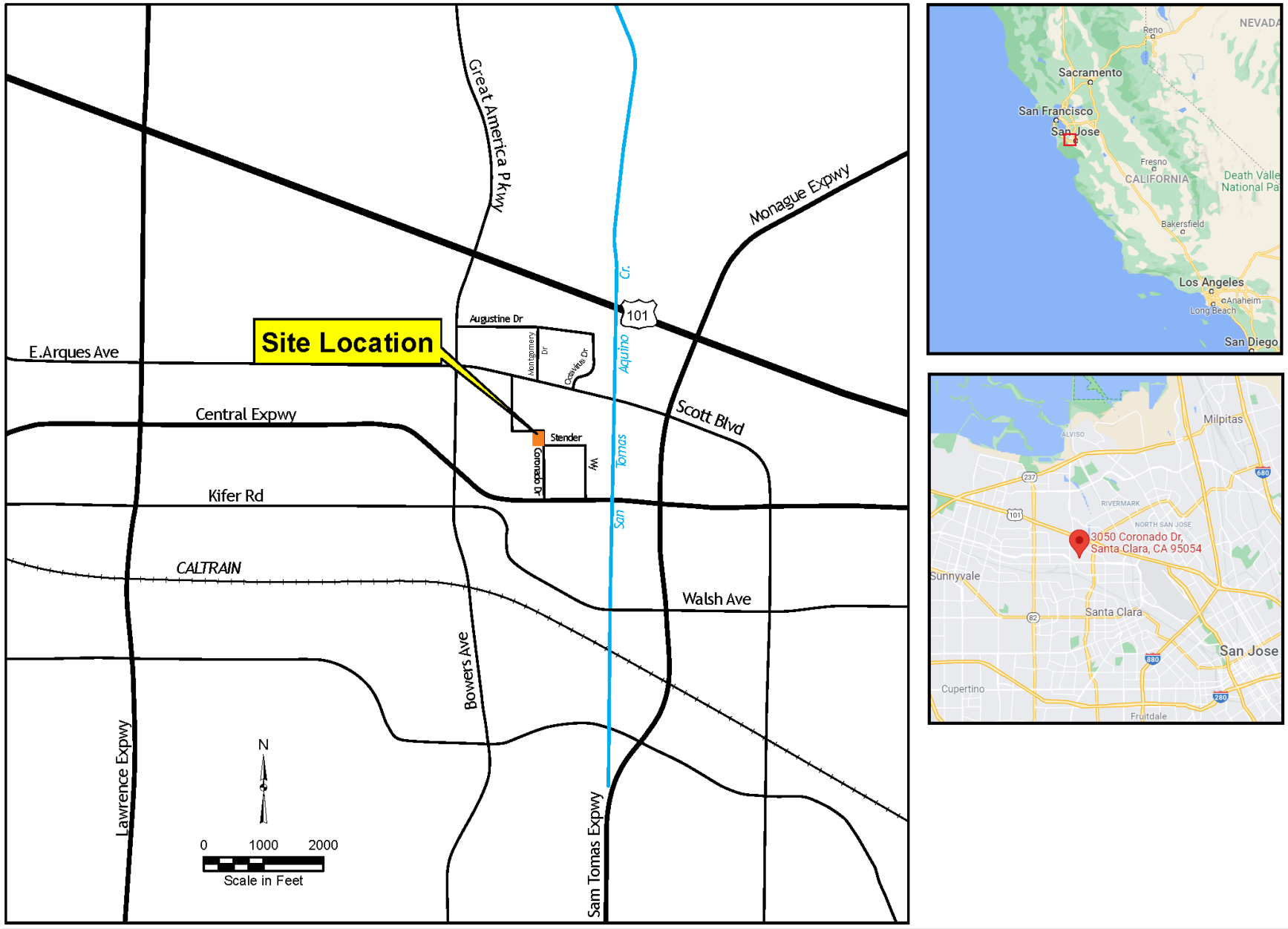
The Site is located at 3050 Coronado Drive in the city of Santa Clara, California, and covers approximately 1.5 acres (Figure 1). Santa Clara has a population of approximately 127,000 and is considered part of the San Francisco Bay metropolitan region. Prior to 1985, Synertek constructed and operated two underground tank systems east of the building. Chlorinated volatile organic compounds used in semiconductor manufacturing were released from the underground tanks.

In 1982, the California Regional Water Quality Control Board, San Francisco Bay Region (RWQCB) discovered solvent contamination in groundwater at the Site in groundwater samples collected as part of a leak detection program for underground tanks. This discovery initiated a remedial investigation, which identified the source of contamination as leaks from on-Site solvent and neutralization tanks. In 1985, Honeywell Inc., the successor company to Synertek, Inc., removed these tanks and the surrounding impacted soil. In 1989 the Synertek Site was placed on the National Priorities List because of the potential threat from past chemical releases to the regional drinking water supply.

1.2. Physical Characteristics

The Site area land use was agricultural until 1974, at which point it began transitioning to commercial and industrial use. In 1974, Synertek leased the Site for semiconductor manufacturing and constructed an approximately 24,000 square foot, single story building (Building 1). Beginning in 1978, Synertek used Building 1 for performing quality control of chemicals and electrical testing of semiconductors. In 1979, Honeywell acquired Synertek. Synertek manufacturing operations ceased in 1985 and Building 1 remained vacant until 1989. Currently, Building 1 is vacant. A deed restriction was recorded for the property in 1991 which prohibits the use of shallow groundwater and installation of new water wells at the Site. Municipal water supply wells in the area are screened in the deeper regional aquifer. The nearest municipal water supply well is located about 1 mile to the southwest. The nearest municipal water supply well downgradient of the Site is located approximately 1.5 miles to the north-northeast.

The 1991 Record of Decision reported that land use adjacent to the Site was industrial park, and that the nearest residential area was located 3,600 feet south of the Site. Within the past five years, some of the adjacent areas have been redeveloped from industrial park to residential and mixed-use buildings with residential units. The nearest residential building (Santa Clara Square Building #7 at 3238 Scott Boulevard) is now located 1,100 feet to the northeast of the Site. Large 2- and 3-story apartment buildings have been recently constructed on city blocks encompassed by Scott Boulevard on the south, Augustine Drive on the north, Octavius Drive on the east, and Coronado Drive on the west. These new residential buildings are located approximately 1,500 feet north and northeast of the Site.



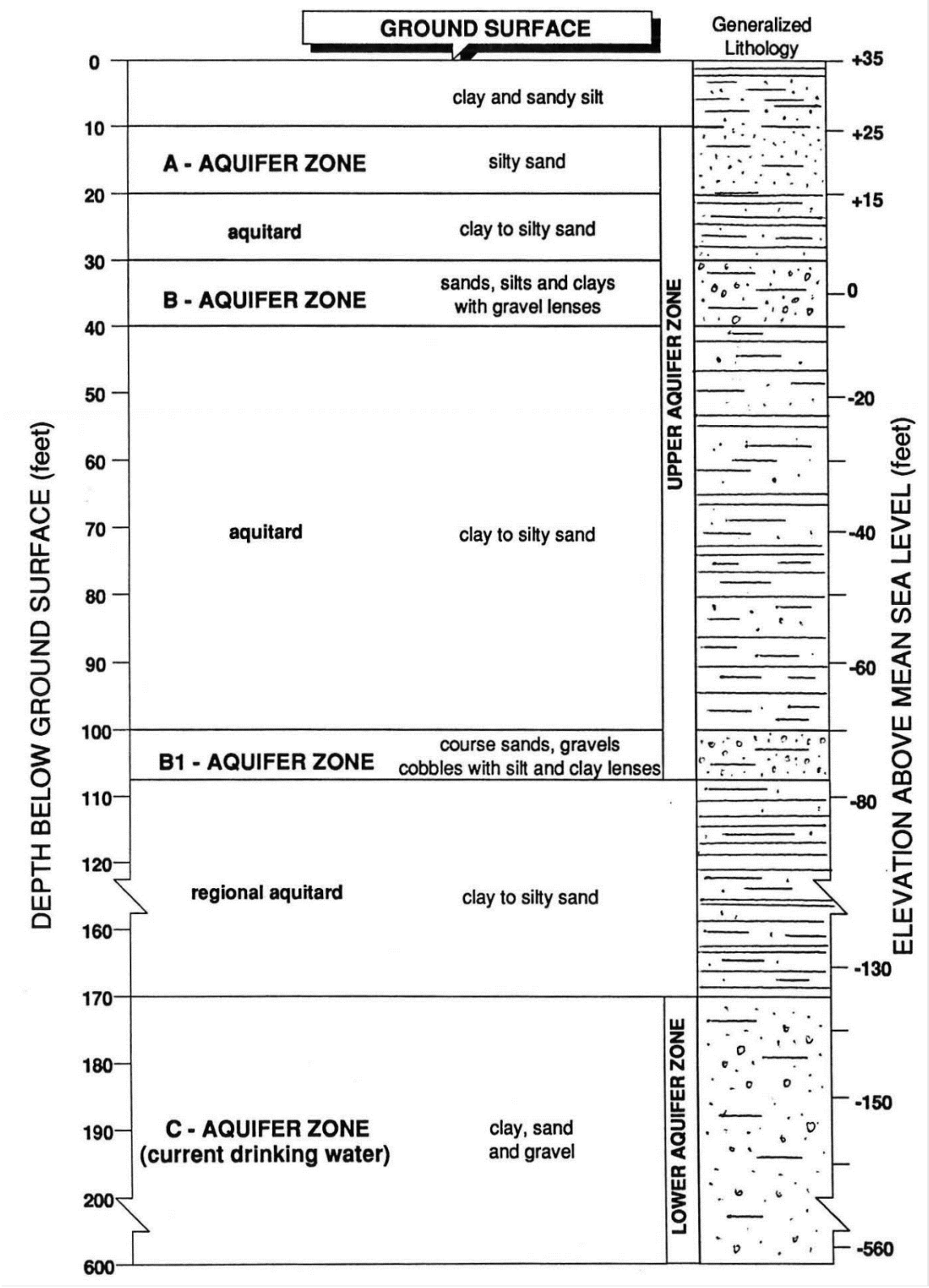
Source: Adapted from Jacobs, 2021. 2020 Groundwater Monitoring and Sampling Summary Report.

