

**FIFTH FIVE-YEAR REVIEW REPORT FOR
WESTINGHOUSE ELECTRIC CORPORATION SUPERFUND SITE
SANTA CLARA COUNTY, CALIFORNIA**



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Executive Summary

This is the fifth Five-Year Review of the Westinghouse Electric Corporation (Site) located in Sunnyvale, Santa Clara County, California. 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 approximately 75 acres and is currently operating as a Northrop Grumman Systems Corporation (Northrop Grumman) manufacturing facility. During the mid-1950s, Westinghouse manufactured transformers that contained Inerteen, a polychlorinated biphenyl and chlorinated benzene mixture with mineral oil added as an insulating fluid. The primary contaminants of concern affecting the soil and groundwater were polychlorinated biphenyls, solvents, and fuel compounds. Polychlorinated biphenyls in soils often exceeded 500 milligrams per kilogram and ranged up to 28,000 milligrams per kilogram from the surface to depths of approximately 45 feet below ground surface.

In 1991, EPA selected the remedy for the Site which required extraction and treatment of groundwater, containment of groundwater in the polychlorinated biphenyl source areas, removal and off-Site incineration of contaminated soil, institutional controls, and monitoring. The cleanup plan outlined in the Record of Decision included leaving contamination above health-based levels in both soil and groundwater on the Site but required a cap and restrictions on excavation for those areas where polychlorinated biphenyls concentrations exceed 25 milligrams per kilogram in soil. A technical impracticability waiver was invoked in the Record of Decision for the groundwater area that contained dense non-aqueous phase liquid. EPA required that this area be permanently contained and that land use restrictions prevent access to this contamination. The aquifers are classified as a potential source of drinking water, thus groundwater cleanup levels (except for polychlorinated biphenyls in the contained source areas) were set at drinking water standards. The soil cleanup level for polychlorinated biphenyls was determined based on Guidance on Remedial Actions for Superfund Sites with Polychlorinated Biphenyl Contamination, OSWER Directive No. 9355.4-01, August 1990.

By issuing the 1997 Explanation of Significant Differences, EPA allowed soils from the North Parking Lot area of the Site, containing polychlorinated biphenyls at concentrations less than 500 milligrams per kilogram, to be disposed at an approved hazardous waste landfill instead of by incineration. EPA extended the applicability of the decision to allow off-site disposal for polychlorinated biphenyl soil with concentrations less than 500 milligrams per kilogram to the rest of the Site through a Memorandum to the Site File in 2010.

In the 2008 Explanation of Significant Differences, EPA added a requirement for land use restrictions for other areas of the Site where polychlorinated biphenyls-contaminated soils remained above levels suitable for unrestricted use. The Record of Decision did not explicitly state institutional controls would restrict the use of the Site to commercial/industrial use. Thus, this Explanation of Significant Differences ensured that the Record of Decision assumptions regarding land use remained valid. Since

polychlorinated biphenyls occur in many areas of the Site at concentrations exceeding those appropriate for unrestricted use, the entire Site will be restricted to commercial/industrial use.

Northrop Grumman completed excavation of shallow surface soil contaminated with polychlorinated biphenyls throughout the site in May 2016 and supplemental soil remediation in November 2018.

Northrop Grumman implemented enhanced best management practices for stormwater control in 2018 and continues to implement them throughout the facility. Stormwater discharge samples collected following implementation of the enhanced best management practices in 2018 and throughout the 2019-2020 monitoring year indicate that the best management practices have been effective at reducing total polychlorinated biphenyls concentrations in stormwater discharges from the facility to trace or non-detect concentrations.

The containment portion of the Site remedy is functioning as intended by the ROD. All institutional controls have been implemented. Exposure assumptions, cleanup levels, and remedial action objectives used at the time of the remedy selection are still valid. There have been no major changes to any Applicable or Relevant and Appropriate Requirements that affect protectiveness. No additional information was discovered during the past five years that calls into question the protectiveness of the remedy.

The remedy at the Westinghouse Electric Corporation Superfund Site currently protects human health and the environment because exposure pathways that could result in unacceptable risks are being controlled by land use covenants, the asphalt cap preventing exposure to soil above 25 mg/kg PCB and the groundwater extraction system providing permanent hydraulic containment of the source area to prevent pollutant migration and further contamination of the shallow aquifers. However, in order for the remedy to be protective in the long term, remedy adjustments or an optimization study should be done to restore of groundwater outside the source areas to beneficial use in a reasonable timeframe. EPA will conduct a site inspection when COVID travel restrictions are lifted.

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List of Abbreviations and Acronyms

ALTA	ALTA Geosciences, Inc.
ARAR	applicable or relevant and appropriate requirement
bgs	below ground surface
DTSC	California Department of Toxic Substances Control
EPA	U.S. Environmental Protection Agency
ESD	Explanation of Significant Differences
ft	foot/feet
Geosyntec	Geosyntec Consultants, Inc.
lbs	pounds
µg/L	micrograms per liter
mg/kg	milligrams per kilogram
ng/L	nanograms per liter
Northrup Grumman	Northrup Grumman System Corporation
PCB	polychlorinated biphenyl
ROD	Record of Decision
USACE	U.S. 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 fifth Five-Year Review for the Westinghouse Electric Corporation Superfund Site. The triggering action for this statutory review is the completion of the previous Five-Year Review on August 23, 2016. The Five-Year Review has been prepared due to the fact that hazardous substances, pollutants, or contaminants remain at the site above levels that allow for unlimited use and unrestricted exposure.

The Westinghouse Electric Corporation Superfund Site Five-Year Review was led by Cynthia Wetmore EPA Region 9 Superfund Five-Year Review Coordinator. Participants from the U.S. Army Corps of Engineers (USACE) included: Karah Haskins, Physical Scientist and Jeffrey Weiss, Geologist. The review began on December 29, 2020.

Table 1. Five-Year Review Summary Form

SITE IDENTIFICATION		
Site Name: Westinghouse Electric Corporation Superfund Site		
EPA ID: CAD001864081		
Region: 9	State: CA	City/County: Sunnyvale/ Santa Clara County
National Priorities List Status: Final		
Multiple Operable Units? No	Has the site achieved construction completion? Yes	
Lead agency: EPA		
Author name (Federal or State Project Manager): Cynthia Wetmore		
Author affiliation: EPA Region 9		
Review period: 12/29/2020 - 7/8/2021		
Date of Site inspection: Not Completed		
Type of review: Statutory		
Review number: 5		
Triggering action date: 8/23/2016		
Due date (five years after triggering action date): 8/23/2021		

1.1. Background

The Westinghouse Electric Corporation Superfund Site (Site) was a heavy industrial facility which manufactured steam generators, marine propulsion systems and missile-launching systems for the U.S. Department of Defense. During the mid-1950s, Westinghouse manufactured transformers that contained Inerteen, a polychlorinated biphenyl (PCB) and chlorinated benzene mixture with mineral oil added as an insulating fluid. The spills during storage and use of transformer fluids and mineral oil resulted in contamination of soils and leakage into shallow groundwater in the Reservoir 2 area. Inerteen was also released at several areas along the underground Inerteen pipeline as indicated by the presence of PCBs in the soils along the pipeline. In addition, several inches of dense nonaqueous phase liquid, free phase product, were identified on top of the A/B aquitard near the pipeline. The presence of free phase product is attributed to either leakage of Inerteen from the Inerteen pipeline or from the former transformer filling station located in Building 21, referred to in this report as the Breezeway source area. Additionally, general handling practices and the on-Site use of Inerteen as a weed killer resulted in the release of PCBs into the northwest yard, the northeast yard, and along the railroad tracks adjacent to Building 61.

Prior to EPA assuming lead agency responsibility for the Site, investigations and remediation for PCB impacts were initiated in 1981 by Brown and Caldwell Consulting Engineers on behalf of Westinghouse under oversight of the by California Regional Water Quality Control Board. In 1984 and 1985, under oversight by California Regional Water Quality Control Board and the California Department of Health Services, Westinghouse removed the PCB-contaminated soils along fences and railroad spurs. In 1986, EPA placed Westinghouse Electric Corporation on the National Priority List.

1.2. Physical Characteristics

The Site is located approximately five miles south of the south end of the San Francisco Bay and five miles northeast of the Santa Clara Mountains, in the Santa Clara Valley of California (Figure 1). The Site occupies a 75-acre parcel of land, located at 401 Hendy Avenue in Sunnyvale, California. It is bounded by California Avenue to the north, North Sunnyvale Avenue to the west, and North Fair Oaks Avenue to the east. The North Parking Lot is located on the north side of California Avenue. The surrounding area is heavily urbanized, and is currently zoned for commercial, residential, and industrial use. Some residential parcels adjoin the facility on the west side (Figure 2).

Northrop Grumman Systems Corporation (Northrop Grumman) operates a manufacturing facility, which manufactures steam generators, marine propulsion systems, and missile launching systems for the U.S. Government at the Site. ALTA Geosciences, Inc., a consultant for Northrop Grumman, conducts groundwater sampling, soil sampling, and provides oversight of soil remediation at the Site. Geosyntec Consultants, Inc. (Geosyntec), also a consultant for Northrop Grumman, supports site investigation work, conducts sampling as required, and supports site strategy and reporting. The Eastern portion of the North Parking Lot previously owned by Northrop Grumman is now a two-story commercial building owned by

Gray Area 555. AllWest Environmental, Inc., a consultant for Gray Area 555, conducts site inspections to meet the requirements of the Land Use Covenant.

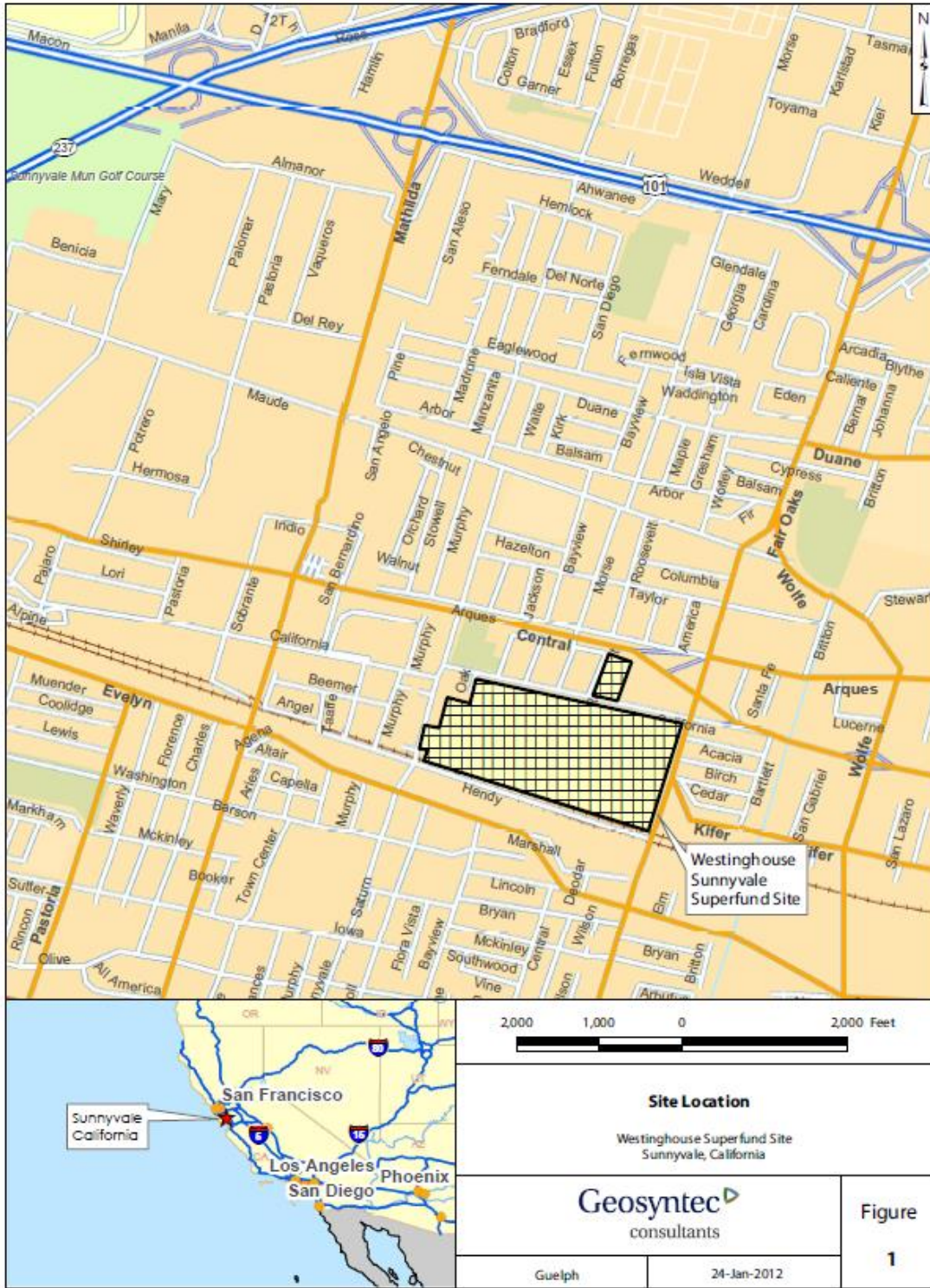
1.3. Geology/ Hydrology

Previous geotechnical studies indicate the deposits near the alignment are young, fine-grained alluvium (horizontally stratified clay and silt) and slightly older fine- to coarse-grained alluvium (moderately to poorly bedded, poorly sorted clay, silt, sand, and gravel). The clayey portions of the material are prone to expansion and do not drain easily. The slightly coarser-grained sediments drain more readily.

The San Francisco Bay Regional Water Quality Control Board established a series of aquifer designations in the Santa Clara Valley area. The shallowest of these is designated as the A-aquifer. The A-aquifer is underlain by the B-aquifer zone, which has been divided into the B1-, B2-, and B3-aquifers (from shallowest to deepest). The approximate depths below ground surface (bgs) at which these aquifer zones occur near the Site are: A, 0 to 50 ft; B1, 50 to 70 ft; B2, 75 to 90 ft; and B3, 90 to 115 ft. One or more water-bearing sand/gravel layers may occur within a particular aquifer zone. Near the Site, the A-aquifer generally has one or more medium to coarse-grained (sand/gravel) units within the interval that extends from the water table (approximately 16 to 20 ft bgs) to a depth of 45 to 52 ft bgs. All aquifers in the Santa Clara Valley Basin are designated drinking water aquifers.

Groundwater flow in both A- and B-aquifer zones is to the north-northeast, consistent with the topography that slopes gently downward toward the north-northeast (toward San Francisco Bay). The regional lateral hydraulic gradient is relatively flat. The vertical gradient has been upward between B1 zone and the A-zone since about 1995. Groundwater levels fluctuate seasonally and are typically lowest in late fall and highest (1 to 2 ft increase) in late spring.

Municipal and industrial water supplies are drawn from groundwater aquifers below a depth of 250 feet (ft), but a current well inventory use report is not available. The surrounding area was used primarily for agricultural purposes before it was developed.



Source: Geosyntec Consultants 2019. Groundwater Monitoring Report for the Fall 2019 Event.

Figure 1. Location Map



Source: Geosyntec Consultants, Inc. 2021. FIVE-YEAR GROUNDWATER STATUS REPORT.

Figure 2. Detailed Map

2. Remedial Actions Summary

2.1. *Basis for Taking Action*

Releases of PCBs, fuel hydrocarbons and other industrial related contaminants during operations at the Westinghouse Site resulted in soil and groundwater contamination. The groundwater contamination was found in both the A- and the B- aquifers. Since all aquifers in the Santa Clara Valley Basin are designated potential drinking water aquifers, the presence of contamination was the basis for taking action. Soil contamination of PCBs was detected also in the Reservoir 2 area, as well as along fence lines in the northwest yard, in the northeast yard, and along the railroad tracks adjacent to Building 61, which is in the western area of the Site. The, ingestion, dermal contact, and inhalation risk of contaminated PCB-contaminated soils to industrial workers was also the basis for taking remedial action.

2.2. *Remedy Selection*

EPA selected a remedy for the groundwater and soil by issuing a Record of Decision (ROD) in 1991. EPA did not specifically identify remedial action objectives or a cleanup timeframe, but did identify anticipated results from the remedy selected, which would result in protectiveness.

- Groundwater to be restored to health-based standards for all chlorobenzene contaminants outside of the source area (the source area is characterized by a dense nonaqueous phase liquid), thus preventing potential exposures, should these shallow aquifers ever be used for water supply purposes.
- Permanent hydraulic containment of the source area to prevent pollutant migration and further contamination of the shallow aquifers, which are potential drinking water supplies. This containment will be combined with land use restrictions to prevent construction of supply wells in the source area where dense nonaqueous phase liquid has been detected
- The extracted groundwater to be treated, prior to on-Site discharge into a storm sewer, which will meet all applicable or relevant and appropriate requirements identified for such discharges.
- Contaminated soil containing greater than 25 mg/kg PCB, which represents a 1×10^{-6} health risk in an industrial setting, to be removed to a depth of 8 ft, thereby preventing potential exposure at the surface or in the subsurface (e.g., exposure to utility line workers).
- The removed soil, spent filtration membranes, and spent carbon to be incinerated off Site, resulting in the destruction of these contaminants and thereby preventing further possibility of exposure to them.
- Land use restrictions to prevent excavation and, therefore, exposure in the area where contaminated soils remain at depths greater than 8 ft.
- Land use restrictions to also prevent any residential development in the source area, in order to further preclude any risk of exposure due to contact with soil contamination.

Major components of the remedy selected in the 1991 ROD included:

- Permanent hydraulic containment of contaminated groundwater in the source area¹ where dense nonaqueous phase liquid was detected to prevent pollutant migration and further contamination of the shallow aquifers, using extraction.
- Restoration of contaminated groundwater, using extraction, to the California Department of Health Services Action Level for 1,3- dichlorobenzene, to the proposed federal drinking water standard for 1,2,4- trichlorobenzene, and to the Federal and State drinking water standards for other contaminants (with the exception of the standard for PCBs in the on-Site source area where dense nonaqueous phase liquid occurs).
- Treatment of the extracted groundwater to meet all regulations identified for this discharge prior to discharge to the on-Site storm sewer, unless an evaluation indicates that an alternative "end use" for the treated effluent (such as use for facility process water) can be practicably implemented;
- Removal of contaminated soil containing greater than 25 mg/kg PCB to a depth of 8 ft.
- Off-Site incineration of excavated soils at a federally permitted facility.
- Institutional controls, such as land use restrictions, to prevent well construction (for water supply purposes) in source areas that remain contaminated and excavation below the 8 ft where soil has been removed will be restricted. Restrictions also preclude excavation, other than temporary subsurface work, in the upper 8 ft and require complete restoration of any disturbed fill or the asphalt cap once any such temporary work is completed.
- A requirement that EPA receive notification of any future intention to cease operations in, abandon, demolish, or perform construction in (including partial demolition or construction) Building 21.
- Permanent and ongoing monitoring of the affected aquifers to verify that the extraction system is effective in capturing and reducing chemical concentrations and extent of the aqueous phase plume and containing the aqueous phase contamination in the dense nonaqueous phase liquid source area.

¹ Note, the 1991 ROD references source area and source areas, interchangeably. Two dense nonaqueous phase liquid source areas are identified in the ROD: to the south and east of Reservoir 2 (Reservoir 2 source area), and in the vicinity of the Building 21 breezeway where the pipelines entered the building (Breezeway source area).

Table 2. Groundwater Cleanup Levels from 1991 ROD

Chemical	Cleanup Levels (µg/L)	Basis for Cleanup Level ¹
Benzene	1	State MCL
1,2-Dichlorobenzene	600	Federal MCL
1,3-Dichlorobenzene	130	State Department Health Services Action Level
1,4-Dichlorobenzene	5	State MCL
1,1-Dichloroethane	5	State MCL
1,2-Dichloroethane	0.5	State MCL
1,1-Dichloroethene	6	State MCL
cis-1,2-Dichloroethene	6	State MCL
Ethylbenzene	680	State MCL
Monochlorobenzene	30	State MCL
Polychlorinated biphenyls	0.5	Federal MCL
Toluene	1,000	Federal MCL
1,2,4-Trichlorobenzene	5	Proposed Federal MCL, not promulgated at the time
1,1,1-Trichloroethane	200	Federal MCL
Trichloroethene	5	Federal MCL
Xylene(s)	1,750	State MCL

¹ The more stringent of the Federal or State MCL was selected as the basis for the groundwater cleanup level.

² MCL = Maximum Contaminant Level, which is a federal or state drinking water standard.

Table 3. Soil Cleanup Levels from 1991 ROD

Chemical	Cleanup Levels (mg/kg)	Basis for Cleanup Level
PCB	25	Guidance on Remedial Actions for Superfund Sites with PCB Contamination, OSWER Directive No. 9355.4-01, August 1990

In the absence of a known technology to effectively remove the dense nonaqueous phase liquid containing PCBs from the subsurface soil, a technical impracticality waiver was invoked in the ROD. This legal mechanism waived the requirement to meet the standard for PCB in the source areas where dense nonaqueous liquid was present in the 1990s. EPA requires that this area be permanently contained, that groundwater in this area be restored to health-based standards for all contaminants except PCBs, and that land use restrictions prevent access to this contamination. Compliance points were set at the perimeter of the dense nonaqueous phase liquid source areas in the groundwater. Soil cleanup levels were based on the reasonably anticipated future use, which is commercial/industrial. Because the aquifers were classified as a potential source of drinking water, soil cleanup levels were also based on whether the contaminants posed a threat to groundwater through leaching.

2.2.1. Explanation of Significant Differences (1997)

In the 1997 Explanation of Significant Differences (ESD), EPA established a remedy change for the disposal method for PCB-contaminated soils in the North Parking Lot area of the Site. EPA changed the method of disposal for soils containing PCBs less than 500 mg/kg to disposal at an approved landfill. EPA reaffirmed the 25 mg/kg soil cleanup level for PCBs at the Site and the need for institutional controls to restrict the entire Site to only industrial/commercial uses. All soils (including those removed

from the North Parking Lot area) with PCB concentrations greater than 500 mg/kg were to be incinerated as required in the 1991 ROD.

2.2.2. Explanation of Significant Differences (2008)

The September 30, 2008 ESD retained the institutional controls for the source areas from the 1991 ROD. To ensure long term protectiveness, the 2008 ESD required that institutional controls be put in place to prohibit sensitive uses (i.e., residential) in other areas of the Site (including a portion of the North Parking Lot) where PCB contamination exceeding soil cleanup levels remain uncapped on-Site (i.e., levels exceeding 25 mg/kg) (EPA, 2008). As a result of the 2008 ESD, institutional controls are required to cover throughout the entire Site. In addition, an asphalt or other pavement cap as required in the ROD will cover areas where soil PCBs equal or exceed 25 mg/kg. Any future subsurface excavation work must be conducted in accordance with a Soils Management Plan approved by EPA and California Department of Toxic Substances Control (DTSC) in January 2014. The land use covenant shall be entered into by the owner with DTSC, naming EPA as a third-party beneficiary, and be recorded in the county records.

2.2.3. Memorandum to File (2010)

EPA extended the applicability of the decision in the 1997 ESD to the rest of the Site with soil PCB levels below 500 mg/kg, in a Memo to File dated March 25, 2010. EPA allowed soils with PCB levels between 25 and 500 mg/kg to be disposed at an appropriate landfill rather than incinerated. However, this did not apply to the PCB source areas, which is defined as the area near the former storage tanks, Reservoir 2, and all associated piping between the tanks and Building 21. Soils with PCB levels less than 25 mg/kg may remain in place as per the 1991 ROD. Soils with levels above 500 mg/kg will continue to be incinerated as specified in the ROD.