Figure 1. Location Map

1.3. Hydrology

The Site is located in the Santa Clara Valley, a structural basin filled with coarse- and fine-grained marine and alluvial sediment deposits. These deposits form a complex series of aquifers interbedded with discontinuous layers that impede the movement of groundwater. Figure 2 depicts the layers of aquifers and impeding layers (aquitards) present at the Synertek Site.

Shallower groundwater at the Site is affected by the release of contaminants. There are three distinct shallow water bearing zones at the Site: Aquifer Zone A (10-20 feet below ground surface); Aquifer Zone B (30-40 feet below ground surface); and below Aquifer Zone B is a layer of approximately 60 feet of clay, separating it from the Aquifer Zone B1, which is found between 100 and 108 feet below ground surface. Below the Zone-B1 Aquifer, there is a regional, relatively impermeable water-impeding layer beginning at a depth of approximately 171 feet. Deeper groundwater comprising the regional aquifer is located beneath the regional impeding layer at a depth of approximately 200 to 300 feet below ground surface. The deeper groundwater of the regional aquifer is not affected by contaminants from the Site. Groundwater in the Santa Clara basin generally flows to the north or northwest, following topographic and surface features, eventually reaching the San Francisco Bay.



Source: Adapted from EPA, 1991. Record of Decision, Synertek Building #1, Superfund Site, Santa Clara, California.

Figure 2. Hydrologic cross section of the aquifers underneath the Synertek Site.

2. Remedial Actions Summary

2.1. Basis for Taking Action

Environmental sampling performed in 1985 indicated that volatile organic compound contamination from the tanks had affected groundwater in both the A and B aquifer zones. The Site overlies the Santa Clara Valley groundwater basin, which in 1989 provided nearly half of the drinking water supply for 1.4 million residents. The groundwater is contaminated with TCE and other volatile organic compounds, and the groundwater is a potential drinking water source.

2.2. Remedy Selection

Prior to selection of the remedy, Honeywell removed two underground tank systems east of Building 1 and affected soils in 1985 as part of an interim remedial measure, under RWQCB oversight. Honeywell also began operating a groundwater extraction and treatment system in 1987 to address the volatile organics contamination identified in the groundwater when the tanks were removed.

EPA selected the remedy as described in the Record of Decision (ROD) dated June 28, 1991, with the following remedial action objectives:

- Prevention of the near-term and future exposure of human receptors to contaminated groundwater;
- Restoration of the contaminated groundwater for future use as potential drinking water;
- Control of contaminant migration; and
- Monitoring of contaminant concentrations in the groundwater.

Major components of the remedy selected in the ROD include:

- A deed restriction prohibiting the use of shallow groundwater;
- Periodic groundwater monitoring;
- Groundwater extraction and treatment with air stripping;
- Discharge of the treated groundwater to the storm drain under a National Pollutant Discharge Elimination System permit; and
- Search for and seal the remaining agricultural well that is believed to exist near the plume.

The groundwater cleanup values are based on federal drinking water standards or California drinking water standards, except for acetone and xylenes which both have risk-based cleanup standards (Table 2).

Table 2. Cleanup Standards from 1991 Record of Decision

Chemical	Cleanup Standard (µg/L)*	Basis for Cleanup Standard
acetone	350	Health-Based Standard[1]
benzene	1	California drinking water standard[2]
bis(2-ethylhexyl)phthalate	4	California drinking water standard[2]
1,1-dichloroethane (1,1-DCA)	5	California drinking water standard[2]
1,1-dichloroethene (1,1-DCE)	6	California drinking water standard[2]
cis-1,2-dichloroethene (cis-1,2-DCE)	6	California drinking water standard[2]
ethylbenzene	680	California drinking water standard[2]
Freon-113	1200	California drinking water standard[2]
styrene	5	Proposed EPA drinking water standard
toluene	100	California Department of Health Services Notification Level
1,1,1-trichloroethane (1,1,1-TCA)	200	California drinking water standard[2]
trichloroethene (TCE)	5	California drinking water standard[2]
vinyl chloride	0.5	California drinking water standard[2]
xylenes	175	Health-Based Standard[3]

*micrograms per liter (µg/L)

1. / Cleanup standard for acetone set at the level that would contribute a value of 0.1 to the cumulative non-carcinogenic risk (Total Hazard Index).

2. / California Maximum Contaminant Level for drinking water.

3. / Cleanup standard for xylenes set an order of magnitude below the California drinking water standard of 1750 µg/L to reduce its contribution to the cumulative non-carcinogenic risk from 0.6 to 0.06.

2.3. Remedy Implementation

The groundwater extraction and treatment system and groundwater monitoring program were already implemented at the time the ROD was adopted. A deed restriction for the Synertek property was recorded on December 30, 1991. This institutional control prevents the installation of new groundwater wells without RWQCB approval (Table 3). Construction of the treatment system was documented as complete on March 25, 1992, with the signing of the Preliminary Closeout Report.

In September 2000, the RWQCB and Honeywell jointly evaluated continued operation of the extraction and treatment system. Based on the findings of this joint evaluation, it was determined that the continued operation of the system was not warranted because the system was not making further progress to reduce contaminant concentrations. Operation of the extraction and treatment system had reduced the average concentration of TCE in the A- and B-aquifers by 93 and 99 percent, respectively. At that time, groundwater monitoring data indicated that volatile organic compound concentrations in monitoring wells and treatment system influent were approaching asymptotic levels, suggesting that further reduction of volatile organic compounds in groundwater using the treatment system would not be feasible.

Groundwater was extracted and treated until January 2001, at which time the RWQCB approved the shutdown of the system with continued groundwater monitoring. At the time of the treatment system shutdown, the system had removed a total of 84 pounds of volatile organic compounds. RWQCB approved removal of the above-ground components of the treatment system in 2012.

Table 3. Summary of Planned and/or Implemented Institutional Controls

Media, Engineered Controls, and Areas	Institutional Controls Needed	Institutional Controls Called for in the Decision Documents	Impacted Parcel(s)	Objective	Title and Date
Groundwater	Yes	Yes	3050 Coronado Drive	No drilling of new water wells without approval from the RWQCB and any other agency with jurisdiction.	Covenant To Restrict Use of Property, 12/30/1991

2.4. System Operations/Operation and Maintenance

The operation of the groundwater extraction and treatment system was discontinued in 2001, ending active operations and maintenance. Honeywell continues to conduct semi-annual groundwater monitoring and submits monitoring reports to the RWQCB and EPA. Due to construction activities off-Site in 2019, monitoring wells MW-15A and MW-15B were damaged; the wells were decommissioned and removed in April 2021.

3. Progress Since the Last Five-Year Review

3.1. Previous Five-Year Review Protectiveness Statement and Issues

The protectiveness statement from the 2017 Five-Year Review for the Synertek Site stated the following:

> *The remedy at Synertek, Inc. (Building 1) Superfund Site is currently protective of human health and the environment because institutional controls are preventing exposure. However, for the remedy to be protective in the long-term, a new remedy needs to be selected since the groundwater extraction and treatment system is no longer operating.*

The 2017 Five-Year Review included one issue and recommendation.

Table 4. Status of Recommendations from the 2017 Five-Year Review

OU #	Issue	Recommendations	Current Status	Current Implementation Status Description	Completion Date (if applicable)
Sitewide	The selected remedy will not achieve remedial action objective of groundwater restoration for future potential use as drinking water.	Select a new remedy by issuing a decision document.	Ongoing	Honeywell conducted enhanced in-situ bioremediation treatment at the Site to further reduce contaminant concentrations in the core release area. Discussion about whether to adopt this approach as the revised remedy in a decision document is ongoing.	Not applicable

3.2. Work Completed at the Site During this Five-Year Review Period

To address residual contamination above cleanup levels, Honeywell proposed enhanced in-situ bioremediation treatment followed by monitored natural attenuation. On June 8, 2018, the RWQCB recommended and approved that Honeywell proceed with developing a work plan for implementing Alternative 3 of the Revised Focused Feasibility Study consisting of enhanced in-situ bioremediation in the plume core area, followed by monitored natural attenuation with institutional controls. Honeywell installed new injection wells at the Site in December 2019, with subsequent injection of carbon substrate and cultured bacteria in February 2020. Honeywell conducted performance monitoring of the enhanced in situ bioremediation through April 2021.

A restrictive land use covenant restricting well development on Site property has been in place since 1991. The RWQCB and EPA approved updated draft deed language for the restrictive covenant to incorporate current California legal requirements for deed restrictions. The property owner reviewed proposed language for the updated deed restriction and responded in May 2021 that they refused to sign the deed restriction because the proposed changes were too extensive. Honeywell requested redline edits to the draft deed language from the property owner to clarify their concerns more specifically.

4. Five-Year Review Process

4.1. Community Notification

A public notice was made available in the *Santa Clara Weekly* on January 12, 2022, stating that there was a Five-Year Review and inviting the public to submit any comments to the EPA. No public comments were received. A copy of the public notice is provided in Appendix F. The results of the review and the report will be made available at the Site information repository located online at: www.epa.gov/superfund/synertek and at the address below:

EPA Superfund Records Center
75 Hawthorne Street, Room 3110
San Francisco, California, 94105
Phone: (415) 947-8717
Email: R9records@epa.gov

4.2. Data Review

Over the past five years, TCE groundwater concentrations at the Site have been stable or decreasing with the exception of one sample location (MW-17A) near the source area of the former Synertek building which is increasing in concentration (Figure 3). In contrast, the concentration of vinyl chloride, a TCE break-down product, is increasing or decreasing very slowly and concentrations of vinyl chloride are above its cleanup level in several Site wells. Because of the recent timing of the injections there is not enough data to evaluate a proper trend analysis or estimate the time to cleanup of the plume. Application of specific treatment to target the break-down products of TCE could decrease the time to reach cleanup levels for vinyl chloride.