2.3. *Remedy Implementation*

2.3.1. Groundwater Remediation

The initial groundwater extraction and treatment system included a pilot system that provided groundwater extraction in the source areas and treatment with an onsite treatment plant. Pilot system construction was started in December 1992 and completed the following year.

The pilot groundwater extraction and treatment system was incorporated into the full-scale system and expanded in 1994 to 1995 with the addition of six extraction wells. The eight wells forming the “barrier system” downgradient of the PCB source area were operational from 1995 to 2001. During that time, groundwater from these wells was not contaminated, but operation of the extraction wells continued as an assurance that potentially impacted water would not leave the containment area. In 2001, the wells were shut down in conjunction with the installation of the treatment system upgrades, which included installation of extraction wells A, B, and C. Extraction wells E6, E7, E10 through E15, W80, W81, and W82 were decommissioned in 2016. Currently, extraction wells E1, E2, E4, E5 A, B and C are in use.

Currently, all treated water is discharged to the sanitary sewer that connects to the City of Sunnyvale Sewage Treatment Plant.

The current monitoring program was modified in 2006 to include 20 wells located within and down gradient of the contaminant plume. Four more wells were located within the plume (or impact zone), and the remaining serve as downgradient sentinel wells.

2.3.2. Soil Remediation

Brown and Caldwell Consulting Engineers began the initial soil remediation program (Phase I soils remediation) in October 1992 and completed in 1993. During Phase I, the easterly-located piping was removed, along with related PCB impacted soils. Site restoration included backfilling excavated trenches, replacement of asphalt paving, and construction of the concrete slab for the groundwater extraction treatment system.

During Phase II, Brown and Caldwell Consulting Engineers removed the second of two PCB and mineral oil pipelines running from the tank area south of Reservoir 2 toward Building 21. Impacted soils surrounding the pipelines and underlying parts of the former tank areas were removed. In some areas, excavation to the desired 8 ft was not possible, due to the presence of utilities. In all areas where excavation was not to 8 ft, the asphalt cap was left in place. Restoration work included backfill of excavations with imported material and replacement of asphalt or concrete areas.

As part of the October 1994 Phase II soils remediation, a 20,000-gallon underground storage tank was removed from the Area 91 Parking Lot. Five confirmation samples were collected from the surrounding tank soils, and only one was found to contain low-level PCB concentrations, which did not require remediation.

ALTA developed a remedial design for excavation of PCB-impacted soil in the North Parking Lot and supervised the remedial work beginning in April 1997. In preparation for building improvements in 1999, Northrop Grumman notified EPA of intended construction in Building 21. Under an EPA-approved work plan, ALTA installed nine soil borings and four monitoring wells inside Building 21, to identify potential PCB impacts. The results of the investigations indicated soil impacts at the east end of the building, adjacent to and beneath the former PCB pipeline and transformer filling station; however, no groundwater impacts from PCBs were identified. ALTA oversaw the excavation and disposal of contaminated soils in August 2000. The excavation was backfilled with imported fill, and the area re-paved (Geosyntec/ALTA 2006).

In June 2013, ALTA oversaw the removal of soil around the Reservoir 1 area, various railroad track locations, and the area around Building 54, and in July 2014, ALTA oversaw the removal of soil from around Building 62 and north and west of Building 61. Three phases of soil remediation were completed by 2016. This phase of soil remediation addressed the known areas where PCBs exceeded the ROD criterion outside of the source area near Reservoir 2.

2.3.3. Institutional Controls

Three land use covenants have been implemented at the Site. One land use covenant was recorded on the eastern portion of the North Parking Lot (Santa Clara County Assessor Parcels Numbers parcel 204-46-009) on August 8, 2013. The second land use covenant covers three Santa Clara County Assessor Parcels Numbers 204-46-008, 204-47-002, and 204-48-028 (3 Parcels) that encompasses Buildings 71, 162, and the western portion of the North Parking Lot. Another land use covenant covers the Assessor Parcels Numbers 204-47-001 (Main Parcel), which encompasses the remainder of the Site, including the Reservoir 2 and Building 21 source areas. The two land use covenants for the 3 parcels and Main Parcel (Santa Clara County Assessor Parcels Numbers parcels 204-46-008, 204-47-002, 204-48-028, and 204-47-001) were recorded in December 2018 and are attached as Appendix F.

Table 4. Summary of Implemented Institutional Controls (ICs)

Media, engineered controls, and areas that do not support UU/UE based on current conditions	ICs Called for in the Decision Documents	Impacted Parcel(s)	Institutional Control Objective	Title of IC Instrument Implemented and Date (or planned)
Soil/Groundwater	Yes	204-46-009	Prohibits use of property as a residence, hospital, school, or daycare center. Prohibits drilling for drinking water, oil or gas, extraction of groundwater for any purpose, and alteration, disturbance, or excavation of soil.	May 2015 Covenant to Restrict Use of Property
Soil/Groundwater	Yes	204-46-008, 204-47-002, 204-48-028	Prohibits use of property as a residence, hospital, school, or daycare center. Prohibits drilling for drinking water, oil or gas, extraction of groundwater for any purpose, and alteration, disturbance, or excavation of soil.	December 2018 Covenant to Restrict Use of Property
Soil/Groundwater	Yes	204-47-001	Prohibits use of property as a residence, hospital, school, or daycare center. Prohibits drilling for drinking water, oil or gas, extraction of groundwater for any purpose, and alteration, disturbance, or excavation of soil. Prohibits activities that may disturb the Capped Area or the groundwater monitoring, extraction, and treatment system.	December 2018 Covenant to Restrict Use of Property

2.4. System Operations/Operation and Maintenance

Geosyntec monitored the groundwater extraction and treatment performance monthly during this five-year period. The monitoring consisted of systems check, influent and effluent concentrations measurement, and flow rate measurement. Northrop Grumman also conducts carbon replacement. Northrop Grumman maintained and monitored the groundwater extraction and treatment system consistent with the requirements of the Site-specific wastewater discharge permit issued by the City of Sunnyvale Water Pollution Control Plant.

3. Progress Since the Last Five-Year Review

3.1. Previous Five-Year Review Protectiveness Statement and Issues

The protectiveness statement from the Fourth Five-Year Review for the Westinghouse Electric Corporation Superfund Site stated the following:

The remedy at the Westinghouse Electric Corporation Superfund Site currently protects human health and the environment because exposure pathways that could result in unacceptable risks are being controlled. However, in order for the remedy to be protective in the long term, the following actions need to be taken: Record the Land Use Covenants, investigate the source of elevated PCBs levels outside the Westinghouse property, and conduct a groundwater remediation system evaluation study.

The 2016 Five-Year Review included three issues and recommendations. Each recommendation and the current status are discussed below.

Table 5. Status of Recommendations from the 2016 Five-Year Review

Issue	Recommendations	Current Status	Current Implementation Status Description	Completion Date
Deed restrictions have not been implemented completely to restrict residential use, well construction, and/or excavation in source areas that remain contaminated. Two Land Use Covenants remain to be completed.	Record the Land Use Covenants	Completed	Land Use Covenants were completed.	12/24/2018
The groundwater extraction and treatment system may have reached its maximum effectiveness for restoration, as recovery of contaminants may have reached asymptotic levels.	Conduct a remediation system evaluation study.	Under Discussion	A remediation study was not completed; however, an increase to the pumping rates at extraction Well C was implemented in 2017 to increase the capture zone.	Click here to enter a date
Elevated PCB concentrations have been detected in street sediment and stormwater sediment adjacent to the Westinghouse property.	Determine source of elevated concentrations and implement appropriate actions to mitigate.	Completed	Enhanced Best Management Practices were implemented during the third and fourth quarters of 2018 and continue to be implemented throughout the facility.	2018

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

3.2.1. Confirmation Soil Sampling

In 2017, EPA requested confirmation soil sampling to determine that the ROD cleanup level for PCBs of 25 mg/kg was met in the upper 8 feet bgs of soil at the Site. Geosyntec completed this work in November 2017. A total of 180 samples were collected from 36 sample locations specified by EPA and analyzed for PCBs. Seven soil samples from seven separate locations exceeded the ROD cleanup level with concentrations ranging from 26.1 to 1,260 mg/kg of PCBs. The seven samples were collected from depths of less than 1 feet bgs. After consulting with EPA, Northrop Grumman proposed to perform a supplementary investigation and remediation in the areas where concentrations exceeded the ROD cleanup standards.

Following the November 2017 confirmation soil investigation, Geosyntec conducted a supplemental soil investigation in March 2018 in areas where PCBs were detected at concentrations greater than the ROD cleanup standard to further delineate the extent of exceedances. Sampling was conducted in shallow soil to a maximum depth of 12 inches bgs based on the 2017 confirmation sampling results. A total of 138 samples were collected and analyzed for PCBs. Forty-seven of the 138 samples exceeded ROD cleanup levels, and PCB concentrations ranged from 0.045 to 2,480 mg/kg.

3.2.2. Dense Nonaqueous Phase Liquid

In May 2018, Geosyntec conducted a soil investigation at the Reservoir 2 source area, the breezeway source area, and the former eastern and western pipelines. The objective of the investigation was to obtain additional PCB and chlorinated benzenes data. The vertical extent of dense nonaqueous phase liquid PCBs and chlorinated benzenes, if any, was evaluated in areas where shallow dense nonaqueous phase liquid was previously identified during the soil excavations undertaken to 8 feet bgs.

Geosyntec advanced nine borings in areas of the subsurface where PCB dense nonaqueous phase liquid was previously identified. Of the 51 samples collected, two samples were indicative of PCB dense nonaqueous phase liquid and none were indicative of chlorinated benzene dense nonaqueous phase liquid. PCB dense nonaqueous phase liquid was indicated directly south of the Reservoir 2 source area at 31 feet bgs and beneath the western former pipeline leading to Building 21 at the water table at 17 feet bgs. The ROD cleanup level of 25 mg/kg of PCBs, which only applies to soil less than 8 feet bgs, was only exceeded in the two samples where PCB dense nonaqueous phase liquid was likely present.

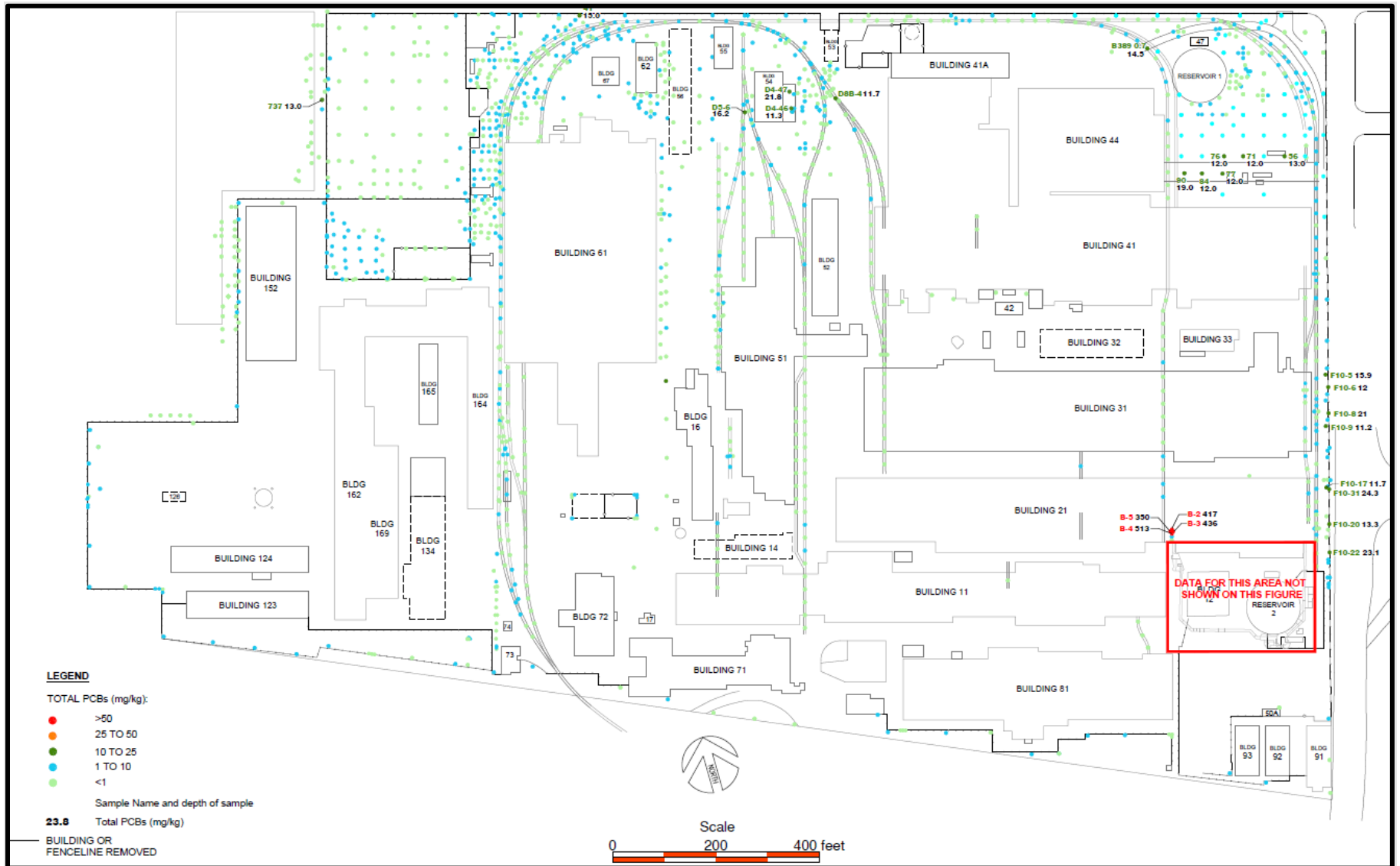
3.2.3. Supplemental Soil Remediation

ALTA oversaw the supplemental soil remediation beginning in August 2018 and completed remediation in November 2018. Soil was removed from locations identified during the 2017 and 2018 soil investigation activities. Three areas were identified for additional soil remediation, Area D, Area F3 and Area F4 (Figure 4). The primary remediation goal was 25 mg/kg of PCBs as specified in the ROD and Northrop Grumman elected to remove soil to 10 mg/kg of PCBs where practicable. Supplemental soil

remediation began in August 2018 and was completed in November 2018. A total of 3,490 tons of soil were excavated and transported off-site for proper disposal.

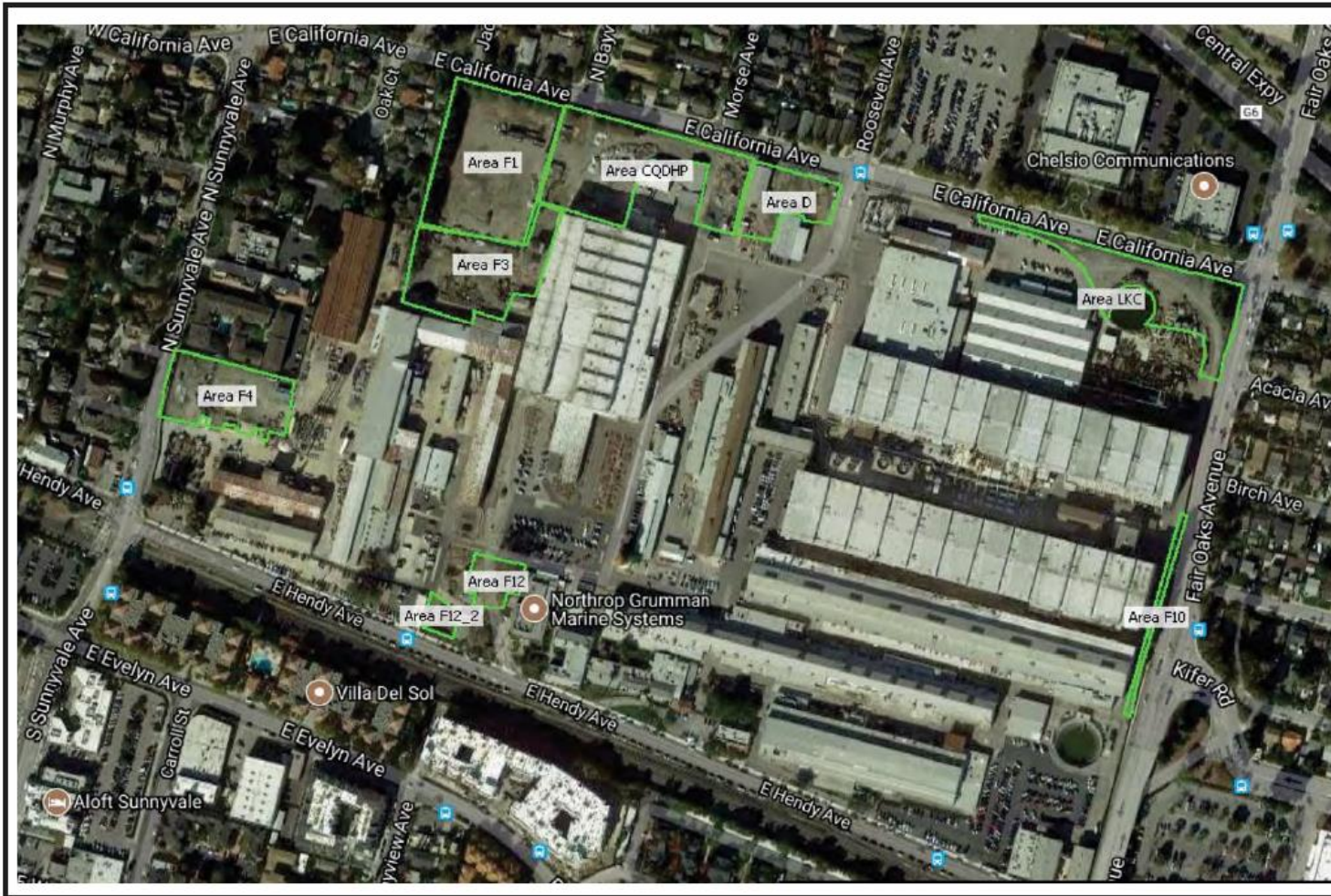
The soil was removed to 10 mg/kg of PCBs with the following exceptions:


- Remediation Area D. Excavation sampling to the north and west met ROD cleanup level of 25 mg/kg. Further excavation was not attempted due to conflicts with other facility activities and utilities.
- Remediation Area F3. Along the west side of subarea F3-1, excavation was expanded until sidewall samples were below 10 mg/kg PCBs. Of the five sidewall samples, only one sample was not below 10 mg/kg PCBs.



Source: ALTA Geosciences, Inc 2017. 2015-2016 SOIL REMEDIATION COMPLETION REPORT.

Figure 3. Concentrations of PCBs in Soil after 2016 Remediation.




 Environmental & Geotechnical Solutions
 Prepared for:
 Northrop Grumman Systems Corporation

2017-2018 SOIL CONFIRMATION, SUPPLEMENTAL INVESTIGATION AND SOIL REMEDIATION
 2017 CONFIRMATION SAMPLING AREAS
 WESTINGHOUSE SUPERFUND SITE
 Sunnyvale, California

FIGURE
 3

Source: ALTA Geosciences, Inc 2018. 2017-2018 Soil Confirmation, Supplemental Investigation and Soil Remediation Report
Figure 4. Supplemental Soil Investigation and Remediation Areas.

3.2.4. Well Survey

In November 2016, Geosyntec completed a well survey using records requested from the California Department of Water Resources and Environmental Data Resources reports. There were no active public water supply or domestic wells identified within a 1-mile radius of the Site in the Department of Water Resources well logs. However, four water supply wells were identified within 1 mile of the Site in the Environmental Data Resources Radius Map Report.

- Well 08S/01E-36F05M was identified in the Environmental Data Resources Report as operated by Whispering Oaks Water Company. Based on data from the Safe Drinking Water Information System, this well has been inactive since June 1, 1993. According to the township, range, and section reported for this well, it is approximately 17 miles from the Site, which would not be within the one-mile search radius of the Site.
- Well 06S/02W-36A02M was a production well owned by the City of Sunnyvale called Central 02. The location of and analytical data for Central 02 are available on the Groundwater Ambient Monitoring and Assessment Program database on GeoTracker, the data management system maintained by the California Regional Water Quality Control Boards. Well Central 02 was located on 804 Coolidge Avenue, approximately 0.75 miles west of the Site. PCBs were analyzed and not detected in Central 02 between 1984 and 2008. Safe Drinking Water Information System listed Central 02 as destroyed on August 13, 2015.
- The remaining two wells identified in the Environmental Data Resources report were an on-Site industrial water supply well that has screens extending between 200 to 569 feet bgs (Geosyntec, 2015b) and a destroyed production well, Central 01, owned by the city of Sunnyvale and more than 0.5 miles to the south-southeast.

3.2.5. Stormwater

Since 2015, Northrop Grumman has been implementing Site-wide best management practices², conducting best management practice inspections, and collecting stormwater discharge samples from drainage areas that discharge stormwater into the City's stormwater sewer system in accordance with the Industrial General Permit, which became effective on July 1, 2015. Throughout the majority of the Site, stormwater is collected in a series of catch basins connected to underground conveyance systems that either discharge to the City of Sunnyvale sanitary sewer system or the City of Sunnyvale's stormwater sewer system. Stormwater also sheet flows off-Site at some locations and is then collected in the City's stormwater sewer system.

² Best management practices are a practice, or combination of practices, that is determined to be an effective and practicable (including technological, economic, and institutional considerations) means of preventing or reducing the amount of pollution generated by nonpoint sources.

EPA identified an issue with elevated PCB concentrations in street sediment and stormwater sediment adjacent to the Site in the 2016 Five-Year Review. At the request from EPA, Northrup Grumman collected stormwater samples during five rain events at five locations during two rainy seasons (2016-2017 and 2017-2018). The sampling locations for stormwater sampling program includes three on-Site that represent stormwater discharge from the Site (SP01, SP02, and SP03) and two in the public right-of-way along California Avenue (SP04 and SP05). On-site sampling results for PCB ranged from 12.5 nanogram/liter (ng/L) to 2,330 ng/L. Off-site sampling results ranged from 12.8 ng/L to 1,710 ng/L.

In 2018, Northrup Grumman began implementation of the enhanced best management practices which included erosion control, sediment control, Pre-Rainy Season Inspection and Maintenance. Following implementation of the enhanced best management practices by Northrup Grumman, total PCB concentrations in stormwater discharges from the facility reduced to trace or non-detect concentrations except for the sample collected from an on-site location (SP-02) in January 2021. Under normal site conditions, the drainage area discharging at location SP-02 is completely impervious; therefore, the PCB detection in January 2021 is likely associated with construction at Building 31, which had some soil excavation. PCBs were not detected in the sample collected from location SP02 in February 2021.