4.2.1. Groundwater

During the past five years, the TCE plume extent decreased in the direction of groundwater flow along the north-south axis. The downgradient 5 µg/L TCE plume contour no longer reaches well MW-36A, which is less than a mile downgradient from the original source area near wells MW-12A, MW-02A, and MW-08A (Figure 3). TCE concentrations in the B aquifer are generally lower than in the A aquifer and the extent of the TCE plume in the B aquifer is closer to the original source area and is smaller in total geographic area than in the A aquifer (Figure 4). The TCE plume spread slightly along the east-west direction toward MW-17A, which was below cleanup levels before the injections. This increase in TCE at MW-17A likely caused by bioremediation injections in the source area displacing contaminated water cross gradient of groundwater flow direction and rebounding effects of TCE desorbing from the sediments in the aquifer. Other constituents of concern aside from vinyl chloride are near cleanup levels or non-detect at the Site and in the downgradient plume. Vinyl chloride is increasing as a result of TCE breakdown in the groundwater due to monitored natural attenuation and on-Site bioremediation activities.

After the most recent round of bioremediation injections was completed in February 2020, TCE concentrations declined significantly at several of the monitoring wells near the source area including MW-04B that went from 110 µg/L to 8.1 µg/L initially. There was a slight rebound effect after the injections (an increase of approximately 5-10 µg/L in nearby wells), but this is typical after injection of bioremediation treatment takes place and adsorbed contaminants are released back into the groundwater from aquifer sediments. Despite this slight rebound after the injections, most of the monitoring wells with TCE concentrations above the cleanup levels are decreasing or stable. MW-12A is near one of the bioremediation injection locations and had a significant decrease in TCE from 110 µg/L down to below the 5 µg/L cleanup levels. MW-19A indicates that the influence of bioremediation injections has not moved downgradient rapidly, as there was no significant change in TCE concentration before and after the injection, oscillating just above the cleanup levels. This slow movement of the bioremediation is reasonable given the geology of the aquifer.

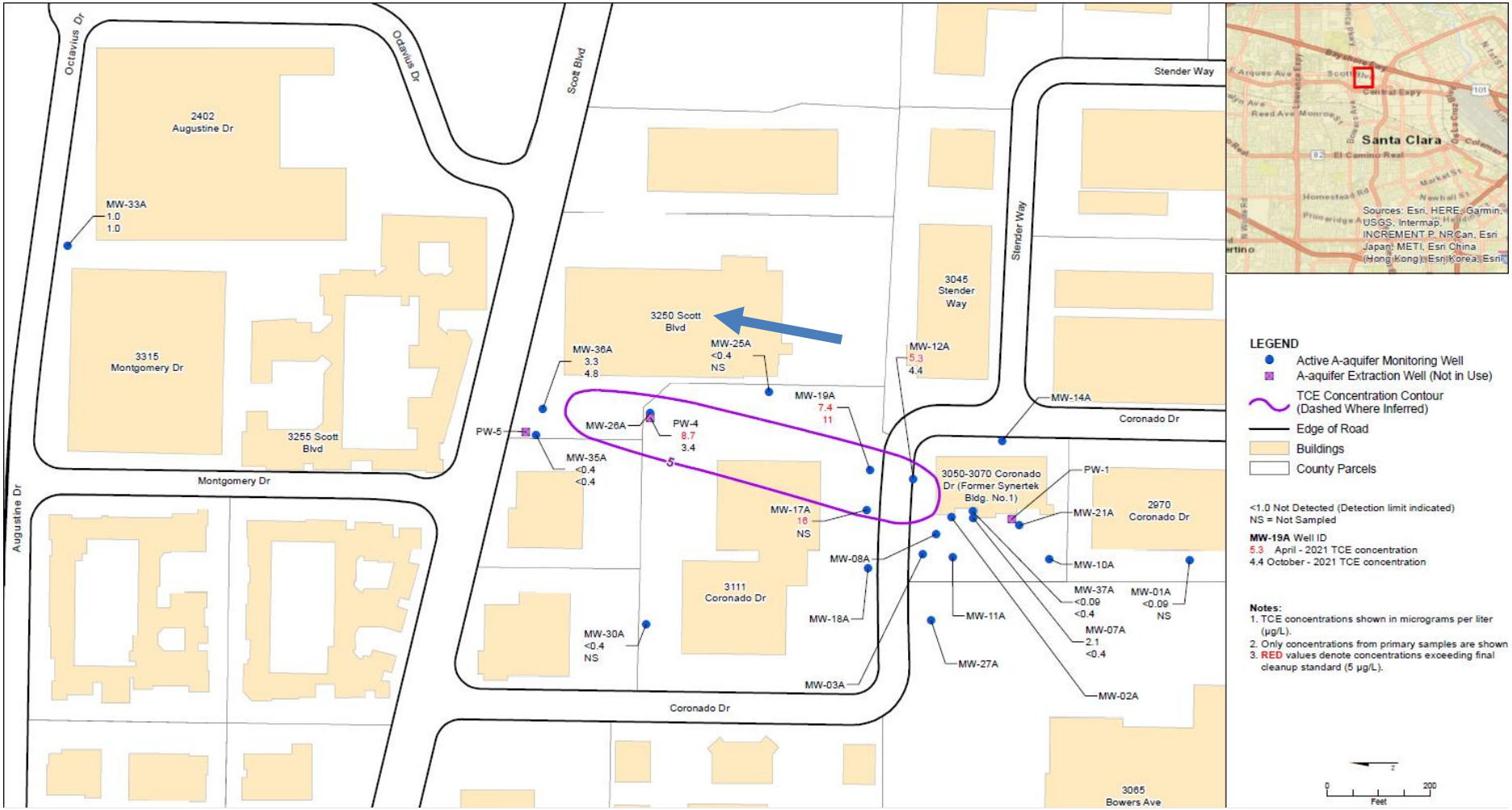
Table 5. TCE concentrations before and after bioremediation injections of Spring 2020

Monitoring well	Concentration of TCE before bioremediation injection	Concentration of TCE after bioremediation injection
MW-12A	110 µg/L	4.6 µg/L
MW-19A	6.2 µg/L	6.3 µg/L

The breakdown of TCE from bioremediation treatment resulted in an increase in vinyl chloride concentrations as a daughter product, at several wells. Because of the recent bioremediation injections vinyl chloride cleanup times cannot accurately be determined as there has not been a sufficient amount of time to collect data for a trend. The vinyl chloride plume above the cleanup level of 0.5 ug/L remains smaller in areal extent than the TCE plume.

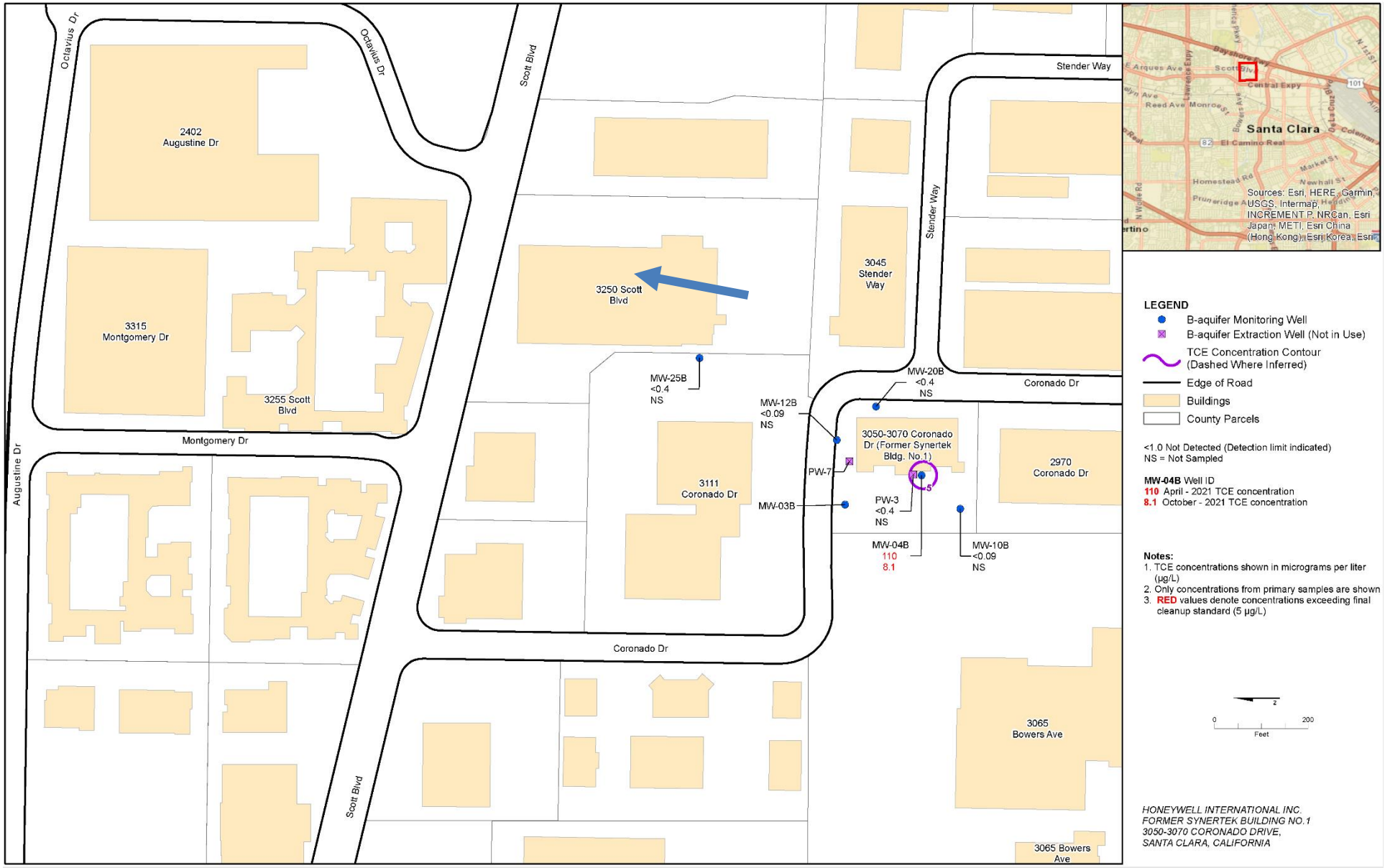
Table 6. Vinyl Chloride Concentrations 2017-2021

Vinyl Chloride concentrations (µg/L) at source area and downgradient wells (Vinyl Chloride cleanup level = 0.5 µg/L)					
Date	**MW-12A (Source Area Well)**	**PW-3 (Source Area Well)**	**MW-37A (Source Area Well)**	**MW-36A (Downgradient Well)**	**MW-35A (Downgradient Well)**
4/22/15	11	11	9.2	-	-
10/01/15	13	-	16	-	-
04/26/16	9.7	6.5	30	-	-
10/27/16	12	-	53	-	-
04/12/17	11	6.7	47	-	0.5
10/02/17	11	-	79	-	0.8
04/26/18	9.4	11	42	-	-
10/23/18	12	-	28	-	1
04/16/19	12	3.2	21	-	1
10/31/19	11	-	35	0.5	-
04/22/20	15	15	8.1	0.9	-
10/27/20	36	-	6.7	0.8	1.2
04/27/21	39	8.7	5.6	0.9	0.7
10/29/21	40	-	8.8	1.1	1.2



Source: Adapted from Jacobs, 2022. 2021 Groundwater Monitoring and Sampling Summary Report, Former Synertek Building No. 1, 3050 Coronado Drive, Santa Clara, California.
blue arrow indicates general direction of groundwater flow

Figure 3. Detailed A Aquifer Plume Map



Source: Adapted from Jacobs, 2022. 2021 Groundwater Monitoring and Sampling Summary Report, Former Synertek Building No. 1, 3050 Coronado Drive, Santa Clara, California.
blue arrow indicates general direction of groundwater flow

Figure 4. Detailed B Aquifer Plume Map

4.2.2. Soil Gas/Indoor Air

There is no potential for vapor intrusion. In 2014 and 2015, Honeywell performed an on-Site assessment of vapor intrusion in on-Site (3050/3060/3070 Coronado Drive) and off-Site commercial/industrial buildings (3111 Coronado Drive) near the source area. Indoor air results were compared with modified EPA Regional Screening Levels and Water Board Environmental Screening Levels for commercial/industrial indoor air. All indoor air results at the Synertek building and at 3111 Coronado Drive were below the commercial/industrial indoor air screening levels.

Based on the Site inspection and a review of the Final Response Plan for the Santa Clara Square Apartments from 2016, vapor mitigation systems were installed below the four closest newly constructed mixed use/residential buildings downgradient on Scott Boulevard.

4.2.3. Sustainability

In 2019, the Government Accountability Office identified the Site as potentially impacted by the highest flood hazard due to the ongoing effects of climate change. The Site is situated on low elevation land (approximately 38 feet above sea level) and located ¼ mile from San Tomas Aquino Creek and ¾ mile from Calabazas Creek. San Francisco Bay is located approximately 3 miles north of the Site. Ongoing climate change is predicted to increase the magnitude of high intensity precipitation events and lead to increasing flood risk in the San Francisco Bay region. Aboveground components of the pump and treat system that are most susceptible to flood damage were removed in 2012. Remaining above-ground remediation features at the Site include enhanced in-situ bioremediation injection and monitoring wells. Passive groundwater treatment and monitoring wells are less likely to be damaged during a flood event than above-ground pump and treat equipment; however, there is some potential for flood damage to well heads or well casing near the ground surface. Such flood damage could require repairs to wells to make them serviceable or, in a worst case, flood damage could necessitate drilling of replacement wells.

4.3. Site Inspection

The inspection of the Site was conducted on June 29, 2022. In attendance were Cynthia Wetmore, EPA Five-Year Coordinator, Nathan O'Neal, EPA, Matt Wetter, USACE and Alan Hodges, Jacobs Engineering. The purpose of the inspection was to assess the condition of the remedy and verify that the remedy is operating as intended. Inspection of selected wells found that they were in serviceable condition to allow for future groundwater monitoring.

5. Technical Assessment

5.1. Question A: Is the remedy functioning as intended by the decision documents?

While the treatment system is no longer in operation, historical system operation had successfully reduced chemicals of concern to much lower concentrations and halted further migration of contaminated

groundwater. By 2000, the treatment system reduced the average TCE concentrations in Aquifer Zone A by 93 percent, and in Aquifer Zone B by 99 percent, but eventually reached the point where operation of the treatment system was no longer effective at reducing concentrations of the chemicals of concern.

A Revised Focused Feasibility Study was submitted to RWQCB and EPA in 2018, which evaluated alternative treatment technologies to achieve the remedial action objectives in the 1991 ROD. Also in 2018, the RWQCB recommended implementing Alternative 3 of the Revised Focused Feasibility Study consisting of enhanced in-situ bioremediation in the on-Site plume core area, followed by monitored natural attenuation with institutional controls. Honeywell installed new injection wells at the Site in December 2019, with subsequent injection of carbon substrate and cultured bacteria in February 2020. Honeywell conducted performance monitoring of the enhanced in situ bioremediation through April 2021.

Since shutdown, there have not been significant changes in the size or location of the plume. Since implementing enhanced in-situ bioremediation, TCE concentrations have decreased, and concentrations of some TCE breakdown products are increasing.

The restrictive covenant restricts groundwater extraction, preventing exposure to on-Site contaminated groundwater.

5.2. Question B: Are the exposure assumptions, Toxicity Data, Cleanup Levels, and Remedial Action Objectives Used at the Time of Remedy Selection Still Valid?

The toxicity data, cleanup levels, and remedial action objectives used at the time of remedy selection are still valid. There were no changes to applicable or relevant and appropriate requirements that affect protectiveness. The ROD did not consider vapor intrusion; subsequent vapor intrusion evaluations at on-Site and off-Site commercial/industrial buildings determined that this pathway is incomplete, or insignificant, thus not a source of exposure to Site contaminants. Risk assessment screening levels for assessing vapor intrusion risk for volatile contaminants have changed since the time the vapor intrusion evaluations were performed, but not in ways that affect the conclusions of the vapor intrusion evaluations.

EPA's Regional Screening Level for xylenes (19 µg/L) is more stringent than its ROD cleanup level (175 µg/L) ; however, in the past five years, xylenes have not been detected in Site monitoring wells.

The cleanup level for ethylbenzene (680 µg/L) is above the current state drinking water regulation standard of 300 µg/L. While ethylbenzene was detected in the early years of the monitoring program, it has been not been detected in Site monitoring wells above the analytical detection limit concentration of 0.5 µg/L over the past five years.

Use of Site groundwater for drinking water and other uses is prohibited by a restrictive covenant. The location and extent of the contaminant plume has not changed in the past five years, indicating that migration of contamination is controlled. Progress towards meeting the groundwater restoration remedial action objective is ongoing with the development and submittal of a revised Focused Feasibility Study.

5.3. Question C: Has Any Other Information Come to Light That Could Call Into Question the Protectiveness of the Remedy?

There is no other information that has come to light that changes the protectiveness of the remedy.

6. Issues/Recommendations

Table 7. Issues and Recommendations Identified in the Five-Year Review

Issues and Recommendations Identified in the Five-Year Review:				
OU(s): Sitewide	**Issue Category: Remedy Performance**			
	Issue: The selected remedy is not operating. A Feasibility Study has been issued, and an alternative, enhance in-situ bioremediation and monitored natural attenuation, is being assessed.			
	Recommendation: Select a new remedy by issuing a decision document.			
Affect Current Protectiveness	**Affect Future Protectiveness**	**Party Responsible**	**Oversight Party**	**Milestone Date**
No	Yes	EPA	EPA	12/30/2027

Issues and Recommendations Identified in the Five-Year Review:				
OU(s): Sitewide	**Issue Category: Institutional Controls**			
	Issue: The existing restrictive covenant is not consistent with current State law (California Civil Code section 1471) which establishes the framework for environmental covenants in California.			
	Recommendation: An updated restrictive covenant should be recorded for the Site that is consistent with current California law.			
Affect Current Protectiveness	**Affect Future Protectiveness**	**Party Responsible**	**Oversight Party**	**Milestone Date**
No	Yes	PRP	EPA/State	5/30/2025

7. Protectiveness Statement

Table 8. Protectiveness Statement

Protectiveness Statement(s)
Protectiveness Determination: Short-term Protective
Protectiveness Statement: The remedy at Synertek, Inc. (Building 1) Superfund Site currently protects human health and the environment because the restrictive covenant is preventing exposure. However, for the remedy to be protective in the long-term, a new remedy needs to be selected since the groundwater extraction and treatment system is no longer operating, and a new deed restriction needs to be put in place.

8. Next Review

The next Five-Year Review report for the Synertek, Inc. (Building 1) Superfund Site is required five years from the completion date of this review.

Appendix A: List of Documents Reviewed

Ackerly, David, Andrew Jones, Mark Stacey, Bruce Riordan. (University of California, Berkeley). 2018. San Francisco Bay Area Summary Report. California's Fourth Climate Change Assessment.

California Water Boards. 2022. GAMA Groundwater Information System Website. https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/ Accessed April 11.

California Water Boards. 2022. State Water Resources Control Board GeoTracker, Synertek #1 Website. https://geotracker.waterboards.ca.gov/profile_report.asp?global_id=SL721241222 Accessed April 28.

California Water Boards. 2015. Addendum to the Additional Vapor Intrusion Evaluation Report, Synertek Building No. 1, 3050 Coronado Drive, Santa Clara County. December 15, 2015

CH2M (CH2M HILL Engineers, Inc.). 2014. Additional Vapor Intrusion Evaluation Report, June/July 2014, Former Synertek Building No. 1, 3050 Coronado Drive, Santa Clara, California, Final Site Cleanup Requirements Order No. 91-051. October 31.