3.2.6. Site Inspections for Land Use Covenants

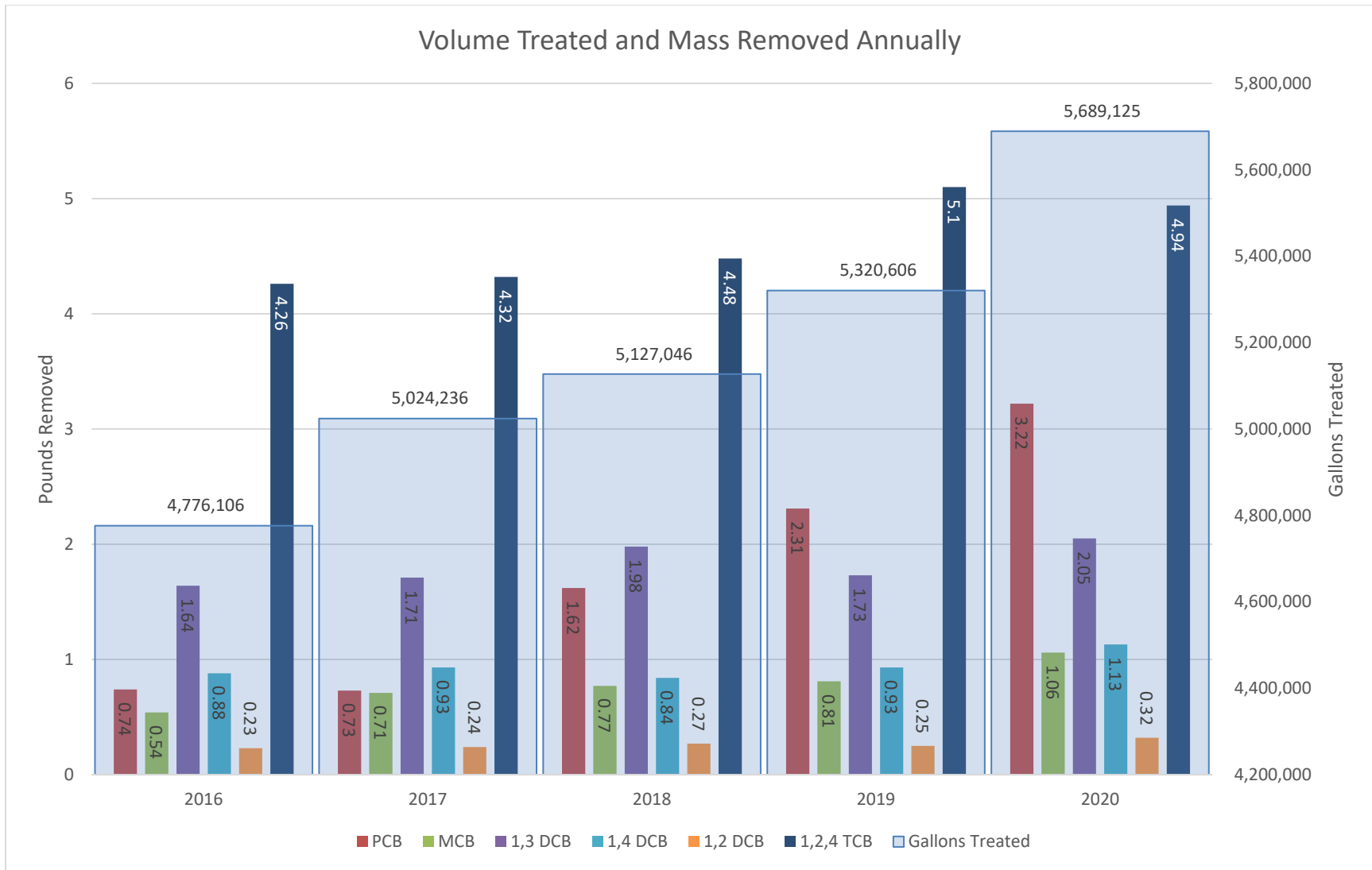
AllWest Environmental, Inc., on behalf of Gray Area 555, conducted an inspection on June 20, 2018 to verify compliance with the restrictions and requirements of the land use covenant on parcel 204-46-009, the eastern portion of the North Parking Lot. AllWest did not observe any evidence of recent construction, excavation, grading, drilling, soil disturbance, or major modifications during the inspection, and determined through interviews with Property owner and tenant representatives that there has not been any change from commercial office and light industrial use of the Property to land uses restricted by the land use covenant. The recorded land use covenant requires an annual inspection of the property be conducted.

Geosyntec and ALTA Geosciences conduct annual site inspections for the remaining parcels. During the 2019 Land Use Covenant inspection, Geosyntec observed soil-disturbing activities relating to soil remediation on Parcel 204-48-028 and related to construction activities within Building 31 at the Main Parcel. During the 2020 Land Use Covenant inspection, soil-disturbing activities were noted related to construction activities within Building 31 and underground utility work near buildings 41 and 44. However, both these soil-disturbing activities were conducted in accordance with the Soil Management Plan that was approved by EPA in January 2014. During the 2020 Land Use Covenant inspection, Geosyntec noted that no soil disturbances were activities were performed on Parcel 204-47-001.

The cap area, which is part of the Main Parcel, was visually inspected by ALTA Geosciences on April 20, 2021. In general, the asphalt cap was in good condition and appeared adequate for the intended purpose of minimizing water infiltration. Two areas showed significant but not severe cracking and will be monitored in the future. Four areas were identified as having high severity cracking with asphalt disintegration. Excavation and repaving of these areas were recommended.

3.2.7. Groundwater Extraction and Treatment System Operation

Geosyntec continues to operate the groundwater and extraction treatment system to remove contaminant mass with approximately 50 pounds of contaminants removed during the previous five years. Extraction wells E1, E2, E4, and E5 pump intermittently, approximately four times daily for approximately 5 minutes. Well A, B, and C pump continuously. Starting in 2016, extraction well E3 was operated only during system checks and maintenance to avoid interfering with extraction. In August 2017, Geosyntec increased the pumping rate at Well C to capture groundwater near well W45. Between January 2016 and December 2020, Geosyntec operated the Groundwater Extraction and Treatment system 91% (2016), 92% (2017), 93% (2018), 97% (2019), and 94% (2020) of the time. During this five-year period Geosyntec changed carbon out in March 2018 and April 2020. No other performance issues or major maintenance occurred during this review period.



Source: USACE Figure

Figure 5. Mass of Contaminants Removed by Groundwater Extraction and Treatment System

4. Five-Year Review Process

4.1. Community Notification

EPA issued a Public Notice in the *Los Altos Town Crier*, on February 10, 2021, stating that there was a Five-Year Review and inviting the public to submit any comments to the EPA. EPA did not receive any comments. EPA noted in the public notice that the results of the review and the report will be made available at the Site information repository located at EPA's Record Center in San Francisco, and at EPA's website: <http://www.epa.gov/superfund/westinghouse>.

4.2. Data Review

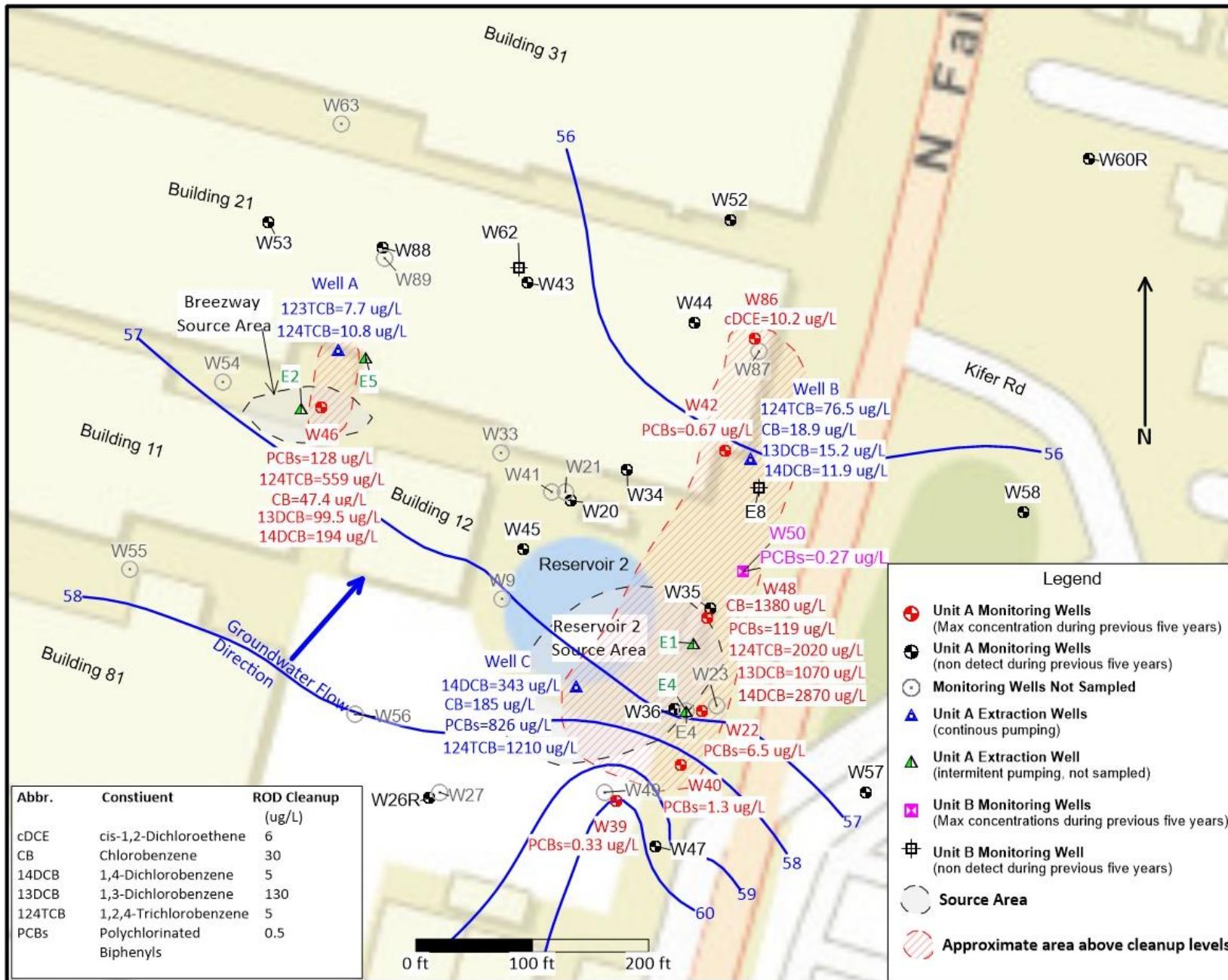
4.2.1. Groundwater

Contamination distribution in groundwater at the Site consists of high concentrations localized to the two source areas (Reservoir 2 and Breezeway) and low levels of contamination that extend a short distance from the source areas. The location of the source areas and maximum concentrations during the previous five years are shown on Figure 6. The contamination is primarily in the shallower A-aquifer. Water levels recorded in both aquifer units indicate an upward gradient which reduces the likelihood of contaminants migrating downward from A to B-aquifer. Over the past five years, there has been no contamination concentrations detected above the contaminants cleanup level in the B-aquifer. Only one well (W50) had detections of a contaminant of concern (PCB), and the concentrations were below cleanup levels and the concentration trend in this well is decreasing.

Groundwater extraction and treatment from the A-aquifer provide both hydraulic containment of the source area and restoration of the aquifer outside of the source area. The groundwater extraction system includes three wells pumping continuously (Well A, B and C) and four wells pumping intermittently (E1, E2, E4 and E5).

The lines of evidence used to evaluate the containment of the source area include the potentiometric surface and contaminant concentrations down gradient of the source areas. The potentiometric surface near the Reservoir 2 Source Area indicates a groundwater depression around extraction Well C located near the center of the source area. The closest downgradient monitoring wells to the Reservoir 2 Source Area (W35 and E8) were non-detect during the previous five years.

The potentiometric surface near the Breezeway Source Area appears relatively flat which may be due to the monitoring wells being further from extraction Well A. The monitoring wells downgradient of the Breezeway Source Area (W53, W88 and W43) were non-detect during the previous five years. The available data indicates containment of the source areas.



Source: USACE Figure

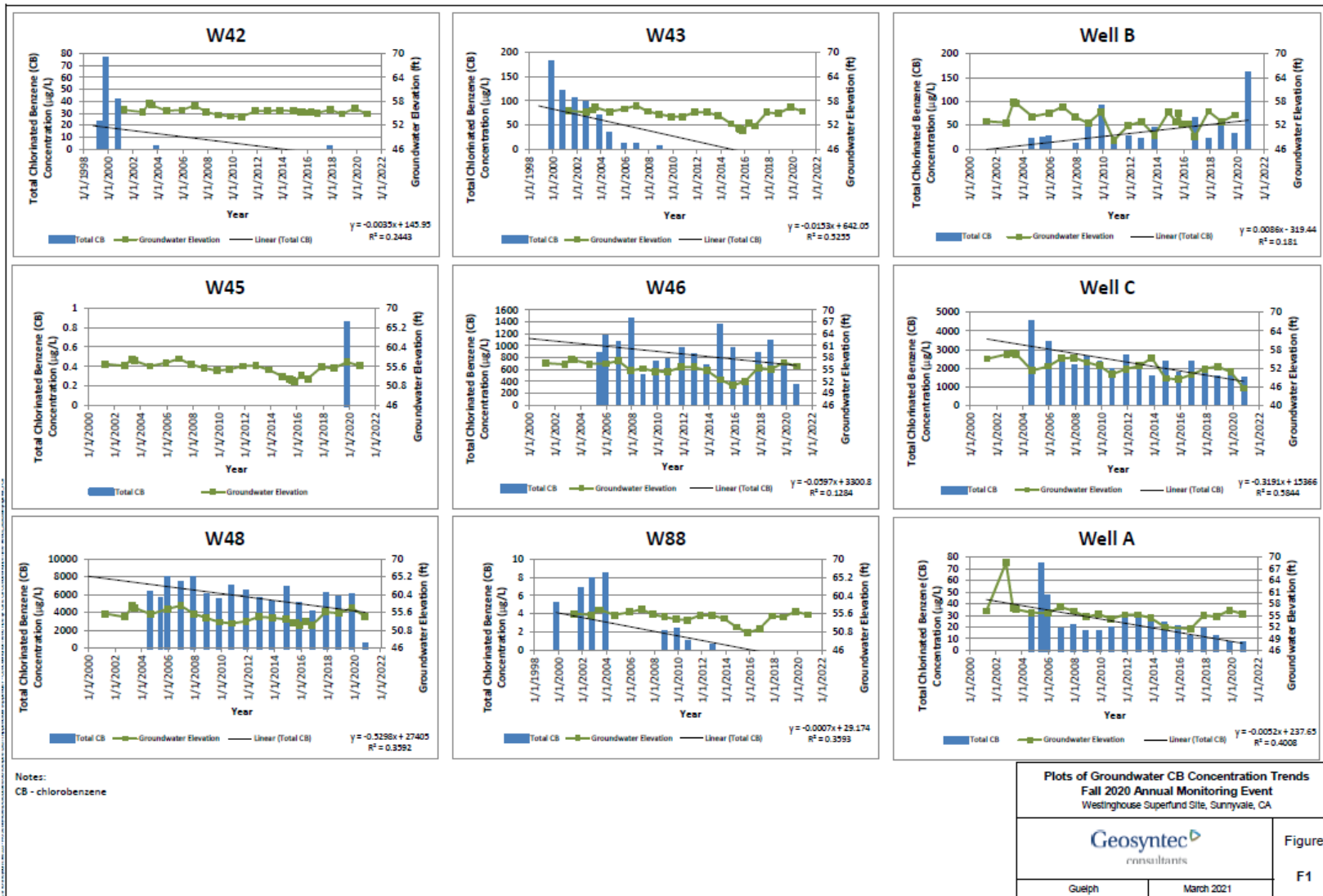
Figure 6. Summary of Groundwater Contamination

Groundwater restoration outside of the source area includes extraction Wells A and C which are also used for containment of the source area plumes and extraction Well B located downgradient of the Reservoir 2 Source Area. The lines of evidence used to evaluate the remediation include declining contaminant trends and contaminant mass removal. The concentration trends were reviewed using the linear regression of the chlorinated benzene over time (Figure 7) and Mann-Kendall trend analysis for wells with at least four detections of a contaminant during the previous five years (Table 7).

The only monitoring well located outside of the source area with an increasing trend during the previous five years was well W86 for cis-1,2-dichloroethene. W86 is located at the downgradient edge of the contaminant plume downgradient of the Reservoir 2 Source Area. Concentrations of cis-1,2-dichloroethene at well W86 increased from 2.5 µg/L in 2016 to 12.5 µg/L in 2020 (2020 results was qualified as biased high). These detections are consistent with historical fluctuations and do not indicate a change in conditions with respect to volatile organic compounds in groundwater. A capture zone analysis of extraction Well B completed by Geosyntec indicates W86 is within the capture zone of Well B. Sample results from well W52, located downgradient of well W86, have been non-detect over the past five years.

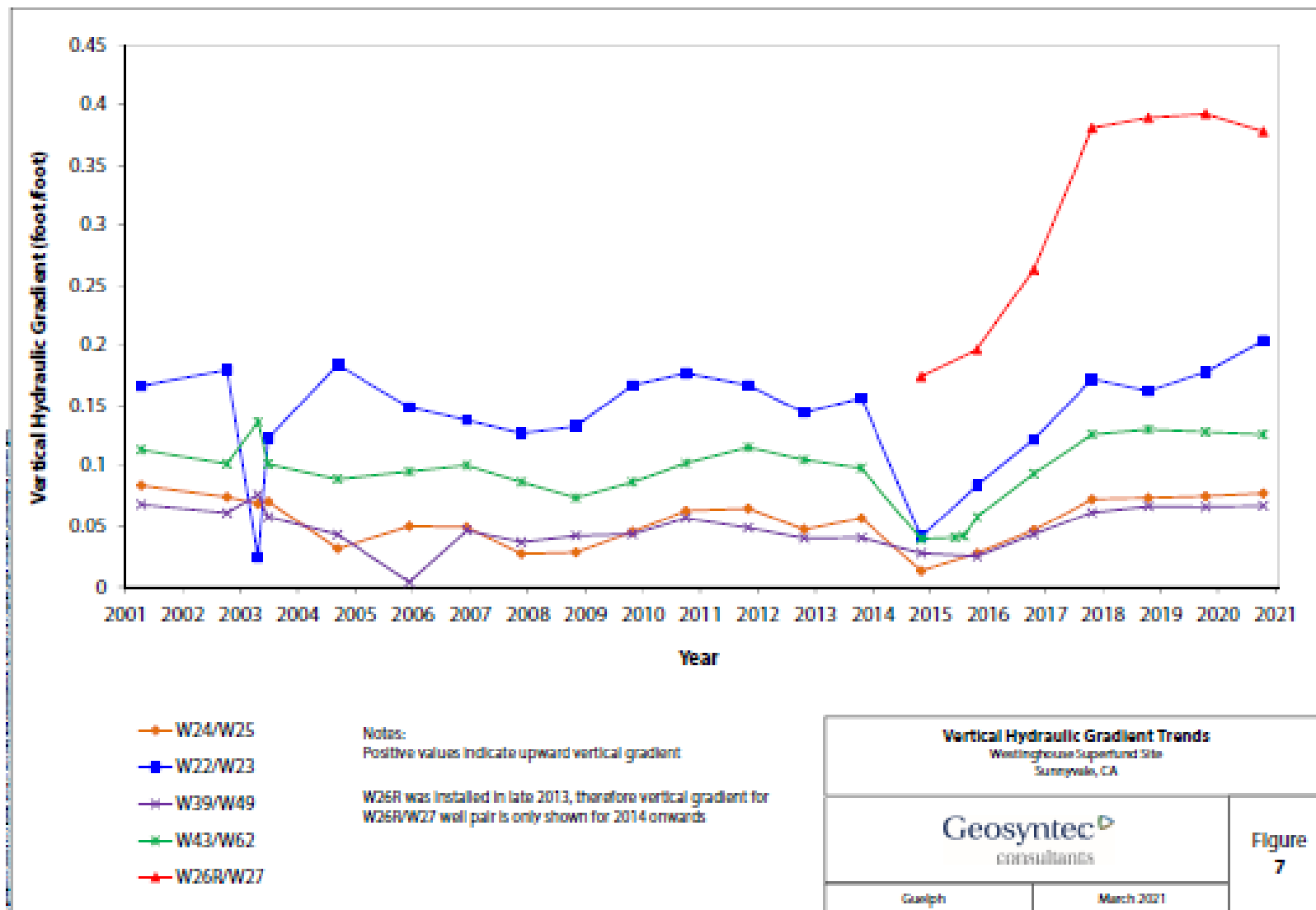
The contaminant mass removal provides evidence contamination in the aquifer is declining and making progress towards remediation of the aquifer. During the previous five years the mass removal has increased from 8.3 to 11.1 pounds of contamination removed annually. The volume of water extracted has also increased from 4.8 to 5.3 million gallons per year. The overall rate of mass removal has increased slightly from 1.7×10^{-6} pounds per gallon to 2.1×10^{-6} pounds per gallon.

The stable and decreasing contaminant trends and mass removal indicate the aquifer outside of the source area is making progress towards restoration; however, the aquifer may not be restored to beneficial use in a reasonable time frame. The rate of mass removal remains low and nearing asymptotic levels and the contaminant trends are not decreasing at a high enough rate to achieve cleanup in a reasonable time frame.



Source: Geosyntec consultants 2020. Groundwater Monitoring Report for the Fall 2020 Event.

Figure 7. Linear Regression of Chlorinated Benzene Concentrations in Wells



Source: Geosyntec consultants 2020. Groundwater Monitoring Report for the Fall 2020 Event.

Figure 8. Vertical Gradient Between Aquifer Units

Table 6. Summary of Groundwater Results from 2016 to 2020

Well ID	Aquifer Unit	cis-1,2-Dichloroethene			Chlorobenzene			1,4-Dichlorobenzene			1,3-Dichlorobenzene			1,2,4-Trichlorobenzene			PCBs		
		Max. Conc. µg/L	n	Mann-Kendall results	Max. Conc. µg/L	n	Mann-Kendall results	Max. Conc. µg/L	n	Mann-Kendall results	Max. Conc. µg/L	n	Mann-Kendall results	Max. Conc. µg/L	n	Mann-Kendall results	Max. Conc. µg/L	n	Mann-Kendall results
<i>Cleanup Level</i>		6	-	--	30	-	--	5	-	--	130	-	--	5	-	--	0.5	-	--
Monitoring Wells within Source Area																			
W22	A	--	-	--	--	-	--	--	-	--	--	-	--	--	-	--	6.5	5	Increasing
W46	A	--	-	--	47.4	5	Stable	194	6	Stable	99.5	6	Probably Decreasing	559	6	Stable	128	4	Stable
W48	A	--	-	--	1380	6	No Trend	2870	6	No Trend	1070	6	Stable	2020	6	Stable	119	5	No Trend
Monitoring Wells outside Source Area																			
W39	A	--	-	--	--	-	--	--	-	--	--	-	--	--	-	--	0.33	4	Stable
W40	A	--	-	--	--	-	--	--	-	--	--	-	--	--	-	--	1.3	6	Probably Decreasing
W42	A	--	-	--	--	-	--	--	-	--	--	-	--	--	-	--	0.67	4	No Trend
W50	B	--	-	--	--	-	--	--	-	--	--	-	--	--	-	--	0.27	4	Decreasing
W86	A	10.2	5	Increasing	--	-	--	--	-	--	--	-	--	--	-	--	--	-	--
Extraction Wells																			
WELL A ¹	A	--	-	--	--	-	--	--	-	--	--	-	--	10.8	6	Prob Dec	--	-	--
WELL B ¹	A	--	-	--	18.9	5	No Trend	11.9	4	Stable	15.2	5	Stable	76.5	5	No Trend	--	-	--
WELL C ¹	A	--	-	--	185	6	No Trend	343	6	Probably Decreasing	349	6	Stable	1210	6	Prob Dec	826	5	No Trend

Notes

n=number of exceedances between 2016 and 2020

Bold indicates concentration exceeds cleanup level

4.3. *Site Inspection*

A formal site inspection was not completed for this Five-Year Review due to travel restrictions resulting from the COVID-19 pandemic.