CH2M. 2015. 2015 Addendum to the Additional Vapor Intrusion Evaluation Report, Former Synertek Building No. 1, 3050 Coronado Drive, Santa Clara, California. November.

CH2M. 2018. 2017 Groundwater Monitoring and Sampling Summary Report, Former Synertek Building No. 1, 3050 Coronado Drive, Santa Clara, California. January.

CH2M. 2018. Revised Final Focused Feasibility Study, Synertek Building No. 1, 3050 Coronado Drive, Santa Clara, California. August.

EPA (US Environmental Protection Agency). 2022. Vapor Intrusion Screening Level Calculator. https://www.epa.gov/vaporintrusion/vapor-intrusion-screening-level-calculator Accessed April 28.

EPA. 1991. Record of Decision, Synertek Building #1, Superfund Site, Santa Clara, California. June 28.

Federal Emergency Management Agency (FEMA). 2022. FEMA Flood Map Service Center Website. https://msc.fema.gov/portal/home Accessed April 26.

GAO (Government Accountability Office). 2019. Report to Congressional Requesters, EPA Should Take Additional Actions to Manage Risks from Climate Change. October.

Jacobs. 2019. 2018 Groundwater Monitoring and Sampling Summary Report, Former Synertek Building No. 1, 3050 Coronado Drive, Santa Clara, California. January.

Jacobs. 2020a. 2019 Groundwater Monitoring and Sampling Summary Report, Former Synertek Building No. 1, 3050 Coronado Drive, Santa Clara, California. January.

Jacobs. 2020b. Enhanced In Situ Bioremediation Completion Report, Synertek Building No. 1, 3050 Coronado Drive, Santa Clara, California. August.

Jacobs. 2021. 2020 Groundwater Monitoring and Sampling Summary Report, Former Synertek Building No. 1, 3050 Coronado Drive, Santa Clara, California. January.

Jacobs. 2022. 2021 Groundwater Monitoring and Sampling Summary Report, Former Synertek Building No. 1, 3050 Coronado Drive, Santa Clara, California. January.

Roux Associates, Inc. 2016. Final Response Plan, Santa Clara Square Apartments, Santa Clara, California. January.

San Francisco Bay Regional Water Quality Control Board. 2019. User's Guide: Derivation and Application of Environmental Screening Levels (ESLs), Interim Final 2019 (Revision 1).

Santa Clara Valley Water District. 2021. Groundwater Management Plan for the Santa Clara and Llagas Subbasins. November.

Appendix B: Site Chronology

Event	Date
Site developed from agricultural land to a business park.	1974
A 200-gallon solvent tank and three neutralization tanks are installed at Synertek.	1974 - 1982
Synertek submits completed San Francisco Bay RWQCB Facility Questionnaire.	1982
Groundwater contamination discovered at the Site.	1982
The solvent and neutralization tanks are determined to be a source of contamination on the Site and are removed.	1985
Groundwater extraction and treatment begins with installation of three on-property extraction wells.	1987
RWQCB adopts National Pollution Discharge Elimination System Permit No. CA0029211 (Order No. 87-050) for the discharge of treated extracted groundwater at the Site.	1987
Initial Site cleanup requirements adopted.	1987
Site is added to the National Priorities List.	1989
Two off-Site site groundwater extraction wells are added to the groundwater extraction and treatment system.	1989
Revised Site cleanup requirements adopted.	1989
RWQCB adopts Order No. 91-051, the final Site cleanup requirements, specifying the final remedial action plan for the Site.	1991
Record of Decision signed by the EPA.	1991
Public Health Assessment completed by the Agency for Toxic Substances and Disease Registry and the California Department of Health Services.	1992
RWQCB issues coverage under Order No. 94-087, General National Pollution Discharge Elimination System Permit No. CAG912003, general permit for the discharge or reuse of extracted, treated groundwater resulting from the cleanup of groundwater from volatile organic compounds.	1994
First Five-Year Review completed.	1996
RWQCB issues coverage under Order No. 99-051, General National Pollution Discharge Elimination System Permit No. CAG912003, general permit for the discharge or reuse of extracted, treated groundwater resulting from the cleanup of groundwater from volatile organic compounds.	1999
RWQCB allows the groundwater extraction and treatment system to be shut down in response to a significant decline in contaminant removal rates, and monitored natural attenuation begins.	2001

Event	Date
Second Five-Year Review completed.	2002
Third Five-Year Review completed.	2007
Enhanced in situ bioremediation pilot test begins in an attempt to reduce the residual mass of volatile organic compounds in the source area.	2011
RWQCB approves the removal of above-ground components of the groundwater extraction and treatment system.	2012
Fourth Five-Year Review completed.	2012
To address a Five-Year Review recommendation regarding Vapor Intrusion, EPA and RWQCB request preparation of a Vapor Intrusion Assessment Work Plan for Building 1.	2012
Vapor Intrusion Assessment Work Plan for Building 1 submitted to EPA and RWQCB (Heating, Ventilation and Air-Conditioning-on).	2012
Focused feasibility study submitted to EPA and RWQCB.	2013
RWQCB approves Heating, Ventilation and Air-Conditioning-on Vapor Intrusion Assessment Work Plan for Building 1.	2013
Heating, Ventilation and Air-Conditioning-on Vapor Intrusion Assessment of Building 1 completed.	2013
EPA Region 9 provides supplemental guidelines to RWQCB on Vapor Intrusion assessments at State-lead South Bay Superfund sites.	2013
Per EPA Region 9 guidelines, RWQCB requires the Responsible Party to prepare and submit an additional Work Plan for Heating, Ventilation and Air-Conditioning -on/ Heating, Ventilation and Air-Conditioning -off Vapor Intrusion assessments at both Building 1 and at an "off-property" building.	2013
Heating, Ventilation and Air-Conditioning-off Vapor Intrusion Assessment Work Plan for Building 1 and the "off-property" building submitted to EPA and RWQCB.	2014
RWQCB approves Heating, Ventilation and Air-Conditioning-off Vapor Intrusion Assessment Work Plan.	2014
Heating, Ventilation and Air-Conditioning-off Vapor Intrusion Assessment completed.	2014
RWQCB approves findings of Vapor Intrusion Assessment for Building 1.	2015
RWQCB approves findings of Vapor Intrusion Assessment for the "off-property" building.	2015
Revised Focused Feasibility Study Approved	2018
Installation of enhanced in situ bioremediation injection wells	Dec. 2019 – Jan 2020

Appendix C: Applicable or Relevant and Appropriate Requirements Assessment

Section 121 (d)(2)(A) of Comprehensive Environmental Response, Compensation, and Liability Act specifies that Superfund remedial actions must meet any Federal standards, requirements, criteria, or limitations that are determined to be legally applicable or relevant and appropriate requirements. Applicable or relevant and appropriate requirements are those standards, criteria, or limitations promulgated under Federal or State law that specifically address a hazardous substance, pollutant, contaminant, remedial action, location, or other circumstance at a Comprehensive Environmental Response, Compensation, and Liability Act site.

Changes (if any) in applicable or relevant and appropriate requirements are evaluated to determine if the changes affect the protectiveness of the remedy. Each applicable or relevant and appropriate requirement and any change to the applicable standard or criterion are discussed below.

Chemical-specific applicable or relevant and appropriate requirements for groundwater identified in the 1991 Record of Decision were evaluated (Table C-1). The cleanup level for styrene is based on the federal drinking water standard. At the time of the ROD, the federal drinking water standard for styrene was 5 µg/L; the federal drinking water standard for styrene has since been revised upward to 100 µg/L and the cleanup level for styrene in groundwater of 5 µg/L remains protective. The cleanup level for ethylbenzene (680 µg/L) is above its current state drinking water regulation standard of 300 µg/L, which was adopted in 2003. While ethylbenzene was detected in the early years of the monitoring program, it has been not been detected in Site monitoring wells above the analytical detection limit concentration of 0.5 µg/L over the past five years.

Cleanup levels for acetone and xylenes are risk-based (rather than based on an applicable or relevant and appropriate requirement) and are evaluated in the Toxicity Analysis (Appendix D). The cleanup level for xylenes (175 µg/L) is well below the current state drinking water standard (1,750 µg/L).

TableC-1. Summary of Groundwater Chemical-Specific ARAR Changes

Chemical	1991 ROD Groundwater Cleanup Levels (µg/L)	Basis for Cleanup Level	Current Drinking Water Regulations (µg/L)		Have ARARs Changed Since ROD?
			State[1]	Federal[2]	
benzene	1	State	1	5	No Change
bis(2-ethylhexyl)phthalate [di(2-ethylhexyl)phthalate]	4	State	4	6	No Change
1,1-dichloroethane (1,1-DCA)	5	State	5	None	No Change
1,1-dichloroethene (1,1-DCE)	6	State	6	7	No Change

Chemical	1991 ROD Groundwater Cleanup Levels (µg/L)	Basis for Cleanup Level	Current Drinking Water Regulations (µg/L)		Have ARARs Changed Since ROD?
			State[1]	Federal[2]	
cis-1,2-dichloroethene (cis-1,2-DCE)	6	State	6	70	No change
ethylbenzene	680	State	300	700	Yes (More Stringent Than Cleanup Level)
Freon 113	1,200	State	1,200	None	No Change
styrene	5	Federal[3]	100	100	Yes (Less Stringent Than Cleanup Level)
toluene	100	State[4]	150	1,000	Yes (Less Stringent Than Cleanup Level)
1,1,1-trichloroethane (1,1,1-TCA)	200	State	200	200	No Change
trichloroethene (TCE)	5	State	5	5	No Change
vinyl chloride	0.5	State	0.5	2	No Change

[1.] / References throughout the table to state drinking water regulations refer to California State Maximum Contaminant Levels, unless otherwise noted.
[2.] / References throughout the table to federal drinking water regulations refer to EPA Maximum Contaminant Levels, unless otherwise noted.
[3.] / The 1991 ROD cleanup level for styrene was based on the then-proposed federal drinking water standard of 5 µg/L. The federal and state drinking water standards have since been finalized at 100 µg/L.
[4.] / The 1991 ROD cleanup level for toluene was based on the California Department of Health Services Action Level for drinking water; in the time since the 1991 ROD, the state of California has established a less stringent drinking water standard for toluene of 150 µg/L.

Federal and state laws and regulations other than the chemical-specific applicable or relevant and appropriate requirements discussed in Table C-1 that have been promulgated or changed since the 1991 Record of Decision are described in Table C-2. There have been no revisions to laws or regulations that affect the protectiveness of the remedy.

The following action- or location-specific applicable or relevant and appropriate requirements have not changed in the past five years, and therefore do not affect protectiveness:

- Porter-Cologne Water Quality Control Act, California Water Code Division 7, Chapter 4, Article 4 § 13263
- Bay Area Air Quality Management District Board of Directors, adopted Regulation 8, Rule 47
- Safe Drinking Water Act, Underground Injection Control, 40 CFR § 144.13(4)(c)
- Resource Conservation Recovery Act (RCRA) Land Disposal Restrictions, 40 CFR §§ 148, 268
- Fish and Wildlife Coordination Act, 16 USC §§ 661-666c

Table C-2. Summary of Applicable or Relevant and Appropriate Requirement Changes for Site in the Past Five Years

Requirement and Citation	Document	Description	Effect on Protectiveness	Comments	Recent Amendment Date
Clean Water Act, 33 USC § 1342	1991 Record of Decision	This section of the Clean Water Act establishes the National Pollutant Discharge Elimination System (NPDES) which regulates the discharge of wastewater to surface waters. The requirement was applicable to discharge of treated groundwater from the Site treatment system.	Changes do not affect protectiveness.	Change to the NPDES provisions to allow inclusion in permits of integrated stormwater/wastewater plans (in accordance with the Integrated Municipal Stormwater and Wastewater Planning Approach Framework, issued by the Environmental Protection Agency, dated June 5, 2012).	January 14, 2019
California Water Code Division 7, Chapter 3 Article 4, § 13160	1991 Record of Decision	This section of the California Water Code establishes the State Water Resources Control Board for purposes of administering the Clean Water Act and other federal water quality control laws and regulations.	Changes do not affect protectiveness.	The change authorizes the state board to issue a certificate or statement required by any federal agency under federal water quality control laws that an activity subject to the jurisdiction of the state board will comply with applicable requirements of that federal law or any other appropriate requirements of state law.	June 29, 2020

Requirement and Citation	Document	Description	Effect on Protectiveness	Comments	Recent Amendment Date

California Hazardous Waste Control Law, Health and Safety Code Division 20, Chapter 6.5, Articles 2, 4, 4.5, 5, 6, 6.5, and 7.7	1991 Record of Decision	Waste disposal regulations which apply to remedial activities involving on-site management of hazardous wastes from spent carbon filter disposal, storage, and handling.	Changes do not affect protectiveness.	• Addition of Article 2, § 25110.3 and Article 4, § 25143.6.
				•
				• Changes to:
				  • Article 2, § 25110.4;
				  • Article 4, §§ 25141 and 25144.6.
				  • Article 5, §§ 25150.84 and 25152.5.
				  • Article 6: §§ 25160, 25160.01, 25160.2, 25160.5, 21560.8, and 25163.
					Effective in 2018, addition of Article 4, § 25143.6.
					
					Effective in 2020, changes to Article 4, § 25141; Article 6, §§ 25160.01 and 25160.5, and 25160.8
					
					Effective in 2021, addition of Article 2, § 25110.3 and changes to Article 2, § 25110.4; Article 4, § 25144.6; Article 5, § 25150.84; Article 6, §§ 25160 and 25160.2.
					
					Effective in 2022, changes to Article 5, § 25152.5 and Article 6, §§ 25163 and 25160.8.

Appendix D. Toxicity Assessment

Chemical-specific applicable or relevant and appropriate requirements identified in the 1991 Record of Decision were evaluated (Table D-1). EPA selected groundwater cleanup levels for acetone, xylenes, and toluene based on non-cancer hazard. EPA selected the groundwater cleanup level for acetone based on the non-cancer Hazard Index (HI) level of 0.1. EPA selected the groundwater cleanup level for xylenes based on the non-cancer Hazard Index (HI) level of 0.06. EPA selected the groundwater cleanup level for toluene based on meeting the non-cancer Hazard Index (HI) level of 0.01. EPA's Integrated Risk Information System (IRIS) updates toxicity values used by EPA in risk assessment when newer scientific information becomes available and are incorporated into periodic updates of Regional Screening Levels (RSLs). The November 2021 RSL update was used for this toxicity assessment.

Table D-1 compares 1991 ROD cleanup levels with current RSLs for contaminants that have a risk-based cleanup standard. The RSL for acetone is less stringent than the ROD cleanup level; therefore the cleanup level for acetone is protective. The RSL for xylenes is more stringent than its ROD cleanup level; however, in the past five years, xylenes have not been detected in Site monitoring wells.

Table D-1. Summary of Water Toxicity Changes

Chemical	Groundwater Cleanup Level (µg/L)	Basis for Cleanup Level	November 2021 Tap Water RSL (µg/L) (HI= 0.1) c = cancer n = noncancer	RSLs More or Less Stringent than Cleanup Levels?
Acetone	350	Based on non-cancer hazard index of 0.1	1,800 (n)	Less stringent
Xylenes	175	Based on non-cancer hazard index of 0.06	19 (n)	More stringent

Notes:
c = cancer, n = noncancer, RSL = EPA Regional Screening Level

The 1991 ROD did not consider the vapor intrusion exposure pathway. Vapor intrusion evaluations were subsequently conducted at the 3050 Coronado Drive building and at the next-door building located at 3111 Coronado Drive to assess the potential for vapor intrusion at the Site. The evaluations concluded that the vapor intrusion pathway is neither complete nor significant under current commercial/industrial use of the two buildings. Comparisons between current vapor intrusion screening levels and the screening levels used for the 2014/2015 vapor intrusion evaluations indicate that for most contaminants the screening levels used for the evaluations are more stringent (Tables D-2 and D-3).

For 1,1-dichloroethene and 1,1,1-trichloroethane, the screening levels used in the 2014/2015 vapor intrusion evaluations are less stringent than current screening levels (Table E-3). However, most samples for 1,1-dichloroethene and 1,1,1-trichloroethane were measured at non-detectable levels. For the handful of results above detection levels, the indoor air concentrations measured for 1,1-

dichloroethene and 1,1,1-trichloroethane were very low and significantly below current commercial/industrial EPA Regional Screening Levels and San Francisco Bay Regional Water Board Environmental Screening Levels. The conclusions of the 2014/2015 vapor intrusion evaluations for the on-Site and off-Site buildings (3050 and 3111 Coronado Drive, respectively) that the vapor intrusion pathway is neither complete nor significant remain valid.

Table D-2. Comparison of current industrial EPA RSLs with screening levels from the 2014/15 VI evaluations

Contaminant	Industrial Indoor Air RSLs (Nov. 2021) - µg/m3		Industrial Indoor Air RSLs	2014/15 VI report screening level more or less stringent?
	cancer	*non-cancer*	*Modified EPA RSLs as used in 2014/15 VI reports**	
trichloroethene (TCE)	3.0E+00	8.8E+00	2.4E+00	more stringent
tetrachloroethene (PCE)	4.7E+01	1.8E+02	3.8E+01	more stringent
vinyl chloride	2.8E+00	3.5E+02	2.2E+00	more stringent
1,1-dichloroethene (1,1-DCE)	not established	8.8E+02	7.0E+02	more stringent
Freon 113	not established	2.2E+04	1.0E+05	more stringent
trans-1,2-Dichloroethene (trans-1,2-DCE)	not established	1.8E+02	no screening level available	-
1,1-dichloroethane (1,1-DCA)	7.7E+00	not established	6.2E+00	more stringent
cis-1,2-dichloroethene (cis-1,2-DCE)	not established	not established	no screening level available	-
1,2-dichloroethane (1,2-DCA)	4.7E-01	3.1E+01	3.8E-01	more stringent
1,1,1-trichloroethane (1,1,1-TCA)	not established	2.2E+04	1.8E+04	more stringent

Table D-3. Comparison of current industrial/commercial SFB Regional Water Board VI ESLs with screening levels from the 2014/15 VI evaluations

Contaminant	Commercial/Industrial Indoor Air SFB Regional Water Board VI ESLs (2019 rev. 2) - µg/m3		Commercial/Industrial Indoor Air ESLs	2014/15 SL more or less stringent?
	cancer	*non-cancer*	*SFB Regional Water Board ESLs (2013) as used in 2014/15 VI reports**	
trichloroethene (TCE)	3.0E+00	8.8E+00	2.4E+00	more stringent
tetrachloroethene (PCE)	2.0E+00	1.8E+02	1.7E+00	more stringent
vinyl chloride	1.6E-01	4.4E+02	1.3E-01	more stringent
1,1-dichloroethene (1,1-DCE)	not established	3.1E+02	7.0E+02	less stringent
Freon 113	not established	not established	no screening level available	-
trans-1,2-Dichloroethene (trans-1,2-DCE)	not established	3.5E+02	2.08E+02	more stringent
1,1-dichloroethane (1,1-DCA)	7.7E+00	not established	6.2E+00	more stringent
cis-1,2-dichloroethene (cis-1,2-DCE)	not established	3.5E+01	2.5E+01	more stringent
1,2-dichloroethane (1,2-DCA)	4.7E-01	3.1E+01	4.6E-01	more stringent
1,1,1-trichloroethane (1,1,1-TCA)	not established	4.4E+03	1.76E+04	less stringent

Appendix E: Public Notice

Youth Soccer Park Parking Battle Reignited

BY ERIKA TOWNE

The fight over whether to allow Levi's Stadium parking at Santa Clara's Youth Soccer Park was renewed on Jan. 11.