5. Technical Assessment

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

Yes, the remedy is functioning as intended by the decision documents.

Multiple lines of evidence indicate that the extraction system is effectively capturing the horizontal and vertical extent of the contaminant plumes, reducing contaminant levels in the affected aquifers to the cleanup standards, and permanently containing aqueous phase contamination in the groundwater source area. The lines of evidence include mostly declining groundwater concentrations at locations downgradient of the source areas, water levels that indicate groundwater in the source zones flows toward the extraction wells, and high run time percentages for the groundwater extraction and treatment system operation.

The aquifer outside of the source area is making progress towards restoration; however, the aquifer may not be restored to beneficial use in a reasonable time frame. The rate of mass removal remains low and nearing asymptotic levels and the contaminant trends are not decreasing at a high enough rate to achieve cleanup in a reasonable time frame.

The excavation of shallow surface soil contaminated with PCBs throughout the Site is completed where accessible. Except for a small number of areas where further excavation was not attempted due to conflicts with other facility activities and utilities, shallow soil has been further remediated to less than 10 mg/kg PCBs.

Operating procedures, as implemented, have maintained the effectiveness of the remedial action and all equipment is functioning at performance conditions.

The land use covenants have been successful at preventing well construction (for water supply purposes) in source areas that remain contaminated. Excavation below the 8 ft where soil has not been removed has been restricted. Any excavation, including temporary subsurface work during building demolition was completed in accordance with the EPA approved soil management plan.

Access controls are in place and effectively prevent current exposures. The entire plant is fenced and the only access to affected areas is via guarded gates. Based on the asphalt cap inspection conducted in 2021, the asphalt cap is in good condition and appears adequate for the intended purpose of minimizing water infiltration and for preventing exposure to contaminated soils.

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?

Yes, exposure assumptions, cleanup levels, and remedial action objectives used at the time of the remedy selection are still valid. There have been no major changes to any applicable or relevant and appropriate requirements that affect protectiveness (Appendix D).

There have been no changes to the vapor intrusion pathway since indoor air sampling was completed in 2013. Building 21 is large and includes open areas with significant ventilation. Future uses of this building may involve subdividing into smaller areas or installing self-contained office spaces with minimal ventilation. Although sub-slab soil gas trichloroethene, 1,2,4- trichlorobenzene, and xylene concentrations exceed conservative screening levels by less than a factor of four, the potential for vapor intrusion could become significant if building alterations involved subdividing into smaller areas, installing self-contained office spaces with minimal ventilation, or if there were modifications to the floor slab causing openings (such as sumps, floor drains, utility trenches etc.) to the sub-slab soil gas. The Record of Decision requires Northrop Grumman to notify "of any future intention to cease operations in, abandon, demolish, or perform construction (including partial demolition or construction) in Building 21".

The groundwater containment goal to maintain permanent hydraulic containment of the source areas to prevent migration of contaminants is being met. The goal to restore groundwater to health-based standards for all contaminated groundwater outside the two dense nonaqueous phase liquid source areas, is making progress towards restoration; however, the aquifer may not be restored to beneficial use in a reasonable time frame.

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

No additional information was discovered during the past five years that calls into questions the protectiveness of the remedy. The Site was identified by the U.S. Government Accountability Office in its 2019 Superfund Climate Change report as potentially impacted by highest flood hazard due to climate change impacts. The treatment system may be impacted by flooding to the area and need to be shutdown. The hydraulic gradient is relatively flat so contamination would not likely migrate to receptors very quickly. The paved cap would help prevent infiltration of flood waters to the source areas.

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): Site	Issue Category: Remedy Performance			
	Issue: Concentration trends indicate that restoration outside the source areas will not be achieved in a reasonable timeframe.			
	Recommendation: Conduct a Remedy Optimization project or make other remedy adjustments to restore of groundwater outside the source areas in a reasonable timeframe			
Affect Current Protectiveness	Affect Future Protectiveness	Party Responsible	Oversight Party	Milestone Date
No	Yes	EPA	EPA	9/30/2023

OU(s): Site	Issue Category: Other			
	Issue: Due to COVID-19 travel restrictions, EPA was unable to conduct a site inspection for this Site.			
	Recommendation: EPA conduct site inspection.			
Affect Current Protectiveness	Affect Future Protectiveness	Party Responsible	Oversight Party	Milestone Date
No	Yes	EPA	EPA	9/30/2022

6.1. Other Findings

In addition, the following are recommendations that may improve performance of the remedy but do not affect current and/or future protectiveness and were identified during the Five-Year Review:

- During the cap inspection four areas were identified as having high severity cracking with asphalt disintegration. Excavation and repaving of these areas were recommended in the Cap Inspection Report.

7. Protectiveness Statement

Table 8. Protectiveness Statement

Sitewide Protectiveness Statement
<i>Protectiveness Determination:</i> Short-term Protective
<i>Protectiveness Statement:</i> The remedy at the Westinghouse Electric Corporation Superfund Site currently protects human health and the environment because exposure pathways that could result in unacceptable risks are being controlled by land use covenants and the asphalt cap preventing exposure to soil above 25 mg/kg PCB and by the groundwater extraction system providing permanent hydraulic containment of the source area to prevent pollutant migration and further contamination of the shallow aquifers. However, in order for the remedy to be protective in the long term, remedy adjustments or an optimization study should be done to restore of groundwater outside the source areas in a reasonable timeframe. EPA will conduct a site inspection when COVID travel restrictions are lifted.

8. Next Review

The next Five-Year Review report for the Westinghouse Electric Corporation Superfund Site is required five years from the completion date of this review.

Appendix A: List of Documents Reviewed

- AllWest. 2018. 2018 Annual Inspection for Property Located at 555 and 557 East California Avenue, Sunnyvale, California 94086. June 2018.
- ALTA Geosciences, Inc. 2017. 2015-2016 Soil Remediation Completion Report. Westinghouse Superfund Site, Sunnyvale, California. May 2017.
- EMCON. 1991. Remedial Investigation and Feasibility Study Report, Westinghouse, Sunnyvale Facility, Sunnyvale, California.
- EPA. 1991. Record of Decision: Westinghouse Superfund Site, Sunnyvale, California. EPA ID CAD981436363. September.
- EPA. 1997. Explanation of Significant Differences: Westinghouse Superfund Site, Sunnyvale, California, EPA ID CAD981436363. February 1997.
- EPA. 2008. Explanation of Significant Differences: Westinghouse Superfund Site, Sunnyvale, California. EPA ID CAD001864081. September 2008.
- EPA. 2015. OSWER Technical Guidance for Assessing and Mitigating the Vapor Intrusion Pathway from Subsurface Vapor Sources to Indoor Air. OSWER Publication 9200.2-154. June 2015.
- EPA. 2016. Fourth Five Year Review for Westinghouse Superfund Site. Sunnyvale, CA. August 2016.
- Geosyntec Consultants, Inc. 2017. Groundwater Monitoring Report for the Fall 2016 Event. Westinghouse Superfund Site, Sunnyvale, California. April 2017.
- Geosyntec. 2018. Groundwater Monitoring Report for the Fall 2017 Event. Westinghouse Superfund Site, Sunnyvale, California. April 2018.
- Geosyntec. 2019. Groundwater Monitoring Report for the Fall 2018 Event. Westinghouse Superfund Site, Sunnyvale, California. April 2019.
- Geosyntec. 2020. Groundwater Monitoring Report for the Fall 2019 Event. Westinghouse Superfund Site, Sunnyvale, California. April 2020.
- Geosyntec. 2020. Westinghouse Electric Corporation Superfund Site PCBs and Stormwater Update. 22 July 2020.
- Geosyntec. 2021. 2020 Annual Inspection Report Land Use Covenant Compliance Inspection Parcels 204-46-008, 204-47-002, and 204-48-028 Westinghouse Electric Corporation Superfund Site, Sunnyvale, California. January 2021.
- Geosyntec. 2021. Groundwater Monitoring Report for the Fall 2020 Event. Westinghouse Superfund Site, Sunnyvale, California. April 2021.
- Geosyntec. 2021. Five-Year Groundwater Status Report Westinghouse Superfund Site Sunnyvale, California. July 2021.

Appendix B: Site Chronology

The following table lists the dates of important events for the Site.

Event	Date
Westinghouse Electric Corporation conducts study to determine the extent and nature of Polychlorinated Biphenyl (PCB) soil contamination on the Site.	1981
Lead Agency, San Francisco Bay Regional Water Quality Control Board (Water Board) orders and oversees investigation and remediation of PCB-contaminated shallow soils in Reservoir 2 area, railroad spurs, and fence lines at the Site.	1981-1987
The Site was listed on National Priorities List (NPL).	6/1/1986
EPA assumes lead oversight role.	12/18/1987
Administrative Order of Consent for the Remedial Investigation and Feasibility Study (RI/FS) signed by Westinghouse and EPA.	September 1990
Public Notice of Feasibility Study (FS) completion and EPA Proposed Plan (PP) for remedial action; start of public comment period.	6/1/1991
Record of Decision (ROD) selecting preferred remedy is signed.	10/16/1991
Westinghouse initiates Remedial Design (RD) pursuant to Administrative Consent Order.	2/6/1992
Start of Phase 1 soil remediation (soil excavation and removal).	October 1992
Pilot groundwater extraction and treatment system installed on-Site.	December 1992
EPA issues Unilateral Administrative Order for RD and Remedial Action (RA)	9/29/1993
Westinghouse Final Remedial Design for soil and groundwater remediation approved by EPA (Phase 2).	6/28/1994
Westinghouse Phase 2 Remedial Action Work Plan (RAWP) approved by EPA.	8/24/1994
Start of Phase 2 on-Site construction activities (soils remediation and final groundwater extraction and treatment system).	10/1/1994
Northrop Grumman Systems Corporation (NGSC) acquires the Westinghouse Electronics Systems Group to include the Sunnyvale property (the Site)	3/1/1996
Explanation of Significant Differences (ESD) issued by EPA for expanded soils remediation and groundwater monitoring in the North Parking Lot area of the Site.	2/14/1997
Monitoring frequency changed from quarterly to semiannually for PCBs. Chlorinated benzenes and volatile organic compounds analyses required only on an annual basis.	1997
Pre-final inspection of Phase 2 and ESD (North Parking Lot) Remedial Actions.	December 1998 & August 2000
Investigation and remediation of soils inside Building 21 completed.	July 2000
EPA signed Preliminary Close Out Report.	9/27/2000
Five Year Groundwater Status Report submitted by NGSC.	February 2001
Work Plan for Project Upgrades to Groundwater Remediation System submitted by NGSC.	4/10/2001
First Five-Year Review Report completed by EPA.	9/28/2001
Upgrades to groundwater extraction and treatment system completed.	October 2001
Groundwater Monitoring Plan completed.	June 2003
Monitoring frequency reduced from semiannually to annually.	2003
Comprehensive Soil Data Summary Report submitted by NGSC.	February 2006
Five-Year Groundwater Status Report Submitted by NGSC	May 2006
Second Five-Year Review Report completed by EPA.	September 2006
2003 Monitoring Plan revised for the Fall 2006 Groundwater Monitoring Event.	12/18/2006

Event	Date
Report of Studies to Optimize Current Site Remediation Activities submitted by NGSC recommending one-year pilot test of Monitored Natural Attenuation (MNA).	10/12/2007
ESD issued by EPA to assure that Institutional Controls (ICs) apply to the entire Site where PCB contamination remains above levels suitable for unrestricted use.	9/30/2008
Site Investigation Report Old 61 Parking Lot completed that summarized evaluation of magnetic anomalies and PCBs in the Lot 61 area.	September 2009
Extraction and Monitoring Well Redevelopment Report submitted by NGSC to summarize well redevelopment activities for Extraction wells A, B, C and E8 that occurred April 2009.	9/23/2009
2010 EPA Memorandum to the Site File issued that extends the applicability of the decision in the 1997 ESD to the rest of the Site with PCB levels below 500 mg/kg that resulted from application of PCBs as an herbicide.	3/25/2010
Supplemental Site Characterization Report for PCBs in Soil provides summary of additional characterization sampling performed in shallow soil in unpaved areas of the Site found to have concentrations greater than 25 mg/kg.	August 2010
Supplemental Site Characterization Report for Dioxins and Furans in Soil – Former Trash Incinerator Area summarizes additional characterization sampling in shallow soil at downwind direction of former trash incinerator area.	August 2010
Asphalt Cap Inspection & Maintenance Plan submitted by Northrop Grumman Systems Corporation.	October 2010
Five-Year Groundwater Status Report Submitted by NGSC.	January 2011
Vapor Intrusion Investigation was completed for Building 21.	January 30, 2014
GETS extraction wells A and C and monitoring wells W26R, W39, W47, and W60R were redeveloped.	November 2014
Extraction well E3 was turned off due to interference with Extraction Well C	May 22, 2015
Land Use Covenant finalized for parcel 204-46-009, 555 East California Avenue	May 2015
Wells E6, E7, E10 through E15, W80, W81, and W82 were decommissioned	2016
Soil Remediation was completed	May 2016
Fourth Five-Year Review Report completed by EPA.	August 23, 2016
A well survey was completed using records requested from the California Department of Water Resources (DWR) and Environmental Data Resources (EDR) reports	November 2016
Northrop Grumman began implementing Site-wide best management practices (BMPs), conducting BMP inspections, and collecting stormwater discharge samples from drainage areas that discharge stormwater into the City's stormwater sewer system	2018
Site Inspection conducted by landowner at 555 East California Avenue	June 2018
Supplemental soil remediation was completed	November 2018
Land Use Covenant Recorded for four parcels (204-46-008, 204-47-002, 204-48-02, and 204-47-001)	December 2018
Northrop Grumman conducted Annual Land Use Covenant Compliance Site Inspection	December 2019
Northrop Grumman conducted Annual Land Use Covenant Compliance Site Inspection	December 2020

Appendix C: Data Review

GSI MANN-KENDALL TOOLKIT
 for Constituent Trend Analysis

Evaluation Date: 1-Feb-21	Job ID: Five Year Review
Facility Name: Westinghouse	Constituent: PCB Aroclor
Conducted By: Jeffrey Weiss	Concentration Units: µg/L
Sampling Point ID: Well C	

Sampling Event	Sampling Date	PCB AROCLOR CONCENTRATION (µg/L)					
1	7-Nov-15	108					
2	2-Nov-16	149					
3	10-Nov-17						
4	26-Oct-18	10.2					
5	30-Oct-19	826					
6	28-Oct-20	718					
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19							
20							

Coefficient of Variation:	1.05
Mann-Kendall Statistic (S):	4
Confidence Factor:	75.8%
Concentration Trend:	No Trend

Well C

Notes:

- At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
- Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
- Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

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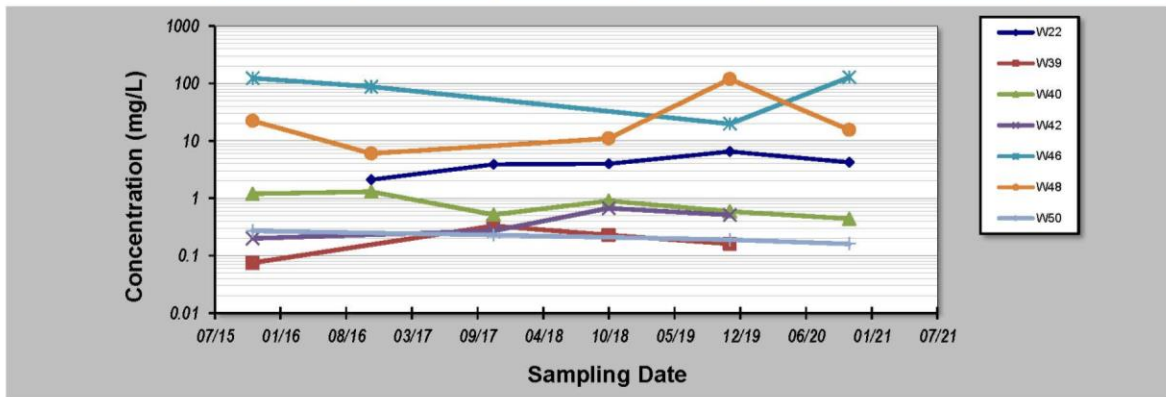
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GSI MANN-KENDALL TOOLKIT for Constituent Trend Analysis

Evaluation Date: **1-Feb-21** Job ID: **Five Year Review**
 Facility Name: **Westinghouse** Constituent: **PCB Aroclor**
 Conducted By: **Jeffrey Weiss** Concentration Units: **µg/L**

Sampling Point ID: **W22** **W39** **W40** **W42** **W46** **W48** **W50**

Sampling Event	Sampling Date	PCB AROCLOR CONCENTRATION (µg/L)						
		W22	W39	W40	W42	W46	W48	W50
1	7-Nov-15		0.075	1.2	0.2	123	22.3	0.27
2	2-Nov-16	2.1		1.3		87.8	6	
3	10-Nov-17	3.9	0.33	0.52	0.27			0.23
4	26-Oct-18	4	0.23	0.9	0.67		11	
5	30-Oct-19	6.5	0.16	0.59	0.51	19.7	119	0.19
6	28-Oct-20	4.2		0.44		128	15.4	0.16
7								
8								
9								
10								
11								
12								
13								
14								
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16								
17								
18								
19								
20								
Coefficient of Variation:		0.38	0.54	0.44	0.53	0.56	1.37	0.23
Mann-Kendall Statistic (S):		8	0	-9	4	0	2	-6
Confidence Factor:		95.8%	37.5%	93.2%	83.3%	37.5%	59.2%	95.8%
Concentration Trend:		Increasing	Stable	Prob. Decreasing	No Trend	Stable	No Trend	Decreasing



Notes:

- At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
- Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
- Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

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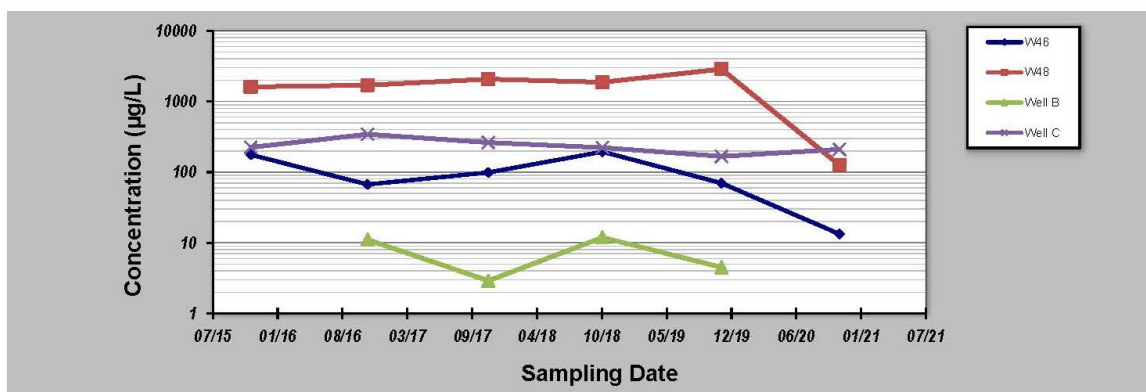
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GSI MANN-KENDALL TOOLKIT for Constituent Trend Analysis

Evaluation Date: 1-Feb-21 Job ID: Five Year Review
 Facility Name: Westinghouse Constituent: 1,4-Dichlorobenzene
 Conducted By: Jeffrey Weiss Concentration Units: µg/L

Sampling Point ID: W46 W48 Well B Well C

Sampling Event	Sampling Date	1,4-DICHLOROBENZENE CONCENTRATION (µg/L)			
1	9-Nov-15	176	1610		224
2	3-Nov-16	66.9	1700	11.1	343
3	11-Nov-17	99	2070	2.9	262
4	29-Oct-18	194	1870	11.9	222
5	31-Oct-19	69.8	2870	4.5	167
6	29-Oct-20	13.3	126		210
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
Coefficient of Variation:		0.67	0.53	0.60	0.25
Mann-Kendall Statistic (S):		-5	3	0	-9
Confidence Factor:		76.5%	64.0%	37.5%	93.2%
Concentration Trend:		Stable	No Trend	Stable	Prob. Decreasing



Notes:

- At least four independent sampling events per well are required for calculating the trend. Methodology is valid for 4 to 40 samples.
- Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
- Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

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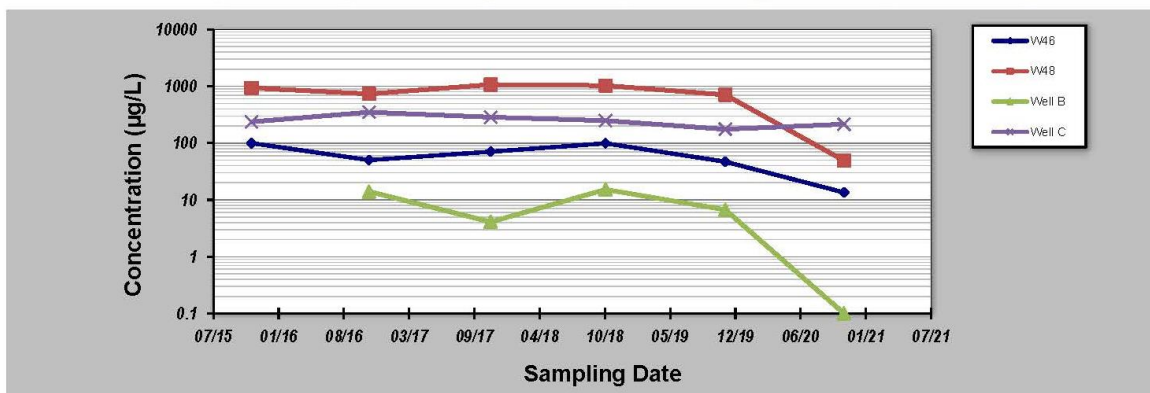
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GSI MANN-KENDALL TOOLKIT for Constituent Trend Analysis

Evaluation Date: 1-Feb-21	Job ID: Five Year Review
Facility Name: Westinghouse	Constituent: 1,3-Dichlorobenzene
Conducted By: Jeffrey Weiss	Concentration Units: µg/L

Sampling Point ID:	W46	W48	Well B	Well C		
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Sampling Event	Sampling Date	1,3-DICHLOROBENZENE CONCENTRATION (µg/L)			
		W46	W48	Well B	Well C
1	9-Nov-15	99.5	935	236	
2	3-Nov-16	50.2	733	14	349
3	11-Nov-17	70.5	1070	4.1	285
4	29-Oct-18	98.9	1030	15.2	248
5	31-Oct-19	47	706	6.7	175
6	29-Oct-20	13.5	49	0.1	215
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
Coefficient of Variation:		0.53	0.50	0.81	0.24
Mann-Kendall Statistic (S):		-9	-7	-4	-7
Confidence Factor:		93.2%	86.4%	75.8%	86.4%
Concentration Trend:		Prob. Decreasing	Stable	Stable	Stable



Notes:

1. At least four independent sampling events per well are required for calculating the trend. Methodology is valid for 4 to 40 samples.
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