Newly elected Vice Mayor Suds Jain asked the Council to put an item on a future agenda that would propose the idea of using the parking lot at the Youth Soccer Park for stadium event parking when youth soccer was not using the lot.

Jain emphasized that youth soccer events would have priority and that money raised from parking could help subsidize funding for local programs like youth soccer. He said there would be no involvement from the 49ers and the City would contract a third-party to operate parking.

Council Member Anthony Becker spoke in favor of the idea.

"We want to milk everything we can out of the Stadium and everything that's revolving out of the Stadium," said Becker.

Several community members asked the Council to deny putting the item on a future agenda.

"[The] soccer park was built for soccer," said Gabe Foo, Vice President of Santa Clara Youth Soccer. "It's Youth Soccer Park. It's built for the children of Santa Clara and if you look at the charter, the intention is for use of soccer, not parking."

"The soccer park was built to be a soccer park and its presence is a present and most definitely something that should be honored outside of soccer," said Robert, who played on the field as a youth. "Myself and many others feel deeply and passionately about this park. In our eyes, it's a foundation of Santa Clara and we will fight to protect its presence."

Despite Jain's insistence that there would be no 49er involvement, other attendees expressed distrust of the NFL team and its intentions.

"Giving the 49ers an inch, they will take a mile. It is absolutely clear they do not need this space. It does not belong to them. It belongs to the children of this community," said Debbie.

"Based on the history and previous efforts of the 49ers, I worry that this is the first step in trying to take over our fields again," 15-year-old Maria said in an email. "I was only 8-years-old when your predecessors tried to steal our soccer fields for VIP parking. I vividly remember that time and it still brings back immense fear and sadness that the City that I called home since birth would try to do such an atrocious thing to its youngest residents who don't have a right to vote… please don't put the young soccer players of Santa Clara through that again."

The Council voted 5-2 in favor of placing the item on a future agenda with Council Member Kathy Watanabe and Mayor Lisa Gillmor voting "no."

City Council Elects New Leadership

During closed session, the City Council elected new leaders for 2022.

Jain assumes the role of Vice Mayor, taking over for Council Member Raj Chahal.

Chahal will serve as Chaplain, taking over for Council Member Karen Hardy.

Whistleblower Hotline Approved

The Council approved a new Fraud, Waste and Abuse policy and authorized the creation of a Whistleblower Hotline.

A third-party will run the hotline. City staff can call the hotline and log issues anonymously.

The items were initially proposed in 2019. City staff says completing the project will show that Santa Clara takes issues of fraud, waste and abuse seriously.

Remote City Council Meetings Will Continue

The Council unanimously approved a resolution extending AB361, which allows city legislative bodies to hold public meetings solely by teleconference during California's COVID State of Emergency.

As reported during the meeting, the Omicron variant has led to an increase of reported COVID cases among City staff.

City Manager Deanna Santana says Council Chambers might reopen in March or April if another variant does not come along.

Silicon Valley Power Requests Funding Increase

The Council unanimously approved a $2 million increase on a previous funding authorization for Silicon Valley Power (SVP) and its work on the Gianera Generating Station. The new authorization allows for purchases not-to-exceed $12,000,000.

Santa Clara's Chief Electric Utility Officer Manuel Pineda says the utility will use the additional funds to purchase a spare rotor for the generating station. The initial funding approval was designated for an overhaul of the station's Unit 2.

Pineda says Unit 2 has not had a major overhaul since it was constructed in 1986.

The Gianera Generating Station only runs during peak usage, usually during the hotter months of the year. It is a significant piece of the South Bay power grid during those months.

Silicon Valley Power Quarterly Update

Pineda also highlighted some of SVP's accomplishments in 2021.

He says load growth and peak load had a small increase. Sales also grew by 7.65 percent. Pineda says sales have increased consistently each month since March 2021.

SVP just completed its Supervisory Control and Data Acquisition (SCADA) project. Pineda says it is a significant accomplishment that will help control data acquisition and cyber security throughout the system.

Other highlights include new solar and hydro resources, an increase in proactive tree trimming and a new organizational chart that will include the creation of new positions.

EPA WANTS TO HEAR FROM YOU ABOUT THE SYNERTEK, INC. SUPERFUND SITE CLEANUP

The U.S. Environmental Protection Agency (EPA) has started the sixth Five-Year Review of the cleanup plan for the Synertek, Inc. Superfund site. The site is in Santa Clara, Calif. This review will evaluate if the cleanup plan is working as EPA intended.
Federal law requires EPA to review its cleanup plans every five years if:
- a cleanup takes more than five years to complete; or
- hazardous waste is still on-site.

EPA completed the last review in 2017 and found the cleanup plan was working as intended.

What is Included in the Review?
The review includes:
- an inspection of the site and technologies used for the cleanup;
- a review of site data and maintenance records; and
- a review of any new laws or requirements that could affect the cleanup.

EPA Would Like to Hear from You!
We would like to interview community members about how you think the site cleanup is going. If you want to learn more about the site and/or be interviewed, please contact, before April 1, 2022, either:
- Ms. Katrina Diemer Project Manager: (415) 972-3117 or diemer.katherina@epa.gov
- Ms. Angie Fuoco, Community Involvement Coordinator: (415) 947-4267 or fuoco.angie@epa.gov

Where Can I Learn More?
To learn more, visit EPA's webpage at www.epa.gov/superfund/synertek. EPA has also set up an information repository with paper copies of the site's administrative record, which holds key documents and reports used in the cleanup. Write, email, or call for copies:
Superfund Record Center
75 Hawthorne Street, Room 3100
San Francisco, CA 94105
Phone: (415) 947-8717
Email: R9records@epa.gov
Hours: 8:00 am-5:00 pm, Mon-Fri

EPA will complete the Five-Year Review report no later than September 30, 2022. When complete, EPA will post a copy on the site's webpage and send a copy to the site information repository listed above.

Background
In 1974, Synertek Inc. leased the building—located at 3050 Coronado Drive in Santa Clara, Calif. (Building No. 1)—where it manufactured semiconductors. Over time, underground storage tanks at the site leaked chemicals called volatile organic compounds (VOCs) into soils beneath the site. The site was added to EPA's National Priorities List for Superfund cleanup in 1989. Cleanup has been successful, and the site is close to reaching cleanup goals.

CNSB #3542580

EPA WANTS TO HEAR FROM YOU ABOUT THE INTEL MAGNETICS SUPERFUND SITE CLEANUP

The U.S. Environmental Protection Agency (EPA) has started the sixth Five-Year Review of the cleanup for the Intel Magnetics Superfund site in Santa Clara, Calif. This review will see if the cleanup plan is working as EPA intended.
Federal law requires EPA to review its cleanup plans every five years if:
- a cleanup takes more than five years to complete; or
- hazardous waste is still on-site.

EPA completed the last review in 2017 and found the cleanup plan was working as intended.

What is Included in the Review?
The review includes:
- an inspection of the site and technologies used for the cleanup;
- a review of site data and maintenance records; and
- a review of any new laws or requirements that could affect the cleanup.

EPA Would Like to Hear from You!
We would like to interview community members about how you think the site cleanup is going. If you want to learn more about the site and/or be interviewed, please contact, before April 1, 2022, either:
- Ms. Fatima Ty, Project Manager: (415) 972-3550 or ty.fatima@epa.gov
- Ms. Angie Fuoco, Community Involvement Coordinator: (415) 947-4267 or fuoco.angie@epa.gov

Where Can I Learn More?
To learn more, visit EPA's webpage at www.epa.gov/superfund/intelmagnetics-microstorage. EPA has also set up an information repository with paper copies of the site's administrative record, which holds key documents and reports used in the cleanup. Write, email, or call for copies:
Superfund Record Center
75 Hawthorne Street, Room 3100
San Francisco, CA 94105
Phone: (415) 947-8717
Email: R9records@epa.gov
Hours: 8:00 am-5:00 pm, Mon-Fri

EPA will complete the Five-Year Review report no later than September 30, 2022. When complete, EPA will post a copy on the site's webpage and send a copy to the site information repository listed above.

Background
Intel Magnetics is a three-acre groundwater site located in a light industrial park in Santa Clara, Calif. that was polluted by the early electronics industry. Since the mid-1980s, federal and state agencies and potentially responsible parties (companies and individuals who are responsible for cleaning up the pollution) have done cleanup work at the site to protect human health and the environment from site pollution.

CNSB #3542576

Appendix F: Site Inspection Report and Photos

a. Date of Visit: 29 June 2022
b. Date of Report: 13 July 2022
b. Location: 3050-3070 Coronado Drive, Santa Clara, CA
c. Purpose: A site visit was conducted to visually inspect and document the conditions of the remedy, the site, and the surrounding area for inclusion into the Five-Year Review Report.

d. Inspector: Matthew Wetter, US Army Corps of Engineers, Env. Engineer
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e. Participants: Cynthia Wetmore, Environmental Engineer, USEPA Region 9
Nathaniel O'Neal, Environmental Engineer, USEPA
Alan Hodges Jacobs Engineering (Consultant to the RP)

A site visit to the Synertek Building 1 Site was conducted on 29 June 2022. The inspection included visual observation of overall site conditions and inspection of various components of the remedy, primarily the monitoring wells and nearby land use. Prior to the visit Mr. Wetter reviewed some historical information and figures and the site-specific inspection plan and participated in a brief pre-visit conference call with Ms. Wetmore and Mr. O'Neal.

Mr. Wetter arrived at the Synertek Site to meet the other participants at approximately 1000. The weather was clear, calm, and approximately 75 degrees Fahrenheit at the beginning of the inspection and warmed slightly over the next hour.

3050-3070 Coronado Drive appeared to be used for office space or light industrial use similar to nearby buildings within the office park as would be expected. There was no evidence of this building being used as living quarters and there was no observed evidence of transient occupancy in the immediate vicinity.

Downgradient (north) from 3050-3070 Coronado Drive are three relatively new, high end apartment buildings. Based on observations from outside the buildings the ground floor appears to have several slab-on-grade dwelling units. There is a subsurface parking area near the center of the 3315 Montgomery Drive, 3405 Montgomery and 3390 Octavius Drive. All three buildings are multi-level and likely have each have elevators inside.