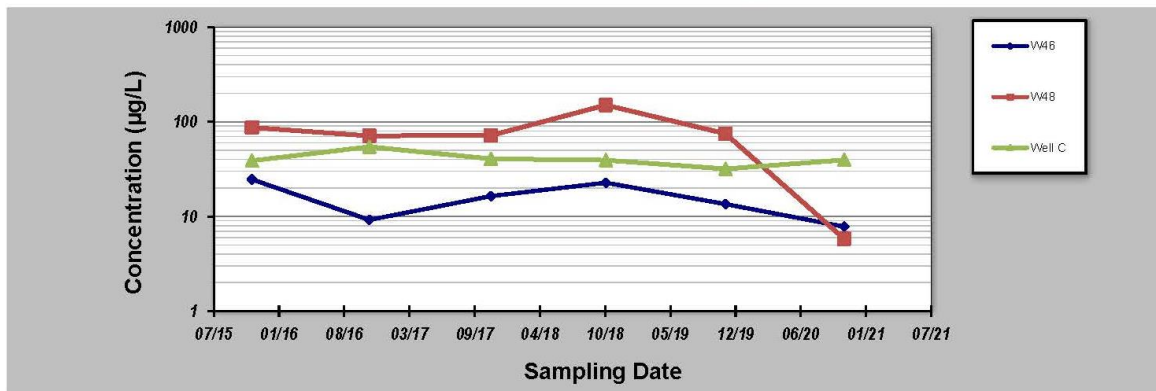
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GSI MANN-KENDALL TOOLKIT for Constituent Trend Analysis

Evaluation Date: 1-Feb-21	Job ID: Five Year Review
Facility Name: Westinghouse	Constituent: 1,2-Dichlorobenzene
Conducted By: Jeffrey Weiss	Concentration Units: µg/L
Sampling Point ID: W46 W48 Well C	

Sampling Event	Sampling Date	1,2-DICHLORO BENZENE CONCENTRATION (µg/L)		
		W46	W48	Well C
1	9-Nov-15	24.6	87	38.8
2	3-Nov-16	9.2	71	54.4
3	11-Nov-17	16.4	71.7	40.6
4	29-Oct-18	22.7	150	39.3
5	31-Oct-19	13.5	74.9	31.8
6	29-Oct-20	7.8	5.8	39.5
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19				
20				
Coefficient of Variation:		0.44	0.60	0.18
Mann-Kendall Statistic (S):		-7	-3	-3
Confidence Factor:		86.4%	64.0%	64.0%
Concentration Trend:		Stable	Stable	Stable



Notes:

- At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
- Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S=0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
- Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

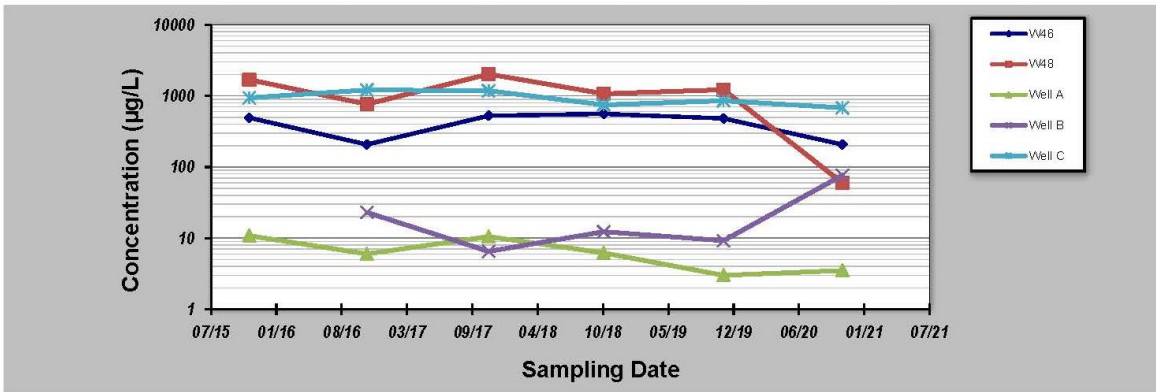
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GSI MANN-KENDALL TOOLKIT for Constituent Trend Analysis

Evaluation Date: 1-Feb-21	Job ID: Five Year Review
Facility Name: Westinghouse	Constituent: 1,2,4-Trichlorobenzene
Conducted By: Jeffrey Weiss	Concentration Units: µg/L
Sampling Point ID: W46 W48 Well A Well B Well C	

Sampling Event	Sampling Date	1,2,4-TRICHLOROBENZENE CONCENTRATION (µg/L)				
		W46	W48	Well A	Well B	Well C
1	9-Nov-15	492	1690	10.8		939
2	3-Nov-16	207	763	6	23	1210
3	11-Nov-17	526	2020	10.5	6.5	1180
4	29-Oct-18	559	1070	6.2	12.3	747
5	31-Oct-19	481	1220	3	9.2	853
6	29-Oct-20	207	59.7	3.5	76.5	680
7						
8						
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10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
Coefficient of Variation:		0.39	0.61	0.50	1.14	0.24
Mann-Kendall Statistic (S):		-2	-5	-9	2	-9
Confidence Factor:		57.0%	76.5%	93.2%	59.2%	93.2%
Concentration Trend:		Stable	Stable	Prob. Decreasing	No Trend	Prob. Decreasing



- Notes:**
- At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
 - Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
 - Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

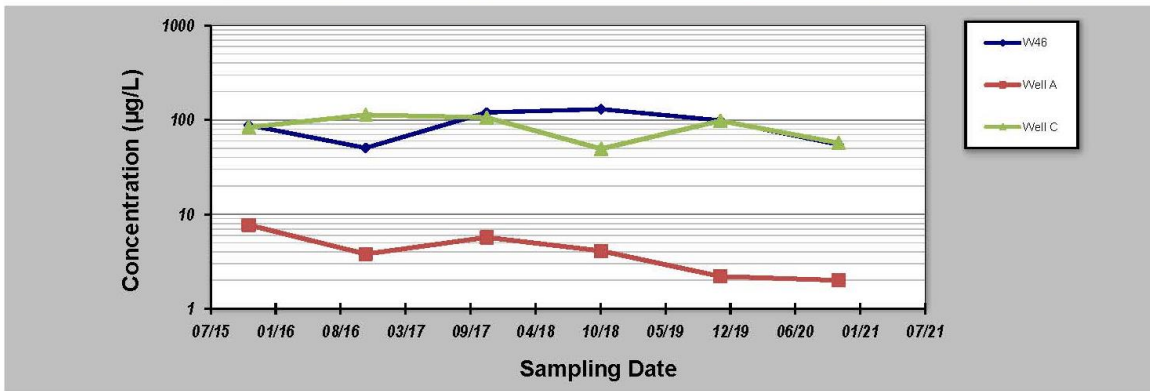
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GSI MANN-KENDALL TOOLKIT for Constituent Trend Analysis

Evaluation Date: 1-Feb-21 Job ID: Five Year Review
 Facility Name: Westinghouse Constituent: 1,2,3-Trichlorobenzene
 Conducted By: Jeffrey Weiss Concentration Units: µg/L

Sampling Point ID:		W46	Well A	Well C			
Sampling Event	Sampling Date	1,2,3-TRICHLOROBENZENE CONCENTRATION (µg/L)					
1	9-Nov-15	88	7.7	83.6			
2	3-Nov-16	50.5	3.8	113			
3	11-Nov-17	120	5.7	106			
4	29-Oct-18	130	4.1	49.4			
5	31-Oct-19	98.8	2.2	97.9			
6	29-Oct-20	54.9	2	57.1			
7							
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12							
13							
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15							
16							
17							
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19							
20							
Coefficient of Variation:		0.36	0.51	0.31			
Mann-Kendall Statistic (S):		1	-11	-5			
Confidence Factor:		50.0%	97.2%	76.5%			
Concentration Trend:		No Trend	Decreasing	Stable			



Notes:

- At least four independent sampling events per well are required for calculating the trend. Methodology is valid for 4 to 40 samples.
- Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
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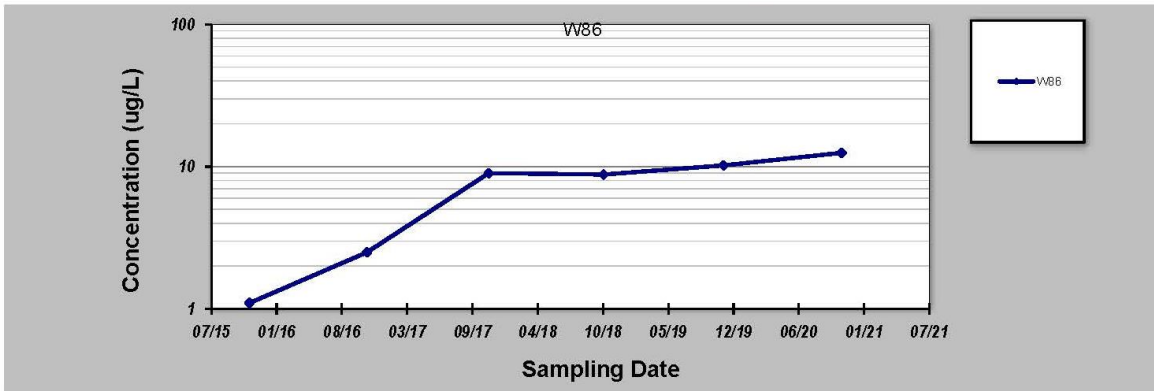
GSI MANN-KENDALL TOOLKIT for Constituent Trend Analysis

Evaluation Date: 1-Feb-21	Job ID: Five Year Review
Facility Name: Westinghouse	Constituent: cis-1,2-Dichloroethene
Conducted By: Jeffrey Weiss	Concentration Units: µg/L

Sampling Point ID: **W86**

Sampling Event	Sampling Date	CIS-1,2-DICHLOROETHENE CONCENTRATION (µg/L)					
1	9-Nov-15	1.1					
2	3-Nov-16	2.5					
3	11-Nov-17	9					
4	29-Oct-18	8.8					
5	31-Oct-19	10.2					
6	27-Oct-20	12.5					
7							
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20							

Coefficient of Variation:	0.61
Mann-Kendall Statistic (S):	13
Confidence Factor:	99.2%
Concentration Trend:	Increasing



Notes:

- At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
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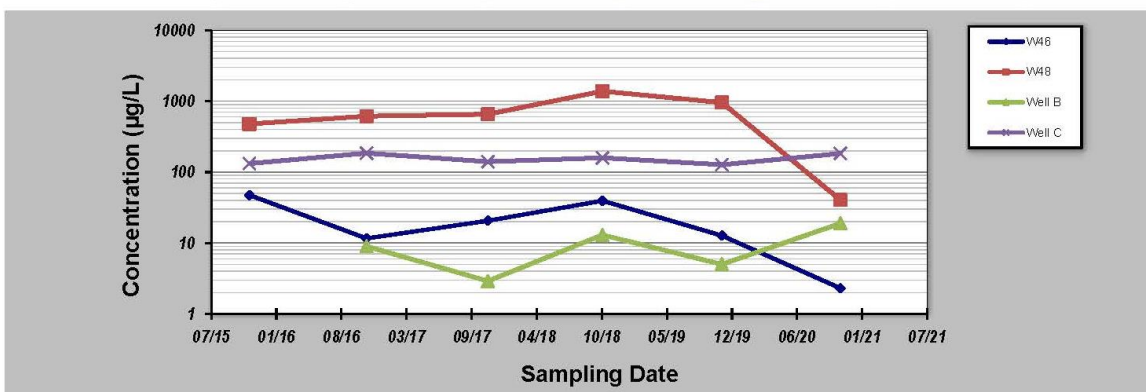
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GSI MANN-KENDALL TOOLKIT for Constituent Trend Analysis

Evaluation Date: 1-Feb-21 Job ID: Five Year Review
 Facility Name: Westinghouse Constituent: Chlorobenzene
 Conducted By: Jeffrey Weiss Concentration Units: µg/L

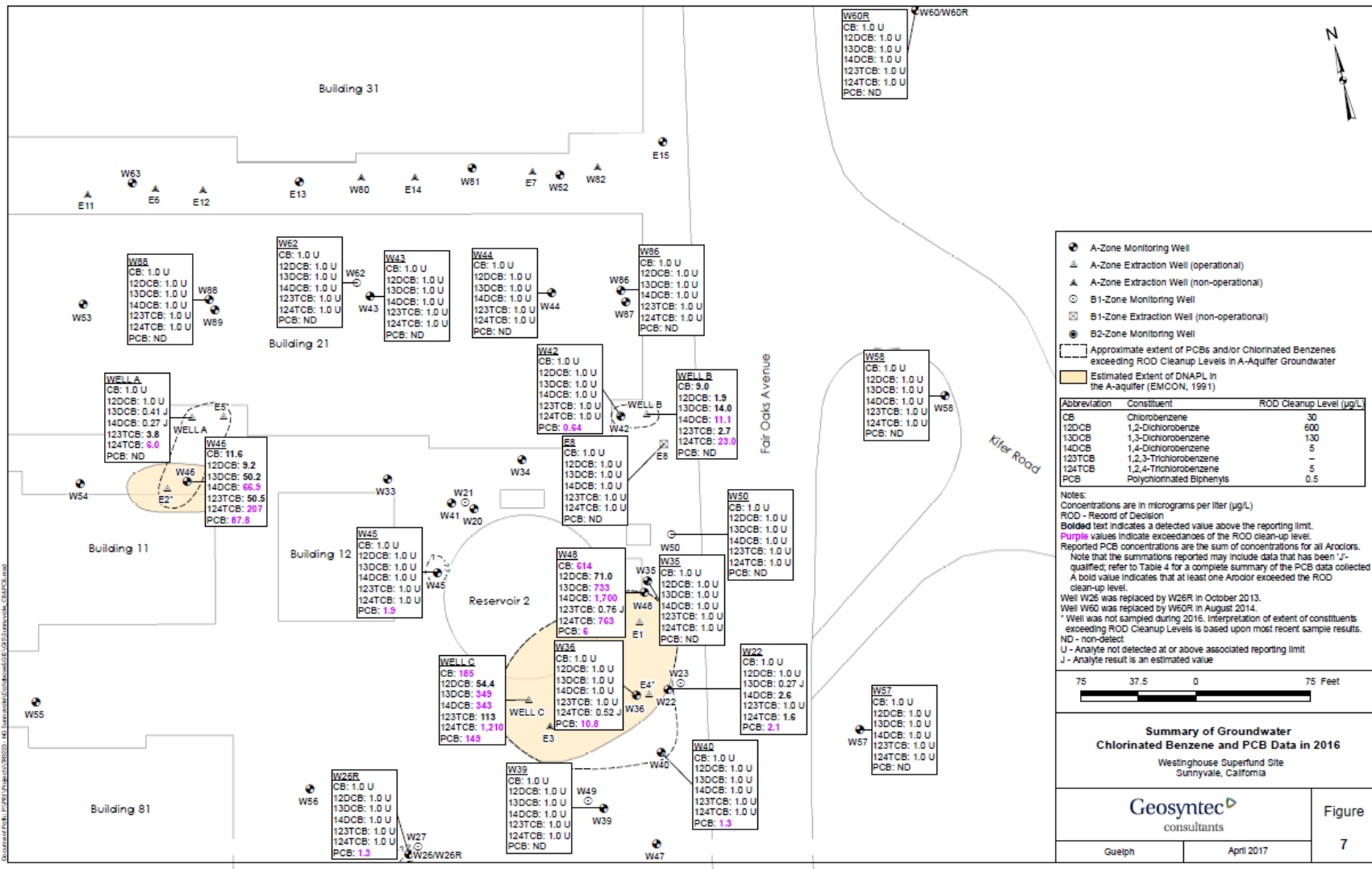
Sampling Point ID:		W46	W48	Well B	Well C		
Sampling Event	Sampling Date	CHLOROBENZENE CONCENTRATION (µg/L)					
1	9-Nov-15	47.4	477		132		
2	3-Nov-16	11.6	614	9	185		
3	11-Nov-17	20.6	655	2.9	140		
4	29-Oct-18	39.4	1380	13	159		
5	31-Oct-19	12.7	955	5	127		
6	29-Oct-20	2.3	40.5	18.9	183		
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13							
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16							
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18							
19							
20							
Coefficient of Variation:		0.78	0.66	0.66	0.16		
Mann-Kendall Statistic (S):		-7	3	4	1		
Confidence Factor:		86.4%	64.0%	75.8%	50.0%		
Concentration Trend:		Stable	No Trend	No Trend	No Trend		



- Notes:**
- At least four independent sampling events per well are required for calculating the trend. Methodology is valid for 4 to 40 samples.
 - Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
 - Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

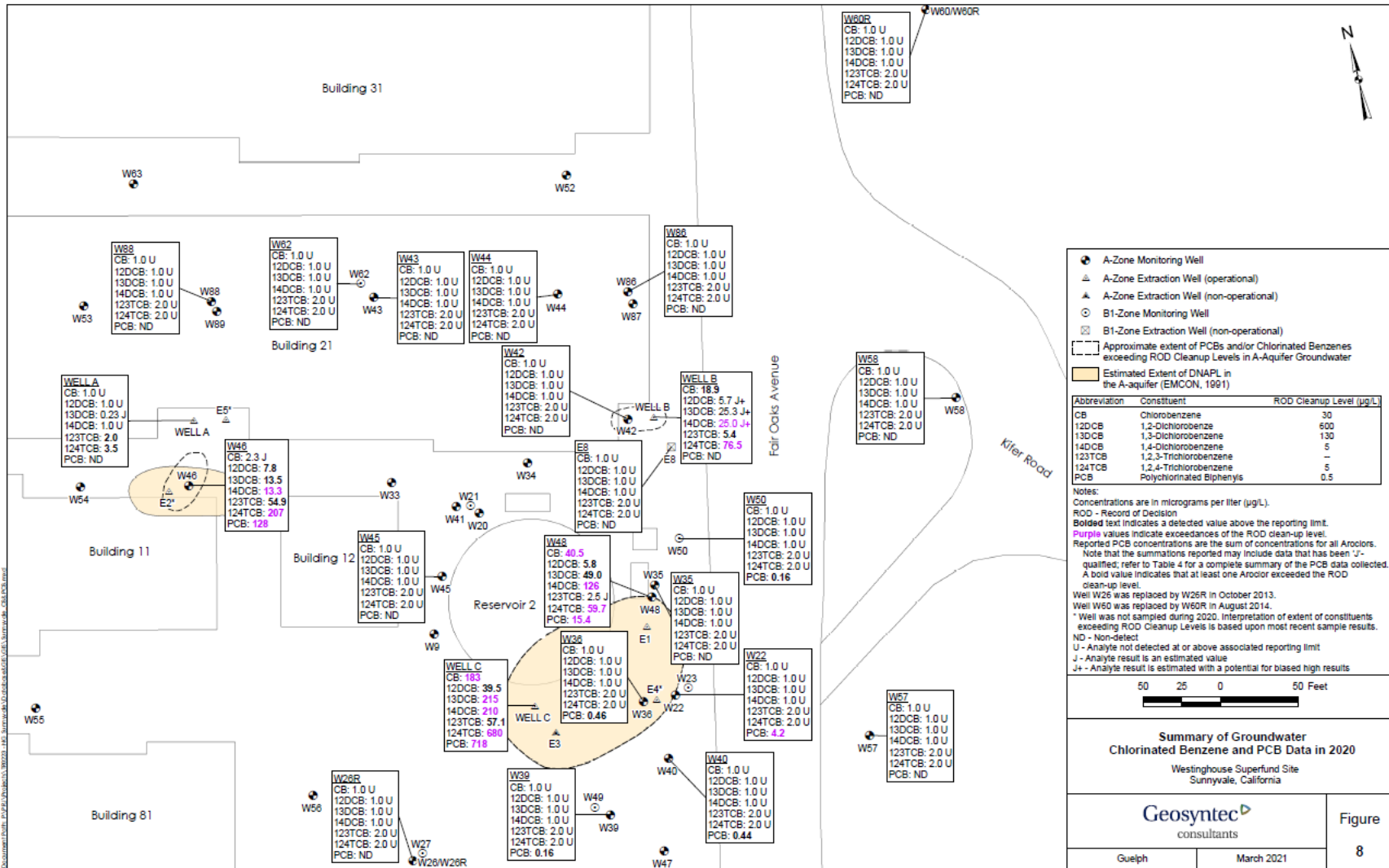
DISCLAIMER: The GSI Mann-Kendall Toolkit is available "as is". Considerable care has been exercised in preparing this software product; however, no party, including without limitation GSI Environmental Inc., makes any representation or warranty regarding the accuracy, correctness, or completeness of the information contained herein, and no such party shall be liable for any direct, indirect, consequential, incidental or other damages resulting from the use of this product or the information contained herein. Information in this publication is subject to change without notice. GSI Environmental Inc., disclaims any responsibility or obligation to update the information contained herein.

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Source: Geosyntec consultants 2017. Groundwater Monitoring Report for the Fall 2016 Event.

Summary of Groundwater Concentrations for Chlorinated Benzene and PCB Data in 2016



Source: Geosyntec consultants 2021. Groundwater Monitoring Report for the Fall 2020 Event.

Summary of Groundwater Concentrations for Chlorinated Benzene and PCB Data in 2020

Appendix D: ARAR 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 (ARARs). Federal ARARs may include requirements promulgated under any Federal environmental laws. State ARARs may only include promulgated, enforceable environmental or facility siting laws of general application that are more stringent or broader in scope than Federal requirements and that are identified by the State in a timely manner. ARARs are identified on a site-specific basis from information about the chemicals at the site, the remedial actions contemplated, the physical characteristics of the site, and other appropriate factors. ARARs include only substantive, not administrative, requirements and pertain only to onsite activities. There are three general categories of ARARs: chemical-specific, location-specific, and action-specific.

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

Chemical-specific ARARs identified in the 1996 ROD and subsequent ROD Amendments for groundwater and soil were evaluated (Table D-1).

Table D-1. Summary of Groundwater Chemical-Specific ARAR Changes

Contaminants of Concern	1996 ROD cleanup goals (µg/L)	Basis for Cleanup Level	Current Regulations (µg/L)		ARARs More or Less Stringent than Cleanup Levels?
			State	Federal	
Benzene	1	State MCL	1	5	No changes
1,2-Dichlorobenzene	600	Federal MCL	600	600	No changes
1,3-Dichlorobenzene	130	State Department Health Services Action Level	6	7	No changes
1,4-Dichlorobenzene	5	State MCL	5	75	No changes
1,1-Dichloroethane	5	State MCL	None	5	No changes
1,2-Dichloroethane	0.5	State MCL	0.5	5	No changes
1,1-Dichloroethene	6	State MCL	6	7	No changes
cis-1,2-Dichloroethene	6	State MCL	6	70	No changes
Ethylbenzene	680	State MCL	300	700	More Stringent
Monochlorobenzene	30	State MCL	70	100	Less stringent
Polychlorinated biphenyls	0.5	Promulgated Federal MCL	0.5	0.5	No changes
Toluene	1,000	Federal MCL	150	1000	More Stringent
1,2,4-Trichlorobenzene	5	Proposed Federal MCL, not promulgated at the time	70	5	No changes
1,1,1-Trichloroethane	200	Federal MCL	200	200	No changes
Trichloroethene	5	Federal MCL	5	5	No changes
Xylene(s)	1,750	State MCL	1,750	10,000	No changes

¹ MCL = Maximum Contaminant Level, which is a federal or state drinking water standard.

Two compounds have cleanup levels that are above their respective current drinking water standards, ethylbenzene and toluene. Over the last 5 years of sampling, these two analytes were non-detect or detected below the respective reporting limit for each well and each sampling event, therefore protectiveness is not affected. These volatile organic compounds have rarely been detected at concentrations above the ROD cleanup levels during the past 10 years of monitoring, and in a letter dated July 16, 2015, EPA approved discontinuing monitoring for most volatile organic compounds except the chlorinated benzenes, benzene, trichloroethene, cis-1,2-dichloroethene, and vinyl chloride.

Federal and State laws and regulations other than the chemical-specific ARARs discussed in Table D-1 that have been promulgated or changed since the 1991 ROD are described in Table D-2. There have been no revisions to laws or regulations that affect the protectiveness of the remedy.

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

- United States Code Title 15, Toxic Substances Control Act (Subpart D)
- Porter-Cologne, Clean Water Act (40 CFR, Basin Plan Resolution 6816)
- Endangered Species Act (16 United States Code 1531 et seq.) (50 CFR Part 200)
- Div. 20, Chapter 6.5, Health and Safety Code (Section 25232 (a)(1) and (2) and California Code of Regulations Title 22, Section 66001)
- California Civil Code Section 1471 (a)
- California Code of Regulations Title 22 (section 67391.1 (a), (b), (d), (g) and (i))

Table D-2. Summary of ARAR Changes for Site in the Past Five Years

Requirement and Citation	Document	Description	Effect on Protectiveness	Comments	Recent Amendment Date
40 Code of Federal Regulations (CFR) Section 13000 Porter-Cologne, California Water Code, Clean Water Act, Division 7	ROD 1991	Requirements are applicable for discharge from any effluent from the groundwater treatment system to the storm sewers.	Changes do not affect protectiveness.	Changes are administrative and editorial	March 2021
50 CFR Part 402 Endangered Species Act of 1973	ROD 1991	Ensure that any action is not likely to jeopardize the continued existence of endangered or threatened species or result in the destruction or adverse modification of critical habitat of such species.	Changes do not affect protectiveness.	Edited definitions, informal consultations, other provisions sections	10/29/2019

Appendix E: Public Notice



EPA WANTS TO HEAR FROM YOU ABOUT THE WESTINGHOUSE ELECTRIC CORPORATION SUPERFUND SITE CLEANUP

The U.S. Environmental Protection Agency (EPA) has started the fifth Five-Year Review of the cleanup plan for the Westinghouse Electric Corporation Superfund site. The site is in Sunnyvale, 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 such Review in 2016 and found the cleanup plan was working as intended.

What is Included in the Review?

The 2021 Five-Year 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 call Ms. Wetmore below before May 31, 2021:

- Cynthia Wetmore, EPA Project Manager, at (415) 972-3059 or wetmore,cynthia@epa.gov

Where Can I Learn More?

Visit EPA's webpage at www.epa.gov/superfund/westinghouse for more information. 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) at this location:

Superfund Record Center
75 Hawthorne Street, Room 3100
San Francisco, CA 94105
Phone: (415) 947-8717
Email: R9records@epa.gov
Hours: 8:00 a.m.-5:00 p.m., Mon.-Fri.
Please call for current hours of operation.

EPA will complete the Five-Year Review report no later than September 30, 2021. When complete, EPA will post a copy on the site's [webpage](http://www.epa.gov/superfund/westinghouse) and send a copy to the site information repository listed above.

Background

The Westinghouse site operates today as a Northrop Grumman manufacturing facility. It occupies a 75-acre lot, located at 401 East Hendy Avenue in Sunnyvale, Calif. In the mid-1950s, Westinghouse made transformers on site that used a mixture of toxic chemicals. Large-scale storage and use of these chemicals caused the soil and groundwater beneath the site to get polluted. The soil was also polluted by toxic chemicals being used as an herbicide along fence lines and railroad tracks. Following initial actions to protect human health and the environment from site pollution, the site's long-term cleanup is ongoing.

Appendix F: Recorded Land Use Covenants

RECORDING REQUESTED BY

Northrop Grumman Systems Corporation

WHEN RECORDED MAIL TO:

John F. Cermak, Jr.
NAME.: Cermak & Inglin, LLP

9.24088653

Regina Alcomendras
Santa Clara County — Clerk—Recorder
12/28/2018 11:43 AM

12121 Wilshire Blvd., Suite 322

E / ZIP: Los Angeles, CA 90025

Fees: \$171.00
Taxes: \$0
Total: \$171.00



9.1.

Titles: 1 Pages: 23

ADDRESS :

ctry / STATE / "LIP:

(DOCUMENT WILL ONLY BE RETURNED TO NAME & ADDRESS IDENTIFIED ABOVE)

(SPACE ABOVE FOR RECORDER'S USE)

.1.1. COVENANT TO RESTRICT USE OF PROPERTY

ENVIRONMENTAL RESTRICTION

(Re: Santa Clara County Assessor Parcel Number 204-47-001
Westinghouse Electric Corp. (Sunnyvale Plant), DTSC Site Code 200107,
U.S. EPA CERCLIS ID No. CAD001864081)

(DOCUMENT TITLE)

9.1.1.1 SEPARATE PAGE, PURSUANT TO CA. GOV'T. CODE 27361.6

RECORDING REQUESTED

BY:

Northrop Grumman Systems Corporation
2980 Fairview Park Drive
Falls Church, VA 22042-4511

WHEN RECORDED, MAIL TO:

State of California
Dept. of Toxic Substances Control
Site Mitigation and
Restoration Program
700 Heinz Avenue
Berkeley, CA 94710
Attention: Mark Piros

WITH A COPY TO:

Northrop Grumman Systems Corporation
Attention: Sector Real Estate
P.O. Box 17319 - MS A465
Baltimore, MD 21203

SPACE ABOVE THIS LINE RESERVED FOR RECORDERS USE

9.2. COVENANT TO RESTRICT USE OF PROPERTY

ENVIRONMENTAL RESTRICTION

(Re: Santa Clara County Assessor Parcel Number 204-47-001

2.1. Westinghouse Electric corp. (Sunnyvale Plant), DTSC Site code 200107, U.S. EPA CERCLIS ID No. CAD001864081)

This Covenant and Agreement ("Covenant") is made by and between Northrop Grumman Systems Corporation (the "Covenantor" or "Northrop"), a Delaware corporation, owner of the property situated in the County of Santa Clara, State of California, described in Exhibit "A" ("Legal Description") and depicted in Exhibit "B" ("Parcel Map"), attached, (the "Property"), and the Department of Toxic Substances Control (the "Department"), Pursuant to Civil Code section 1471 , the Department has determined that this Covenant is reasonably necessary to protect present or future

human health, safety, or the environment as a result of the presence on the Property of hazardous materials as defined in Health and Safety Code section 25260. The Covenantor and the Department, collectively referred to as the "Parties," hereby agree, pursuant to Civil Code section 1471 and Health and Safety Code section 25355.5, that the use of the Property be restricted as set forth in this Covenant. The Parties further agree that the Covenant shall conform to the requirements of California Code of Regulations, title 22, section 67391.1. The provisions of this Covenant shall be for the benefit of, and shall be enforceable by, the United States Environmental Protection Agency ("U.S. EPA"), as a third-party beneficiary pursuant to general contract law, including, but not limited to, Civil Code section 1559.

9.3. ARTICLE I

STATEMENT OF FACTS

1 .01. The Property. The Property is a portion of a larger Superfund site located at 401 E. Hendy Ave. in Sunnyvale, California, totals approximately 55.58 acres, and is more particularly described and depicted in the attached in Exhibits "A" and "B". The Property is currently owned and operated by Northrop, formerly owned and operated by Westinghouse Electric Corporation. The entire Superfund site is commonly referred to as the Westinghouse Electric Corp. (Sunnyvale Plant) Superfund Site ("Site"), is depicted in Exhibit "C" ("Westinghouse Sunnyvale Superfund Site"), and is located in the City of Sunnyvale in the area now generally bounded by California Avenue to the north, North Sunnyvale Avenue to the west, North Fair Oaks Boulevard to the east, and Hendy Avenue to the south. The Site is also generally described as Santa Clara County Assessor's Parcel Numbers (APN) 204-46-008, 204-47-001 , 204-47-002, 204-48-028, and 20446-009. The Property consists of only APN 204-47-001.

1 .02. Hazardous Substances. Hazardous substances, as defined in section 25316, Chapter 6.8, Division 20 of the California Health and Safety Code; Section 101 (14) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended ("CERCLA"), 42 U.S.C. section 9601 (14); and 40 Code of Federal Regulations parts 261 .3 and 302.4, remain in the soil and groundwater on portions of the Property. These substances are also hazardous materials as defined in Health and Safety Code section 25260. Benzene, Polychlorinated Biphenyls (PCBs), 1 ,2,4-Trichlorobenzene (1 ,2,4-TCB), 1 ,4-Dichlorobenzene (1 ,4-DCB), and 1 ,2-Dichloroethane

(1,2-DCA) are the hazardous substances present in soil and in groundwater onsite. Ethylbenzene, Chlorobenzene (CB), 1,2-Dichlorobenzene (1,2-DCB), Toluene, 1,3-Dichlorobenzene (1,3-DCB), 1,1,1-Trichloroethane (1,1,1-TCA), Trichloroethene (TCE), 1,1-Dichloroethene (1,1-DCE), Xylenes, and cis-1,2-Dichloroethene (cis-1,2-DCE) are additional hazardous substances present in soil at the Site.

1.03. Remediation of the Site, including the Property. The Site is being remediated pursuant to a Record of Decision ("ROD") issued by U.S. EPA, dated October 16, 1991 and two (2) subsequent Explanations of Significant Differences ("ESDs") issued in 1997 and 2008. The ROD, ESDs, and other U.S. EPA documents referenced in this paragraph, as well as additional information on the Site and Property, are on file and available for review at:

Sunnyvale Public Library
665 West Olive Avenue
Sunnyvale, California 94088
(408) 730-7300

EPA Region IX Superfund Records Center
95 Hawthorne Street Suite 403S
San Francisco, California 94105
(415) 947-8717 and
electronically at:

9.3.1.
[http://vosemite.epa.gov/r9/sfund/r9sfdocw.nsf/vwsoalphabetic/Westinghouse+Electric+Corp.+\(Sunnyvale+Plant\)?OpenDocument](http://vosemite.epa.gov/r9/sfund/r9sfdocw.nsf/vwsoalphabetic/Westinghouse+Electric+Corp.+(Sunnyvale+Plant)?OpenDocument)

Information on the Site is also available on the Department's website at:

https://www.envirostor.dtsc.ca.gov/public/profile_report.asp?global_id=43350001
which is referenced as the Westinghouse Electric (Sunnyvale Plant) page.

Through the ROD, as later modified by the ESDs, the U.S. EPA Region IX Superfund Division Director, and/or his or her delegates, selected the remedial actions for the Site pursuant to CERCLA. The Department concurred with the remedial actions selected in the ROD and the modifications made through the ESDs.

1. Groundwater Remediation:

A groundwater monitoring, extraction, and treatment system was designed and installed in 1994 - 1995 to monitor and control the migration (permanent hydraulic containment) of the contaminants of concern from the PCB source areas adjacent to and northwest of Reservoir 2 into the A aquifer, with extraction wells placed in the A aquifer downgradient from the source areas; and in the B aquifer on and off site. Exhibit "D" ("Groundwater Extraction and Monitoring Wells and Extent of PCBs and/or Chlorinated Benzenes Exceeding ROD Cleanup Levels") depicts the current configuration of monitoring and extraction wells on the Property. Extracted groundwater is filtered and treated via activated carbon adsorption, then discharged to the City of Sunnyvale's sanitary sewage treatment plant. Annual groundwater monitoring events take place to verify containment of contaminants of concern and reduction in contaminant concentrations.

2. Soil Remediation:

The ROD called for PCB-impacted soils in the vicinity of Reservoir 2 and Building 21 with greater than 25 milligrams per kilogram ("mg/kg") PCBs to be removed to a depth of eight feet, and disposed offsite. Excavated areas were filled with clean soil, and capped with asphalt (Capped Area). To identify any potential problems with the integrity of the Capped Area, a cap inspection monitoring program is required.

Several phases of soil investigation and removal have been conducted. Exhibit "E" ("Capped Area") depicts the Capped Area of the Property with PCBs greater than 25 mg/kg below 8 feet below ground surface.

The main areas of the Property impacted by PCBs are: the Reservoir 2 area, the plant site perimeter, central railroad tracks, and graveled yard areas in the northeast and northwest parts of the plant site.

In 1997, U.S. EPA issued an Explanation of Significant Differences ("1997 ESD") that modified the soil disposal method specified by the ROD, but did not modify remedial requirements or onsite work at the Property.

In 1999/2000, Northrop implemented a U.S. EPA-approved Work Plan for Building 21, to identify potential PCB impacts. The sampling results indicated soil impacts at the east end of the building, adjacent to and beneath the former PCB pipeline and transformer filling station; however, no groundwater impacts from PCBs were

identified. Excavation and disposal of contaminated soils commenced in August 2000. Soils exceeding 25 mg/kg PCBs were sent offsite for treatment and disposal.

From 2013 through 2018, pursuant to U.S. EPA-approved work plans, Northrop performed a removal of PCB contaminated soils in the upper 8 feet below ground surface. The San Francisco Bay Regional Water Quality Control Board has also determined that additional stormwater measures are needed at the Site to address impacts to San Francisco Bay.

In 2008, U.S. EPA issued a second ESD to include the specific institutional controls ("ICs") necessary to ensure long term protectiveness of the remedy. The ESD retained the ICs for the source areas from the ROD, and required additional use restrictions for areas throughout the Site where PCB contamination remained above levels suitable for unrestricted use. The Department concurred with the remedial actions in the ROD, as modified by the ESDs. In 2015, U.S. EPA issued a memorandum clarifying the use restrictions that should apply to this Site. Consequently, this Covenant prohibits sensitive uses such as residences, parks, hospitals, schools for minors, and child care at the Property, and imposes other restrictions, as specified in Article IV below.

1.04. Land Use Covenant. A land use covenant is necessary to preclude potential users' exposure to hazardous substances that remain at the Property and to complete the remedy selected in the ROD and modified in the ESDs. U.S. EPA, with the concurrence of the Department, has concluded that the Property, remediated to the goals presented in the ROD, as modified by the ESDs, subject to the restrictions of this Covenant, and used in compliance with such restrictions, does not present an unacceptable threat to present or future human health or safety or the environment. Additional information about the Site, including the 2008 ESD containing this risk analysis, is available at the repositories listed in paragraph 1.03, above.

9.3.2. ARTICLE II

DEFINITIONS

2.01. Department. "Department" means the California Department of Toxic Substances Control and includes its successor agencies, if any.

2.02. U.S. EPA. "U.S. EPA" means the United States Environmental Protection

Agency and includes its successor agencies, if any. As of September 1, 2018, U.S. EPA is the CERCLA Lead Agency for this Site with the lead responsibility to implement response action under the National Contingency Plan ("NCP"), 40 C.F.R. Part 300.

2.03. Owner. "Owner" means the Covenantor, its successors in interest, and their successors in interest, including heirs and assigns, which at any time hold title or an ownership interest to all or any portion of the Property.

2.04. Occupant. "Occupant" means Owner and any person or entity entitled by ownership, leasehold, or other legal relationship to the right to occupy any portion of the Property.

2.05. CERCLA Lead Agency. "CERCLA Lead Agency" means the governmental entity having the designated lead responsibility to implement response action under the National Contingency Plan ("NCP"), 40 C.F.R. Part 300. U.S. EPA or a state agency acting pursuant to a contract or cooperative agreement executed under CERCLA section 104(d)(1), 42 U.S.C. 9604(d)(1), or designated pursuant to a CERCLA Memorandum of Agreement entered into under subpart F of the NCP (40 C.F.R. 300.505), may be the designated CERCLA Lead Agency.

2.06. Environmental Restrictions. "Environmental Restrictions" means all protective provisions, covenants, restrictions, prohibitions, and terms and conditions as set forth in any section of this Covenant.

2.07. Improvements. "Improvements" include, but are not limited to: buildings, structures, roads, driveways, improved parking areas, wells, pipelines, or other utilities.

2.08. Lease. "Lease" means lease, rental agreement, or any other document that creates a right to use or occupy any portion of the Property.

9.3.3. ARTICLE III

GENERAL PROVISIONS

3.01. Restrictions to Run with the Land. This Covenant sets forth Environmental Restrictions, that apply to and encumber the Property and every portion thereof no matter how it is improved, held, used, occupied, leased, sold, hypothecated, encumbered, and/or conveyed. This Covenant: (a) Runs with the land pursuant to Health and Safety Code section 25355.5(a) and Civil Code section 1471 ; (b) Inures to the benefit of and passes with each and every portion of the Property;

(c) Is for the benefit of, and is enforceable by the Department; and (d) Is imposed upon the entire Property, unless expressly stated as applicable only to a specific portion thereof.

3.02. Binding upon Owners/Occupants. Pursuant to the Health and Safety Code, this Covenant binds all Owners and Occupants of the Property. Pursuant to Civil Code section 1471 , all successive owners of the Property are expressly bound hereby for the benefit of the Department

3.03. Written Notice of the Presence of Hazardous Substances. Prior to the sale, lease, assignment, or other transfer of the Property, or any portion thereof, the Owner, lessor, or sublessor shall give the buyer, lessee, or sublessee written notice of the existence of this Covenant and its Environmental Restrictions.

3.04. Incorporation into Deeds and Leases. The Covenant and its Environmental Restrictions shall be incorporated by reference in each and every deed and lease for any portion of the Property.

3.05. Conveyance of Property. The Owner shall provide notice to the Department and U.S. EPA not later than thirty (30) days after any conveyance of any ownership interest in the Property (excluding mortgages, liens, and other non-possessory encumbrances). The written notice shall include the name and mailing address of the new owner of the Property and shall reference the DTSC site name and site code as listed on page one of this Covenant. The notice shall also include the APN listed in paragraph 1.01. If the new owners of the Property have been assigned a different APN, each such APN that covers the Property must be provided. The Department shall not, by reason of this Covenant, have authority to approve, disapprove, or otherwise affect any proposed conveyance, except as otherwise provided by law or by administrative order.

3.06. Costs of Administering the Covenant to be paid by Owner. The Department has already incurred and will in the future incur costs associated with the administration of this Covenant. Therefore, the Covenantor hereby covenants for Covenantor and for all subsequent Owners that, pursuant to California Code of Regulations, title 22 section

67391 .1 (h), the Owner will pay the Department's costs of administering this Covenant, including but not limited to costs of implementation and enforcement.

9.3.4. ARTICLE IV

RESTRICTIONS

4.01. Prohibited Uses. The Property shall not be used for any of the following purposes without the Department's prior, specific written approval for that land use pursuant to Health and Safety Code section 25227:

- (a) A new use of the Property, except that the Department's approval is not required for the use, modification or expansion of an existing industrial or manufacturing facility, if, on or before January 1, 1981, the Property was owned by or held for the beneficial use of that facility or complex.
- (b) Subdivision of the Property; except for subdivision to divide that portion of the parcel that contains hazardous materials, as defined in Health and Safety Code section 25260(d), from other portions of that parcel.
- (c) Construction or placement of a building or structure on the Property that is intended for use as any of the following, or the new use of an existing structure for the purpose of serving as any of the following:
 - (i) A residence, including any mobile home or factory built housing, constructed or installed for use as residential human habitation.
 - (ii) A hospital for humans.
 - (iii) A public or private school for persons under 21 years of age.
 - (iv) A day care center for children.
 - (v) A permanently occupied human habitation, other than those used for industrial purposes.

4.01 .01 Written Approval for Use. The Department's execution of this Covenant constitutes the Department's specific written approval pursuant to Health & Safety Code Section 25227, and section 4.01 above, that the Property can be used for commercial and industrial uses, and can be subdivided, so long as the subdivided property remains subject to the terms of this Covenant. The Department's approval is based on its prior

concurrence with the U.S. EPA determination(s) in the ROD for the Property, as modified by the ESDs, that did not prohibit commercial/industrial use; and also on consultation with U.S. EPA on or about November 8, 2018.

4.01 .02. Approval Request: Any request for the Department's written approval under paragraph 4.01 above shall be submitted to U.S. EPA simultaneously with the request

submitted to the Department, and shall provide U.S. EPA with actual, prior notice and opportunity to comment.

4.02. Soil Management.

- (a) No activities that will disturb the soil (e.g., excavation, grading, removal, trenching, filling, earth movement, mining, or drilling) shall be allowed on the Property without a Soil Management Plan approved by the CERCLA Lead Agency in advance.
- (b) Any contaminated soils brought to the surface by grading, excavation, trenching or backfilling shall be managed in accordance with all applicable provisions of state and federal law, and will not be removed from the Property without a Soil Management Plan approved in advance and in writing by the CERCLA Lead Agency.

4.03. Prohibited Activities. The following activities are specifically prohibited on the Property without prior written approval from the CERCLA Lead Agency:

- (a) Drilling for drinking water, oil, or gas.
- (b) Extraction of groundwater for any purpose.
- (c) Activity that may interfere with, or otherwise affect the integrity or effectiveness of any activity required for the Property under either this Covenant or applicable federal, state or local law.

4.04. Non-Interference with Remedial Systems and Activities.

- (a) Activities that may disturb the Capped Area or the groundwater monitoring, extraction, and treatment system shall not be permitted on the Property without prior written approval by the CERCLA Lead Agency.
- (b) The Capped Area or the groundwater monitoring, extraction, and treatment system shall not be altered without prior written approval by the CERCLA Lead Agency.
- (c) All uses shall preserve the physical accessibility to and integrity of the Capped Area or the groundwater monitoring, extraction, and treatment system.
- (d) The Owner and Occupant shall not participate in or allow any activity that would interfere with the operation of any response activities at the Property (e.g., the groundwater monitoring, extraction and treatment equipment and the Capped Area) without prior written approval from the CERCLA Lead Agency.

(e) All uses and development of the Property shall preserve the integrity of the remedy approved by the CERCLA Lead Agency.

4.05. Written Notice of Covenant. Prior to any sale, lease, or rental of any portion of the Property, the Owner shall provide a copy of this Covenant to the buyer, lessee, or renter to ensure that the buyer, lessee, or renter is on notice of the restrictions and requirements of this Covenant. Prior to recordation of any easement on any portion of the Property, the Owner shall provide a copy of this Covenant to the easement holder to ensure that the easement holder is on notice of the restrictions and requirements of this Covenant. Covenantor shall also provide a copy of this Covenant to all existing

Occupants and easement holders of record within 30 days of recording this Covenant

4.06. Access for Department. The Department shall have reasonable right of entry and access to the Property for inspection, monitoring, and other activities on the Property consistent with the purposes of this Covenant as deemed necessary by the Department in order to protect the public health or safety, or the environment. Nothing in this instrument shall limit or otherwise affect the Department's right of entry and access, or authority to take response actions, under CERCLA; 40 Code of Federal Regulations Part 300; Chapter 6.8, Division 20 of the California Health and Safety Code; California Civil Code, or other applicable State Law.

4.07. Access for U.S. EPA. Nothing in this instrument shall limit or otherwise affect U.S. EPA's right of entry and access, or U.S. EPA's authority to take response actions, under CERCLA; the National Contingency Plan, 40 Code of Federal Regulations Part 300; or federal law.

4.08. Five-year Review. This provision shall be effective only if the Department, or another State agency, becomes the CERCLA Lead Agency. In addition to the annual inspections required by paragraph 4.10, after a period of five (5) years from U.S. EPA's last Five-year Review, and every five (5) years thereafter, Owner shall submit a FiveYear Review report documenting its review of the remedy implemented and its evaluation to determine if human health and the environment are being adequately protected by the remedy as implemented. The report shall describe the results of all inspections, sampling analyses, tests and other data generated or received by Owner and evaluate the adequacy of the implemented remedy in protecting human health and the environment. As a result of any review work performed, the CERCLA Lead

Agency may require Owner to perform additional review work or modify the review work previously performed by Owner.