The participants inspected several of the accessible wells in addition to the three wells requested in the Inspection Plan to evaluate overall status. The monitoring wells that were observed were in varying condition, but all were usable. All of the observed wells appeared to be usable, but a few were housed in non-standard casings and well boxes (e.g. irrigation well boxes etc.), lacked locks or security fittings, lacked monitoring well specific caps, and/or had some standing water in the vaults. The three downgradient wells that the IP specifically requested inspection of each had watertight caps and were in relatively good condition as shown in pictures below.

The following wells were observed:

Well No.	Comments
MW-12A	Well in extraction well vault. Well was uncovered. Several inches of water inside vault (see photo below).
MW-12B	Adjacent well in irrigation style well box (see photo below).
MW-14A	Unable to locate this well. 4-inch well in the vicinity shown on map did not appear to be a monitoring well.
MW-17A	Watertight cap, cover hand tight, unlocked, fair condition (see photo below).
MW-19A	Cap on loosely, unlocked, cover hand tight (see photo below).
MW-25A	2-inch PVC well with non-watertight PVC cap.
MW-25B	2-inch PVC well with non-watertight PVC cap.
MW-33A	Well cap not locked, watertight cap and cover bolted (see photo below).
MW-35A	Well cap locked, watertight cap and cover not bolted (see photo below).
MW-36B	Well cap locked, watertight cap and cover bolted (see photo below).
PW-4	Well in fair condition, inside dry well vault.

Photo 1 – 3315 Montgomery; facing NNE

Photo 2 – 3315 Montgomery Dr; facing N

Photo 3 – Parking entrance at 3315 Montgomery; facing E

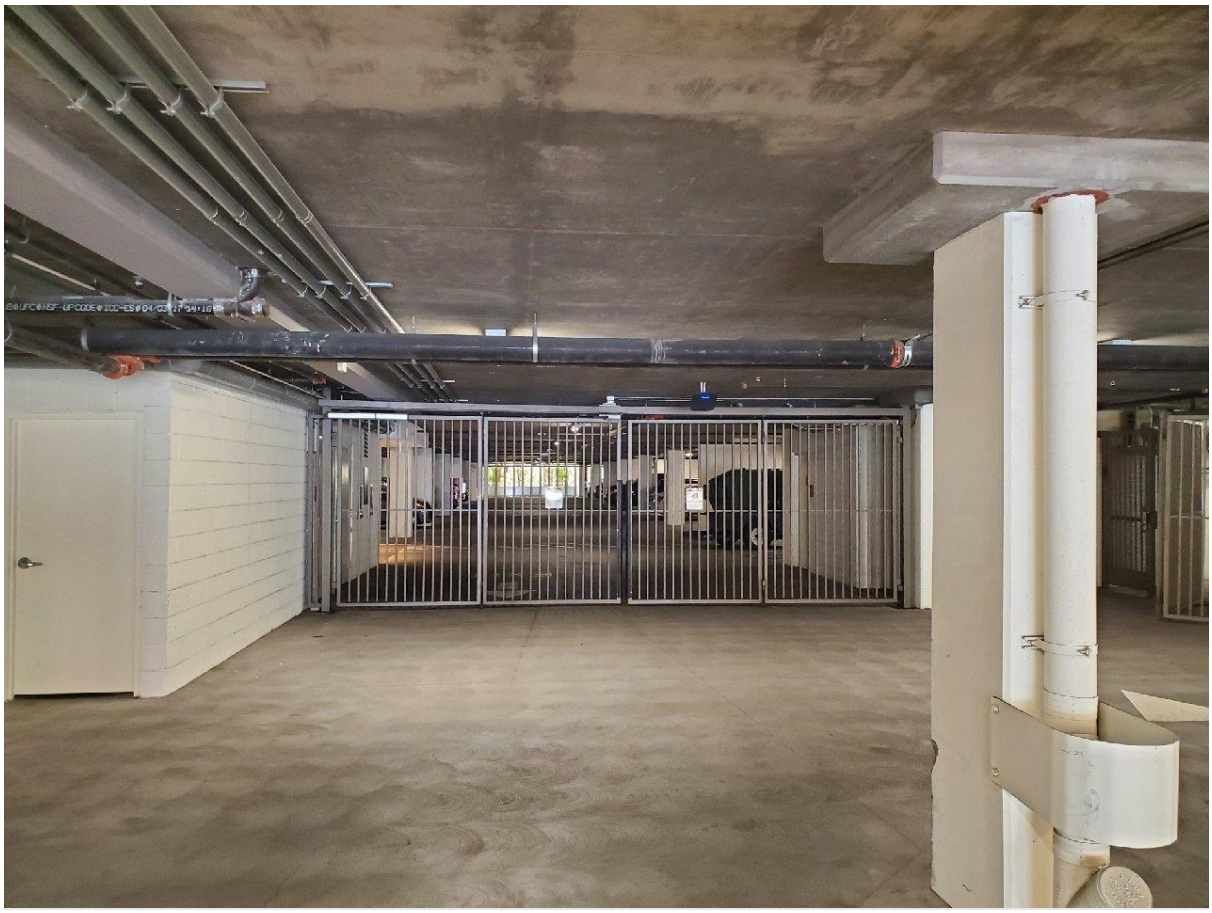

Photo 4 – Parking at 3315 Montgomery; facing E

Photo 5 – 3405 Montgomery Dr; facing NE

Photo 6 – Vault for MW-12A; facing SW.

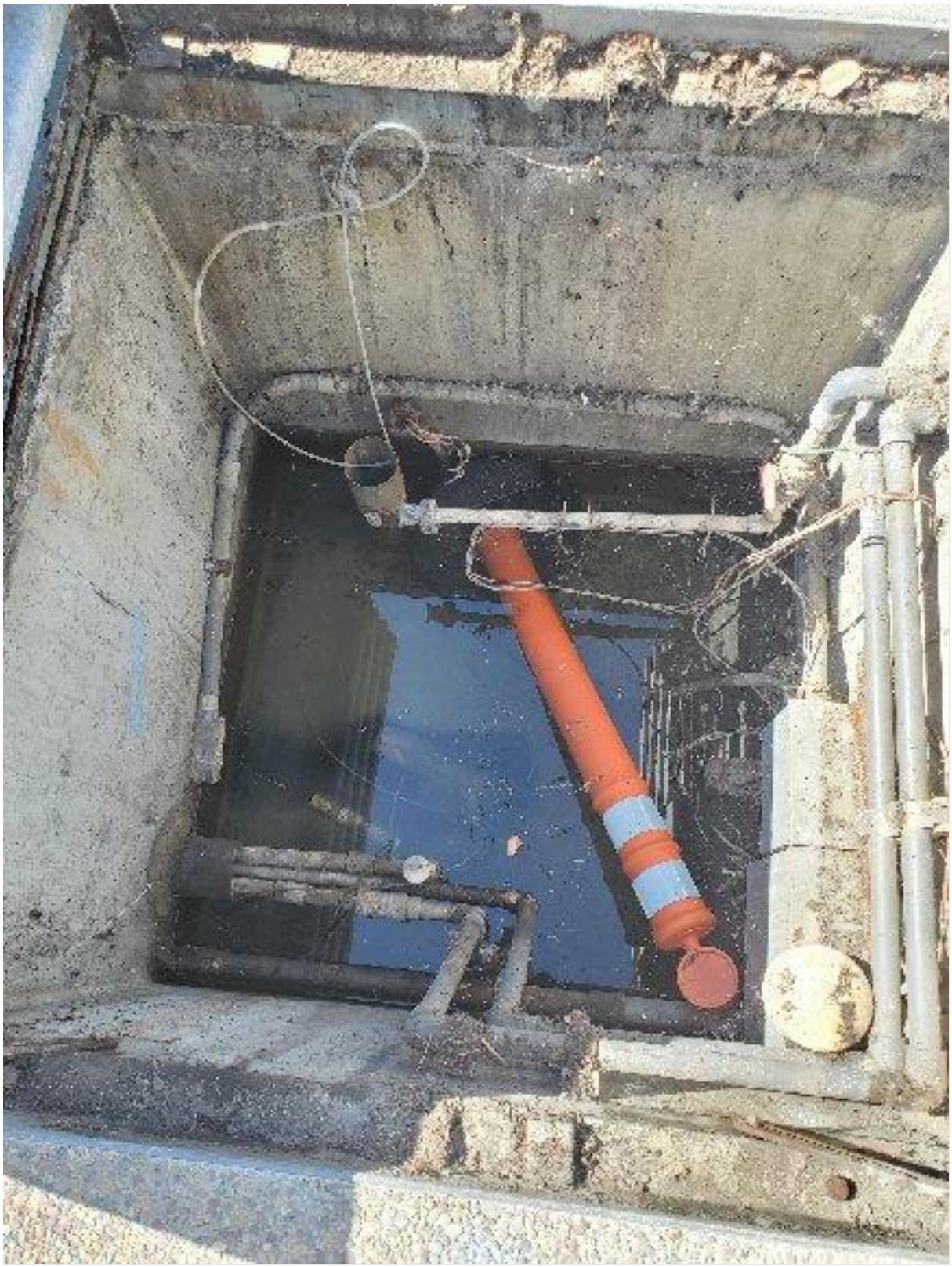

Photo 7 – MW-12A, well is uncovered in upper left corner, vault has several inches of water and very dirty.

Photo 8 – MW-12B; 4-inch well with watertight cap.

Photo 9 – MW-19A. Facing S

Photo 10 –MW-19A closeup with watertight cap.

Photo 11 – MW-17A

Photo 12 – Closeup of MW-17A with watertight cap

Photo 13 – MW-36A, watertight well cap locked, cover was bolted.

Photo 14 – MW-35A, watertight well cap locked, cover was unbolted.

Photo 15 –MW-33A. Facing S.

Photo 16 – MW-33A with watertight cap, plastic irrigation cover.

Photo 17 – 3390 Octavius Dr showing parking area entrance.