4.09. Access for Five-year Reviews. The entity, person or persons responsible for Five-year Reviews shall have reasonable right of entry and access to the Property for the purpose of implementing these activities. Such right of entry and access shall continue until such time as the CERCLA Lead Agency determines that no further FiveYear Review activities are required.

4.10. Inspection and Reporting Requirements. The Owner shall conduct an annual inspection and submit an Annual Inspection Report to the Department and to U.S. EPA for their approval by January 15th of each year. The annual report shall describe how all requirements outlined in this Covenant have been met. The annual report, filed under penalty of perjury, shall certify that the Property is being used in a manner consistent with this Covenant. The annual report must include the dates, times, and names of those who conducted and reviewed the annual inspection report. It also shall describe how the observations were performed that were the basis for the statements and conclusions in the annual report (e.g., drive by, fly over, walk in, etc.). If violations are noted, the annual report must detail the steps taken to return to compliance. If the Owner identifies any violations of this Covenant during the annual inspections or at any

other time, the Owner must, within ten (10) days of identifying the violation: determine the identity of the party in violation; send a letter advising the party of the violation of the Covenant; and demand that the violation cease immediately. Additionally, copies of any correspondence related to the enforcement of this Covenant shall be sent to the Department and U.S. EPA within ten (10) days of its original transmission.

9.3.5. ARTICLE V

ENFORCEMENT

5.01. Enforcement. Failure of the Covenantor, Owner or Occupant to comply with this Covenant shall be grounds for the Department to require modification or removal of any Improvements constructed or placed upon any portion of the Property in violation of this Covenant. Violation of this Covenant, including but not limited to, failure to submit, or the

submission of any false statement, record or report to the Department shall be grounds for the Department to pursue administrative, civil or criminal actions.

5.02. Enforcement Rights of U.S. EPA as a Third-Party Beneficiary. U.S. EPA, as a third-party beneficiary, has the right to enforce the Environmental Restrictions contained herein.

9.3.6. ARTICLE VI

VARIANCE TERMINATION AND TERM

6.01. Variance. Any person may apply to the Department for a written variance from the provisions of this Covenant. Such application shall be made in accordance with Health and Safety Code section 25223 and a copy of the application shall be submitted to U.S. EPA simultaneously with the application submitted to the Department. No variance may be granted under this paragraph without prior notice to and an opportunity to comment by U.S. EPA.

6.02. Termination. Any person may apply to the Department for a termination or modification of one or more terms of this Covenant as they apply to all or any portion of the Property. Such application shall be made in accordance with Health and Safety Code section 25224 and a copy of the application shall be submitted to U.S. EPA simultaneously with the application submitted to the Department. No termination may be granted under this paragraph without prior notice to and opportunity to comment by U.S. EPA.

6.03. Term. Unless ended in accordance with paragraph 6.02, by law, or by the Department in the exercise of its discretion, after providing notice to and an opportunity to comment by U.S. EPA, this Covenant shall continue in effect in perpetuity.

9.4. ARTICLE VII

MISCELLANEOUS

7.01. No Dedication or Taking Intended. Nothing set forth in this Covenant shall be construed to be a gift or dedication, or offer of a gift or dedication, of the Property, or any portion thereof to the general public or anyone else for any purpose

whatsoever. Further, nothing in this Covenant shall be construed to effect a taking under State or federal law.

7.02. Recordation. The Covenantor shall record this Covenant, with all referenced Exhibits, in the County of Santa Clara within thirty (30) days of the Covenantor's receipt of a fully executed original. The Covenantor shall also provide copies showing the County Recorder's tracking information of its recording (i.e., document number or book and page number information) to the Department and U.S. EPA within ten (10) days of receiving it from the County Recorder's Office.

7.03. Notices. Whenever any person gives or serves any Notice ("Notice" as used herein includes any demand or other communication with respect to this Covenant), each such Notice shall be in writing and shall be deemed effective: (1) when delivered, if personally delivered to the person being served or to an officer of a corporate party being served, or (2) three (3) business days after deposit in the mail, if mailed by United States mail, postage paid, certified, return receipt requested. Courtesy copies will not constitute Notice and are provided merely for the convenience of the recipient.

To Owner: Northrop Grumman Systems Corporation
Attention: Law Department — Real Estate Legal Notices
2980 Fairview Park Drive
Falls Church, VA 22042-451 1

With a Copy To:
Northrop Grumman Systems Corporation
Attention: Corporate Real Estate — Legal Notices
One Space Park Drive — D/2
Redondo Beach, California 90278

With Courtesy Copies (by email only) To:
Jay.tolle@ngc.com
Donald-Canada@ngc.com
Jill.palmer@ngc.com
jcermak@cermaklegal.com

To Department: Branch Chief
Site Mitigation and Restoration Program
California Department of Toxic Substances Control
700 Heinz Avenue
Berkeley, CA 94710

To U.S. EPA: Mark Samolis, Remedial Project Manager
S F D-9-4
U.S. Environmental Protection Agency
Region IX
75 Hawthorne Street
San Francisco, CA 94105

Attn: Westinghouse Electric Corp. Superfund Site Project Manager

Any party may change its address or the individual to whose attention a Notice is to be sent by giving written Notice in compliance with this paragraph.

7.04. Partial Invalidity. If this Covenant or any of its terms are determined by a court of competent jurisdiction to be invalid for any reason, the surviving portions of this Covenant, or the application of it to any person or circumstance, shall remain in full force and effect as if such portion found invalid had not been included herein.

7.05. Statutory and Regulatory References. All statutory and regulatory references include successor provisions.

7.06. Incorporation of Attached Exhibits. All attached exhibits to this Covenant are incorporated herein by reference. The exhibits to this Land Use Covenant are:

- A. Legal Description of Property
- B. Property Parcel Map
- C. Map of Westinghouse Sunnyvale Superfund Site
- D. Map of Groundwater Extraction and Monitoring Wells
- E. Map of Capped Area

7.07. California Law. This Covenant shall be governed, performed and interpreted under the laws of the State of California.

7.08. No Delegation. Nothing set forth in this Covenant shall be construed to be a delegation of any authorities of the Department under any statute or regulation.

IN WITNESS WHEREOF, the Parties execute this Covenant.

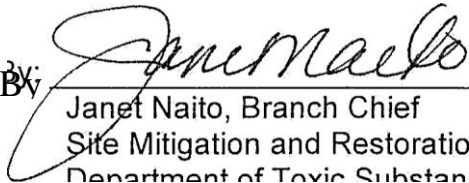
Northrop Grumman Systems Corporation, a Delaware corporation:



By: _____
A. J. Paz, Director of Real Estate
Northrop Grumman Systems Corporation

Date: DECEMBER 18, 2018

Department of Toxic Substances Control:



By: _____
Janet Naito, Branch Chief
Site Mitigation and Restoration Program - Berkeley
Department of Toxic Substances Control
Toxic Substances Control

Date: 12/24/2018

Department of

State of California
County of Alameda

On December 24, 2018 before me,

Leslie M. Johnson, Notary Public

(space above this line is for name and title of the officer/notary),

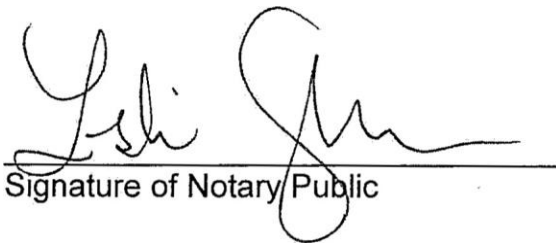
personally appeared Janet Naito, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

proved to me on the basis of satisfactory evidence to be is/are subscribed to the within instrument and acknowledged to executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal,


Signature of Notary Public

LESLIE HICHELLE
JOHNSON
Notary Public - California
Contra Costa County
Commission # 2241582
My Comm. Expires May 1, 2022

(seal)

ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California County of Los Angeles

on 18, 2018 before me, Dalia Sofia Rios, Notary Public (insert name and title of the officer)

personally appeared AJ Paz who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/it/they executed the same in his/her/its/their authorized capacity(ies), and that by executing the instrument the person(s) or the entity upon behalf of which the person(s) executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature [Handwritten Signature] (Seal)



Exhibit A

9.4.1. SANTA CLARA COUNTY

APN 204-47-001

LEGAL DESCRIPTION

Real property in the City of Sunnyvale, County of Santa Clara, State of California, described as follows:

Parcel Nine:

Beginning at a cross chiseled into the concrete sidewalk at the point of intersection of the westerly line of Fair Oaks Avenue, with the northerly line of Hendy Avenue (60 feet wide), and running thence northerly along said westerly line of Fair Oaks Avenue, north 14° 52' east 151 1.39 feet to

the point of intersection thereof with the southerly line of California Avenue, from which a cross chiseled into the concrete sidewalk bears north 14⁰ 52' east 1.00 foot; thence westerly along said southerly line of California Avenue, north 75⁰ 09' west 1932.14 feet to a concrete monument found at the easternmost corner of tract no. 101 (Oak Court), as shown upon the map of said tract no. 101 recorded in Book 4 of maps, at pages 4 and 5, Santa Clara County records; thence southerly along the easterly line of said tract no. 101 and its prolongation southerly, south 14⁰ 51' 30" west 507.25 feet to a concrete monument found at the northernmost corner of that certain 5.597 acre tract conveyed by Henry Bonetti, et ux, to Jacob Brack, by deed dated October 19, 1917 and recorded in Volume 465 of deeds, at page 74, Santa Clara County records; thence easterly and southerly along the boundaries of said 5.597 acre tract the two following courses and distances: south 71⁰ 30' 10" east, 320.69 feet to a concrete monument found, and south 14⁰ 51' 35" west 768.40 feet to a concrete monument found in said northerly line of Hendy Avenue and in the dividing line between Lots I and 2 of the Murphy partition, as shown upon the map of said partition recorded in Book G of maps, pages 74 and 75, Santa Clara County records; and thence easterly along said northerly line of Hendy Avenue, south 67⁰ 32' 25" east 1626.20 feet to the point of beginning.

APN: 204-47-001 as to Parcel Nine

EXHIBIT B -001
APN 204-
4

PARCEL MAP: SAN A CLARA CO.

LEGEND

PARCEL NUMBER
AS DESCRIBED
IN EXHIBIT A

NORTH FAIR OAKS AVENUE

NOT TO SCALE

SHCT*ELNE S*XJE ZOO
533/432-6300
(FAX)

EXHIBIT B

SANTA CLARA COUNTY

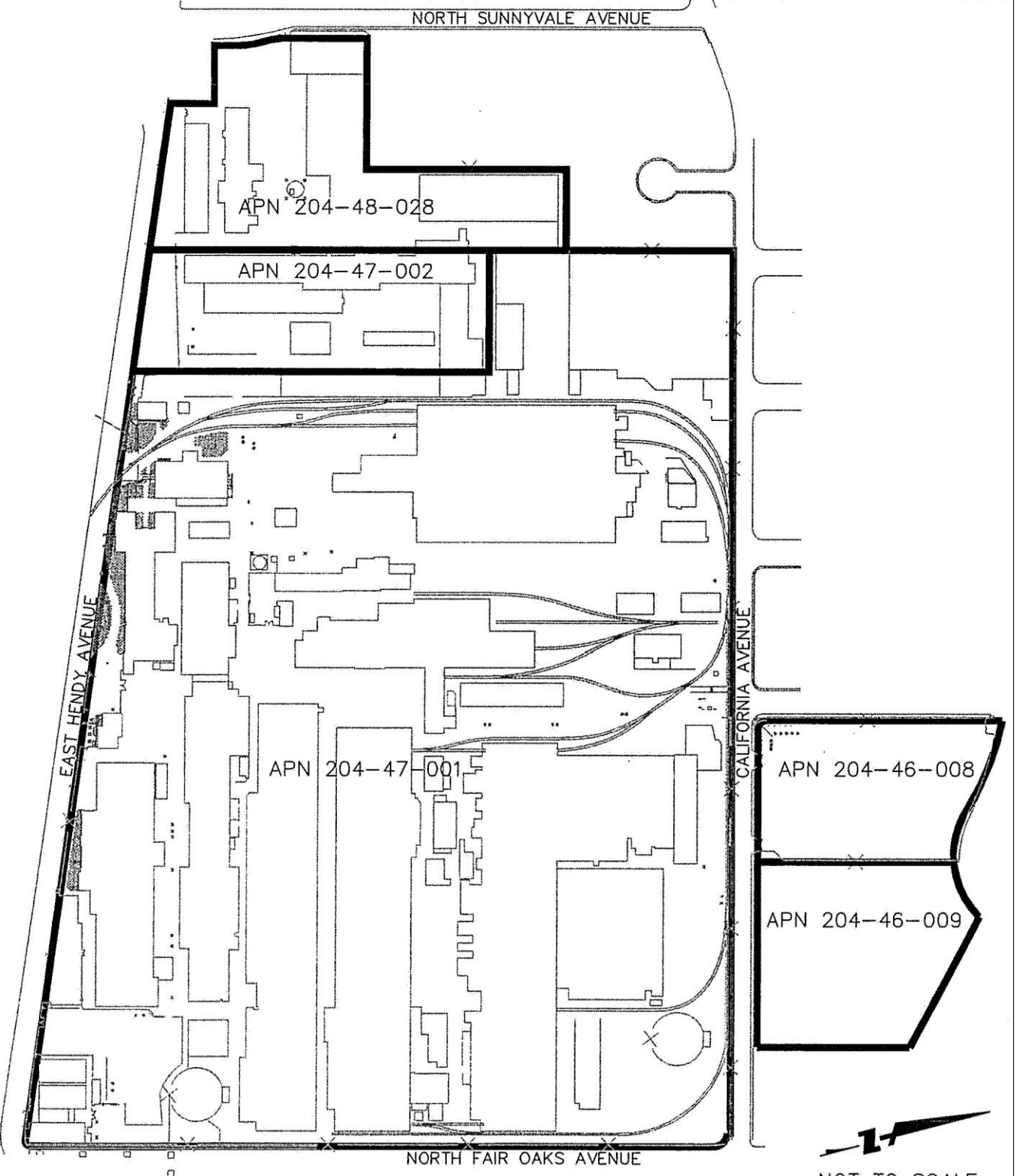
APN 204-47-001

CHG
No. 2014C095

Checked RRB
Date 09/26/2014

Approved TRH
Sheet 1

**EXHIBIT C WESTINGHOUSE SUNNYVALE SUPERFUND SITE ALL PARCELS
INCLUDING WESTINGHOUSE ELECTAC (SUNNYVALE PLANT)**




NOT TO SCALE
NOT TO SCALE



255 SHORELINE DRIVE SUITE 200
 REDWOOD CITY, CA 94065
 650/482-6300
 650/482-6399 (FAX)

APN

204-48-028,204-47-001,204-47-002,204-46-008,204-46-009

EXHIBIT C

ENGINEERS / SURVEYORS / PLANNERS

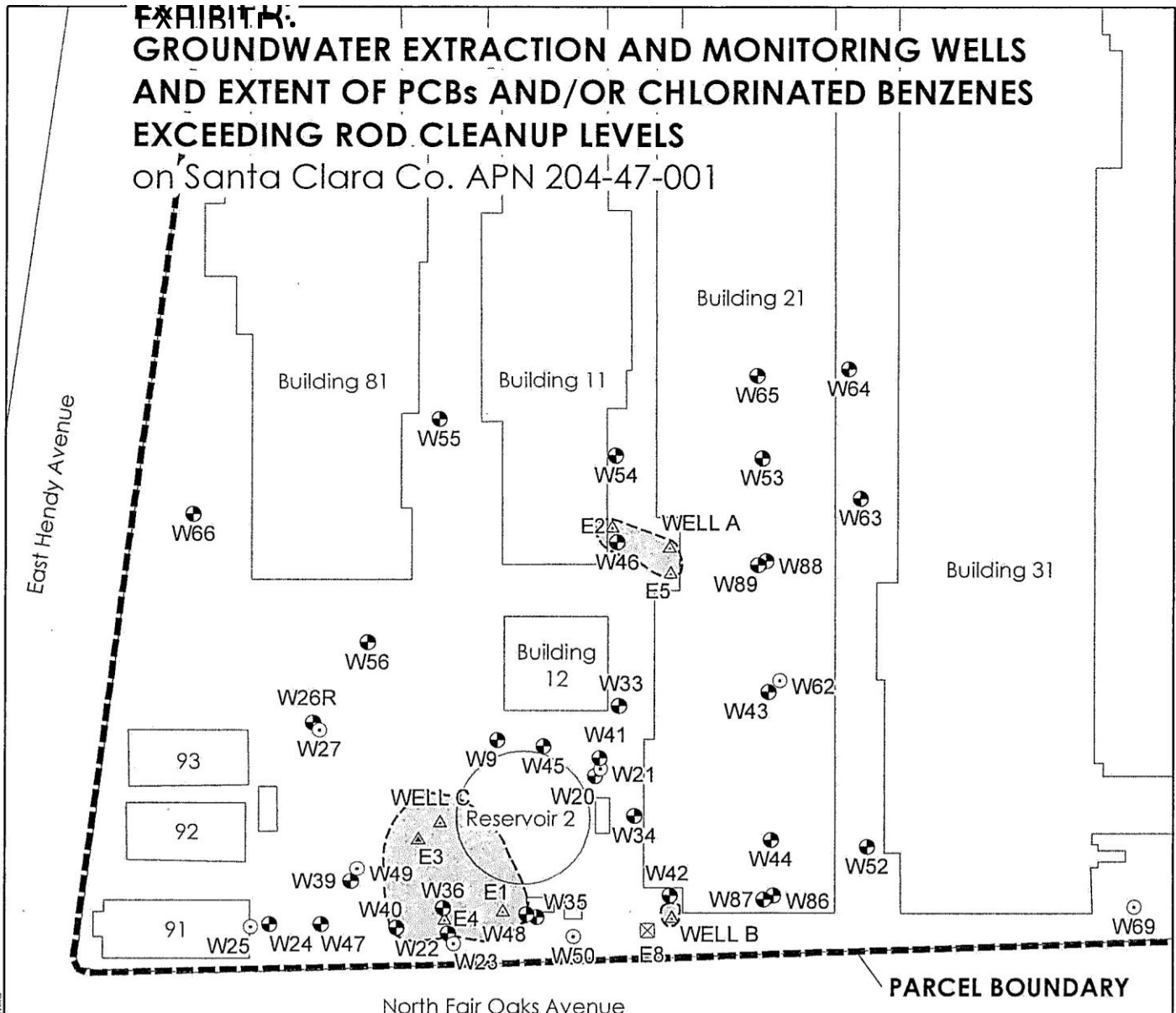
Drawn CHG
 Job No. 20140095

Checked RKB
 Date 10 03 2014

Approved TRM
 Sheet 1

DRAWING NAME: J:\Eng14\140095\Exhibits\14_0926 Exhibit Superfund Site.dwg
 PLOT DATE: 10-06-14 PLOTTED BY: berr

EXHIBIT H:
GROUNDWATER EXTRACTION AND MONITORING WELLS
AND EXTENT OF PCBs AND/OR CHLORINATED BENZENES
EXCEEDING ROD CLEANUP LEVELS
 on Santa Clara Co. APN 204-47-001



Document Path: P:\PPE\Projects\170223 - NG_Sunnyvale\GIS\GIS_Sunnyvale_Exhibit_H_cortrail.mxd

- A-Zone Monitoring Well
 - ▲ A-Zone Extraction Well (operational)
 - △ A-Zone Extraction Well (non-operational)
 - B1-Zone Monitoring Well
 - ⊠ B1-Zone Extraction Well (non-operational)
 - ⦿ B2-Zone Monitoring Well
 - Approximate extent of PCBs and/or Chlorinated Benzenes exceeding ROD Cleanup Levels in A-Aquifer Groundwater
- Note: ROD Cleanup Levels are not exceeded in the B aquifer.

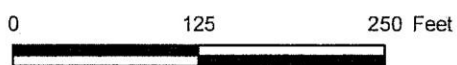
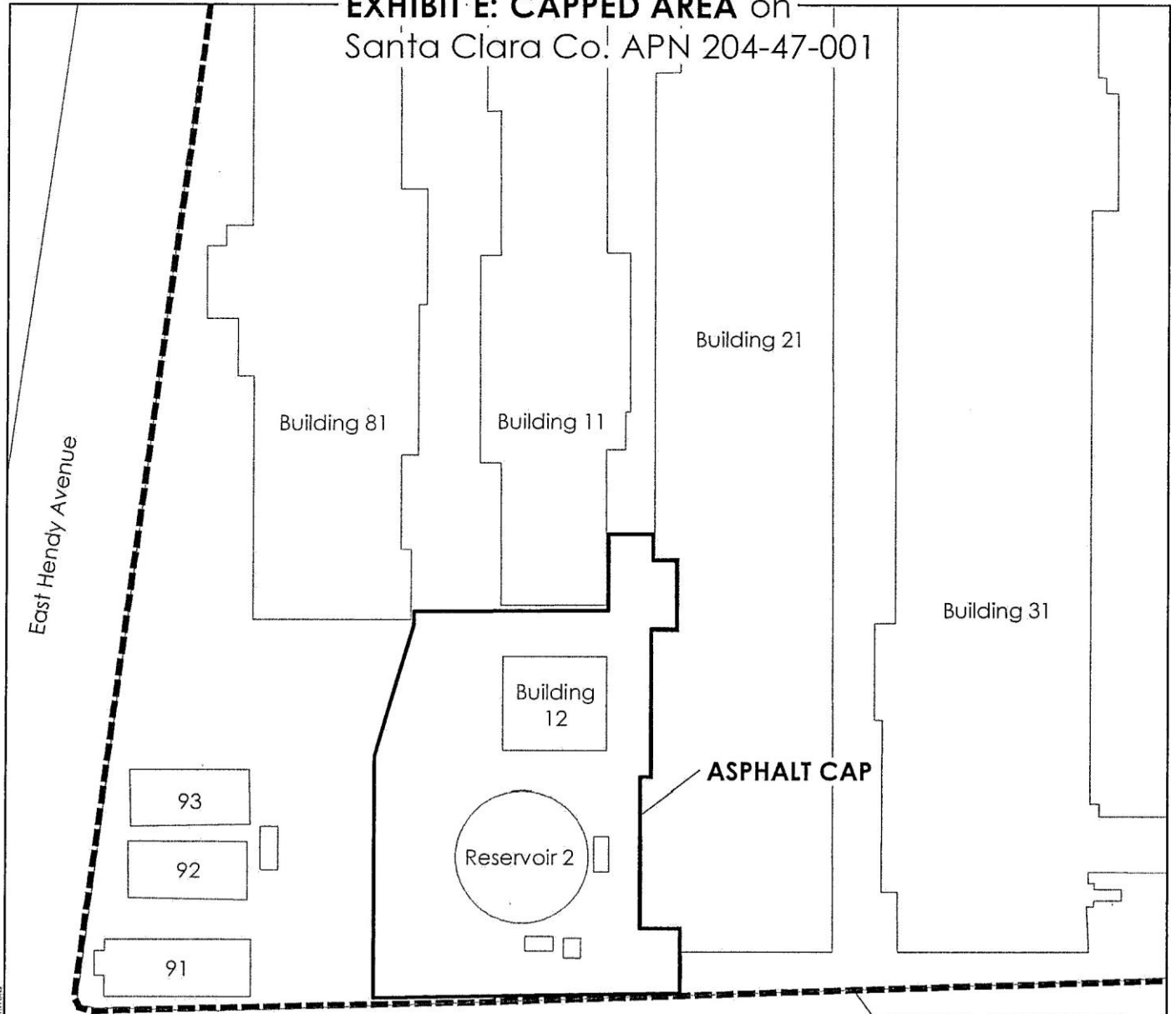


EXHIBIT E: CAPPED AREA on
Santa Clara Co. APN 204-47-001

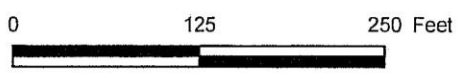


Document Path: P:\PRJ\Projects\TR0223 - NG_Sunnyvale\Database\GIS\GIS_Sunnyvale_ExhibitE_p01\tr0223.mxd

North Fair Oaks Avenue

PARCEL BOUNDARY

Kifer Road



Guelph

July 2018



This is to certify that this is
a true copy of the
document on file in this
office.

ATTEST  DEC 28 2010

9.5. COUNTY CLERK-RECORDER

SANTA CLARA COUNTY, CALIFORNIA

RECORDING REQUESTED BY

NAME : Northrop Grumman Systems Corporation

24088654

Regina Alcomendras
Santa Clara

WHEN RECORDED MAIL TO:

County — Clerk—Recorder

12/28/2018 11:43 AM

~~Cermak & Truhitt, LLC~~

Titles: 1 **Pages: 23**

Fees: \$171.00
Taxes: \$0
Total: \$171.00

12121 Wilshire Blvd., Suite 322



John F. Cermak, Jr.

NAME :

ADDRESS :

CITY / STATE / ZIP: Los Angeles, CA 90025

III

(DOCUMENT WILL ONLY BE RETURNED TO NAME & ADDRESS IDENTIFIED ABOVE)

(SPACE ABOVE FOR RECORDER'S USE)

10. COVENANT TO RESTRICT USE OF PROPERTY

ENVIRONMENTAL RESTRICTION

(Re: Santa Clara County Assessor Parcel Numbers 204-46-008,
204-47-002, and 204-48-028

Westinghouse Electric Corp. (Sunnyvale Plant), DTSC Site Code 200107,
U.S. EPA CERCLIS ID No. CAD001864081)

11. (DOCUMENT TITLE)

11.1. SEPARATE PAGE, PURSUANT TO CA. GOV'T. CODE 27361.6

RECORDING REQUESTED

BY:

Northrop Grumman Systems Corporation
2980 Fairview Park Drive
Falls Church, VA 22042-451 1

WHEN RECORDED, MAIL TO:

State of California
Dept. of Toxic Substances Control
Site Mitigation and
Restoration Program
700 Heinz Avenue
Berkeley, CA 94710
Attention: Mark Piros

WITH A COPY TO:

Northrop Grumman Systems Corporation
Attention: Sector Real Estate
P.O. Box 17319 - MS A465
Baltimore, MD 21203

SPACE ABOVE THIS LINE RESERVED FOR RECORDERS USE

COVENANT TO RESTRICT USE OF PROPERTY

ENVIRONMENTAL RESTRICTION

(Re: Santa Clara County Assessor Parcel Numbers 204-46-008, 20447-002, and 204-48-028)

11.2. Westinghouse Electric Corp. (Sunnyvale Plant), DTSC Site Code 200107, U.S. EPA CERCLIS ID No. CAD001864081)

This Covenant and Agreement ("Covenant") is made by and between Northrop Grumman Systems Corporation (the "Covenantor" or "Northrop"), a Delaware corporation, owner of the property situated in the County of Santa Clara, State of California, described in Exhibit "A" ("Legal Description") and depicted in Exhibit "B"

("Property Parcel Map"), attached, (the "Property"), and the Department of Toxic Substances Control (the "Department"). Pursuant to Civil Code section 1471, the Department has determined that this Covenant is reasonably necessary to protect present or future human health, safety, or the environment as a result of the presence on the Property of hazardous materials as defined in Health and Safety Code section 25260. The Covenantor and the Department, collectively referred to as the "Parties," hereby agree, pursuant to Civil Code section 1471 and Health and Safety Code section 25355.5, that the use of the Property be restricted as set forth in this Covenant. The

Parties further agree that the Covenant shall conform to the requirements of California

Code of Regulations, title 22, section 67391.1. The provisions of this Covenant shall be for the benefit of, and shall be enforceable by, the United States Environmental Protection Agency ("U.S. EPA"), as a third-party beneficiary pursuant to general contract law, including, but not limited to, Civil Code section 1559.

12. ARTICLE I

STATEMENT OF FACTS

1.01. The Property. The Property is a portion of a larger Superfund site located at 401

E. Hendy Ave. in Sunnyvale, California, totals approximately 14.97 acres, and is more particularly described and depicted in the attached in Exhibits "A" and "B", The Property is currently owned and operated by Northrop, formerly owned and operated by Westinghouse Electric Corporation. The entire Superfund site is commonly referred to as the Westinghouse Electric Corp. (Sunnyvale Plant) Superfund Site ("Site"), is depicted in Exhibit "C" ("Westinghouse Sunnyvale Superfund Site"), and is located in the City of Sunnyvale in the area now generally bounded by California Avenue to the north, North Sunnyvale Avenue to the west, North Fair Oaks Boulevard to the east, and Hendy Avenue to the south. The Site is also generally described as Santa Clara

County Assessor's Parcel Numbers (APN) 204-46-008, 204-47-001 , 204-47-002, 20448-028, and 204-46-009. The Property consists of APNs 204-46-008, 204-47-002 and 204-48-028.

1.02. Hazardous Substances. Hazardous substances, as defined in section 25316, Chapter 6.8, Division 20 of the California Health and Safety Code; Section 101 (14) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended ("CERCLA"), 42 U.S.C. section 9601 (14); and 40 Code of Federal

Regulations parts 261.3 and 302.4, remain in the soil on portions of the Property. These substances are also hazardous materials as defined in Health and Safety Code section 25260. These contaminants include polychlorinated biphenyls (PCBs") that were present in a thermal insulating fluid called Inerteen that was historically applied as a weed killer at the Property.

1.03. Remediation of the Site, including the Property. The Site is being remediated pursuant to a Record of Decision ("ROD") issued by U.S. EPA, dated October 16, 1991 and two (2) subsequent Explanations of Significant Differences ("ESDs") issued in 1997 and 2008. The ROD, ESDs, and other U.S. EPA documents referenced in this paragraph, as

well as additional information on the Site and Property, are on file and available for review at:

Sunnyvale Public Library
665 West Olive Avenue
Sunnyvale, California 94088
(408) 730-7300

EPA Region IX Superfund Records Center
95 Hawthorne Street - Suite 403S
San Francisco,
California 94105
(415) 947-8717
and electronically
at:

[http://yosemite.epa.gov/r9/sfund/r9sfdocw.nsf/vwsoalphabetic/Westinghouse+Electric+\(Sunnyvale+Plant\)?OpenDocument](http://yosemite.epa.gov/r9/sfund/r9sfdocw.nsf/vwsoalphabetic/Westinghouse+Electric+(Sunnyvale+Plant)?OpenDocument)

Information on the Site is also available on the Department's website at:

https://www.envirostor.dtsc.ca.gov/public/profile_report.asp?global_id=43350001 which is referenced as the Westinghouse Electric (Sunnyvale Plant) page.

Through the ROD, as later modified by the ESDs, the U.S. EPA Region IX Superfund Division Director, and/or his or her delegates, selected the remedial actions for the Site pursuant to CERCLA. The Department concurred with the remedial actions selected in the ROD and the modifications made through the ESDs. The original remedy selected for the Westinghouse Site was excavation and off-site disposal of soils in the upper 8 feet containing concentrations of PCBs greater than 25 parts per million ("ppm") and groundwater remediation. Groundwater containment was selected for a portion of the Westinghouse Site where remediation to safe levels was found to be technically impracticable. This groundwater containment area is not located at the Property.

In 1997, U.S. EPA issued an Explanation of Significant Differences ("1997 ESD") that modified the soil disposal method specified by the

ROD, but did not modify requirements for onsite activities. Remedial actions were performed at the Westinghouse Site, and at the Property, under Regional Water Quality Control Board oversight in the 1980's and subsequently pursuant to the ROD and 1997 ESD. In 2008, U.S. EPA issued a second ESD to include the specific institutional controls ("ICs") necessary to ensure long term protectiveness of the remedy. The ESD required use restrictions for areas throughout the Site where PCB contamination remained above levels suitable for unrestricted use, including limiting the Property to commercial/industrial uses. The Department concurred with the remedial actions in the ROD, as modified by the ESDs.

From 2013 through 2018, pursuant to U.S. EPA-approved work plans, Northrop performed a removal of PCB contaminated soils and conducted confirmation sampling. The results demonstrated that PCB contamination in the upper 8 feet below ground surface was below the health-based criteria of 25 mg/kg PCBs. The San Francisco Bay Area Regional Water Quality Control Board has also determined that additional stormwater measures are needed at the Site to address impacts to San Francisco Bay. In 2015, U.S. EPA issued a memorandum clarifying the use restrictions that should apply to this Site. Consequently, this Covenant prohibits sensitive uses such as residences, parks, hospitals, schools for minors, and child care at the Property, and imposes other restrictions as specified in Article IV below.

1.04. Land Use Covenant. A land use covenant is necessary to preclude potential users' exposure to hazardous substances that remain at the Property and to complete the remedy selected in the ROD and modified in the ESDs. U.S. EPA, with the concurrence of the Department, has concluded that the Property, remediated to the goals presented in the ROD, as modified by the ESDs, subject to the restrictions of this Covenant, and used in compliance with such restrictions, does not present an unacceptable threat to present or future human health or safety or the environment. Additional information about the Site, including the 2008 ESD containing this risk analysis, is available at the repositories listed in paragraph 1.03, above.

13. ARTICLE II

DEFINITIONS

2.01. Department. "Department" means the California Department of Toxic Substances

Control and includes its successor agencies, if any.

2.02. U.S. EPA. "U.S. EPA" means the United States Environmental Protection Agency and includes its successor agencies, if any. As of September 1, 2018, U.S. EPA is the CERCLA Lead Agency for this Site with the lead responsibility to implement response action under the National Contingency Plan ("NCP"), 40 C.F.R. Part 300.

2.03. Owner. "Owner" means the Covenantor, its successors in interest, and their successors in interest, including heirs and assigns, which at any time hold title or an ownership interest to all or any portion of the Property.

2.04. Occupant. "Occupant" means Owner and any person or entity entitled by ownership, leasehold, or other legal relationship to the right to occupy any portion of the Property.

2.05. CERCLA Lead Agency. "CERCLA Lead Agency" means the governmental entity having the designated lead responsibility to implement response action under the National Contingency Plan ("NCP"), 40 C.F.R. Part 300. U.S. EPA or a state agency acting pursuant to a contract or cooperative agreement executed under CERCLA section 104(d)(1), 42 U.S.C. 9604(d)(1), or designated pursuant to a CERCLA Memorandum of Agreement entered into under subpart F of the NCP (40 C.F.R. 300.505), may be the designated CERCLA Lead Agency.

2.06. Environmental Restrictions. "Environmental Restrictions" means all protective provisions, covenants, restrictions, prohibitions, and terms and conditions as set forth in any section of this Covenant.

2.07. Improvements. "Improvements!" include, but are not limited to: buildings, structures, roads, driveways, improved parking areas, wells, pipelines, or other utilities.

2.08. Lease. "Lease" means lease, rental agreement, or any other document that creates a right to use or occupy any portion of the Property.

14. ARTICLE III

GENERAL PROVISIONS

3.01. Restrictions to Run with the Land. This Covenant sets forth Environmental Restrictions, that apply to and encumber the Property and every portion thereof no matter how it is improved, held, used, occupied, leased, sold, hypothecated, encumbered, and/or conveyed. This Covenant: (a) Runs with the land pursuant to Health and Safety Code section 25355.5(a) and Civil Code section 1471; (b) Inures to the benefit of and passes with each and every portion of the Property; (c) Is for the benefit of, and is enforceable by the Department; and (d) Is imposed upon the entire Property, unless expressly stated as applicable only to a specific portion thereof.

3.02. Binding upon Owners/Occupants. Pursuant to the Health and Safety Code, this Covenant binds all Owners and Occupants of the Property. Pursuant to Civil Code section 1471, all successive owners of the Property are expressly bound hereby for the benefit of the Department.

3.03. Written Notice of the Presence of Hazardous Substances. Prior to the sale, lease, assignment, or other transfer of the Property, or any portion thereof, the Owner, lessor, or sublessor shall give the buyer, lessee, or sublessee written notice of the existence of this Covenant and its Environmental Restrictions.

3.04. Incorporation into Deeds and Leases. The Covenant and its Environmental Restrictions shall be incorporated by reference in each and every deed and lease for any portion of the Property.

3.05. Conveyance of Property. The Owner shall provide notice to the Department and

U.S. EPA not later than thirty (30) days after any conveyance of any ownership interest in the Property (excluding mortgages, liens, and other non-possessory encumbrances). The written notice shall include the name and mailing address of the new owner of the Property and shall reference the DTSC site name and site code as listed on page one of this Covenant. The notice shall also include the APNs listed in paragraph 1.01. If the new owners of the Property have been assigned a different APN, each such APN that covers the Property must be provided. The Department shall not, by reason of this Covenant, have authority to approve, disapprove, or otherwise affect any proposed conveyance, except as otherwise provided by law or by administrative order.

3.06. Costs of Administering the Covenant to be paid by Owner. The Department has already incurred and will in the future incur costs associated with the administration of this Covenant. Therefore, the Covenantor hereby covenants for Covenantor and for all subsequent Owners that, pursuant to California Code of Regulations, title 22 section 67391 .1 (h), the Owner will pay the Department's costs of administering this Covenant, including but not limited to costs of implementation and enforcement.

15. ARTICLE IV

RESTRICTIONS

4.01. Prohibited Uses. The Property shall not be used for any of the following purposes without the Department's prior, specific written approval for that land use pursuant to Health and Safety Code section 25227:

- (a) A new use of the Property, except that the Department's approval is not required for the use, modification or expansion of an existing industrial or manufacturing facility, if, on or before January 1, 1981 , the Property was owned by or held for the beneficial use of that facility or complex.

- (b) Subdivision of the Property; except for subdivision to divide that portion of the parcel that contains hazardous materials, as defined in Health and Safety Code section 25260(d), from other portions of that parcel.
- (c) Construction or placement of a building or structure on the Property that is intended for use as any of the following, or the new use of an existing structure for the purpose of serving as any of the following:
 - (i) A residence, including any mobile home or factory built housing, constructed or installed for use as residential human habitation.
 - (ii) A hospital for humans.
 - (iii) A public or private school for persons under 21 years of age.
 - (iv) A day care center for children.
 - (v) A permanently occupied human habitation, other than those used for industrial purposes.

4.01 .01 Written Approval for Use. The Department's execution of this Covenant constitutes the Department's specific written approval pursuant to Health & Safety Code Section 25227, and section 4.01 above, that the Property can be used for commercial and industrial uses, and can be subdivided, so long as the subdivided property remains subject to the terms of this Covenant. The Department's approval is based on its prior concurrence with the U.S. EPA determination(s) in the ROD for the Property, as modified by the ESDs, that did not prohibit commercial/industrial use; and also on consultation with U.S. EPA on or about November 8, 2018.

4.01.02. Approval Request: Any request for the Department's written approval under paragraph 4.01 above shall be submitted to U.S. EPA simultaneously with the request submitted to the Department, and shall provide U.S. EPA with actual, prior notice and opportunity to comment.

4.02. Soil Management.

- (a) No activities that will disturb the soil (e.g., excavation, grading, removal, trenching, filling, earth movement, mining, or drilling)

shall be allowed on the Property without a Soil Management Plan approved by the CERCLA Lead Agency in advance.

- (b) Any contaminated soils brought to the surface by grading, excavation, trenching or backfilling shall be managed in accordance with all applicable provisions of state and federal law, and will not be removed from the Property without a Soil Management Plan approved in advance and in writing by the CERCLA Lead Agency.

4.03. Prohibited Activities. The following activities are specifically prohibited on the

Property without prior written approval from the CERCLA Lead Agency:

- (a) Drilling for drinking water, oil, or gas.
- (b) Extraction of groundwater for any purpose.
- (c) Activity that may interfere with, or otherwise affect the integrity or effectiveness of any activity required for the Property under either this Covenant or applicable federal, state or local law.
- (d) The Owner and Occupant shall not participate in or allow any activity that would interfere with the operation of any response activities at the Property without prior written approval from the CERCLA Lead Agency.
- (e) All uses and development of the Property shall preserve the integrity of the remedy approved by the CERCLA Lead Agency.

4.04. Written Notice of Covenant. Prior to any sale, lease, or rental of any portion of the Property, the Owner shall provide a copy of this Covenant to the buyer, lessee, or renter to ensure that the buyer, lessee, or renter is on notice of the restrictions and requirements of this Covenant. Prior to recordation of any easement on any portion of the Property, the Owner shall provide a copy of this Covenant to the easement holder to ensure that the easement holder is on notice of the restrictions and requirements of this

Covenant. Covenantor shall also provide a copy of this Covenant to all existing Occupants and easement holders of record within 30 days of recording this Covenant.

4.05. Access for Department. The Department shall have reasonable right of entry and access to the Property for inspection, monitoring, and other activities on the Property consistent with the purposes of this Covenant as deemed necessary by the Department in order to protect the public health or safety, or the environment. Nothing in this instrument shall limit or otherwise affect the Department's right of entry and access, or authority to take response actions, under CERCLA; 40 Code of Federal Regulations Part 300; Chapter 6.8, Division 20 of the California Health and Safety Code; California Civil Code, or other applicable State Law.

4.06. Access for U.S. EPA. Nothing in this instrument shall limit or otherwise affect

U.S. EPA's right of entry and access, or U.S. EPA's authority to take response actions, under CERCLA; the National Contingency Plan, 40 Code of Federal Regulations Part 300; or federal law.

4.07. Five-year Review. This provision shall be effective only if the Department, or another State agency, becomes the CERCLA Lead Agency. In addition to the annual inspections required by paragraph 4.10, after a period of five (5) years from U.S. EPA's last Five-year Review, and every five (5) years thereafter, Owner shall submit a FiveYear Review report documenting its review of the remedy implemented and its evaluation to determine if human health and the environment are being adequately protected by the remedy as implemented. The report shall describe the results of all inspections, sampling analyses, tests and other data generated or received by Owner and evaluate the adequacy of the implemented remedy in protecting human health and the environment. As a result of any review work performed, the CERCLA Lead Agency may require Owner to perform additional review work or modify the review work previously performed by Owner.

4.08. Access for Five-year Reviews. The entity, person or persons responsible for Five Year Reviews shall have reasonable right of entry and access to the Property for the purpose of implementing these activities. Such right of entry and access shall continue until such time as the

CERCLA Lead Agency determines that no further Five-year Review activities are required.

4.09. Inspection and Reporting Requirements. The Owner shall conduct an annual inspection and submit an Annual Inspection Report to the Department and to U.S. EPA for their approval by January 15th of each year. The annual report shall describe how all requirements outlined in this Covenant have been met. The annual report, filed under penalty of perjury, shall certify that the Property is being used in a manner consistent with this Covenant. The annual report must include the dates, times, and names of those who conducted and reviewed the annual inspection report. It also shall describe how the observations were performed that were the basis for the statements and conclusions in the annual report (e.g., drive by, fly over, walk in, etc.). If violations are noted, the annual report must detail the steps taken to return to compliance. If the Owner identifies any violations of this Covenant during the annual inspections or at any other time, the Owner must, within ten (10) days of identifying the violation: determine the identity of the party in violation; send a letter advising the party of the violation of the Covenant; and demand that the violation cease immediately. Additionally, copies of any correspondence related to the enforcement of this Covenant shall be sent to the Department and U.S. EPA within ten (10) days of its original transmission.

16. ARTICLE V

ENFORCEMENT

5.01. Enforcement. Failure of the Covenantor, Owner or Occupant to comply with this

Covenant shall be grounds for the Department to require modification or removal of any

Improvements constructed or placed upon any portion of the Property in violation of this

Covenant. Violation of this Covenant, including but not limited to, failure to submit, or the submission of any false statement, record or report to the

Department shall be grounds for the Department to pursue administrative, civil or criminal actions.

5.02. Enforcement Rights of U.S. EPA as a Third-Party Beneficiary.

U.S. EPA, as a third-party beneficiary, has the right to enforce the Environmental Restrictions contained herein.

17. ARTICLE VI

VARIANCE TERMINATION AND TERM

6.01. Variance. Any person may apply to the Department for a written variance from the provisions of this Covenant. Such application shall be made in accordance with Health and Safety Code section 25223 and a copy of the application shall be submitted to U.S. EPA simultaneously with the application submitted to the Department. No variance may be granted under this paragraph without prior notice to and an opportunity to comment by U.S. EPA.

6.02. Termination. Any person may apply to the Department for a termination or modification of one or more terms of this Covenant as they apply to all or any portion of the Property. Such application shall be made in accordance with Health and Safety Code section 25224 and a copy of the application shall be submitted to U.S. EPA simultaneously with the application submitted to the Department. No termination may be granted under this paragraph without prior notice to and opportunity to comment by U.S. EPA.

6.03. Term. Unless ended in accordance with paragraph 6.02, by law, or by the Department in the exercise of its discretion, after providing notice to and an opportunity to comment by U.S. EPA, this Covenant shall continue in effect in perpetuity.

ARTICLE VII MISCELLANEOUS

7.01. No Dedication or Taking Intended. Nothing set forth in this Covenant shall be construed to be a gift or dedication, or offer of a gift or dedication, of the Property, or any portion thereof to the general public or anyone else for any purpose whatsoever. Further, nothing in this Covenant shall be construed to effect a taking under State or federal law.

7.02. Recordation. The Covenantor shall record this Covenant, with all referenced Exhibits, in the County of Santa Clara within thirty (30) days of the Covenantor's receipt of a fully-executed original. The Covenantor shall also provide copies showing the County Recorder's tracking information of its recording (i.e., document number or book and page number information) to the Department and U.S. EPA within ten (10) days of receiving it from the County Recorder's Office.

7.03. Notices. Whenever any person gives or serves any Notice ("Notice" as used herein includes any demand or other communication with respect to this Covenant), each such Notice shall be in writing and shall be deemed effective: (1) when delivered, if personally delivered to the person being served or to an officer of a corporate party being served, or (2) three (3) business days after deposit in the mail, if mailed by United States mail, postage paid, certified, return receipt requested. Courtesy copies will not constitute Notice and are provided merely for the convenience of the recipient.

To Owner: Northrop Grumman Systems Corporation
Attention: Law Department — Real Estate Legal Notices
2980 Fairview Park Drive
Falls Church, VA 22042-451 1
With a copy To:

Northrop Grumman Systems Corporation
Attention: Corporate Real Estate — Legal Notices
One Space Park Drive — D/2
Redondo Beach, California 90278

With Courtesy Copies (by email only) To:

Jay-tolle@ngc.com

Donald.Canada@ngc.com
Jill.palmer@ngc.com
jcermak@cermaklegal.com

To Department: Branch Chief
Site Mitigation and Restoration Program
California Department of Toxic Substances
Control
700 Heinz Avenue
Berkeley, CA 94710

To U.S. EPA: Mark Samolis, Remedial Project Manager
S F D-9-4
U.S. Environmental Protection Agency
Region IX
75 Hawthorne Street
San Francisco, CA 94105
Attn: Westinghouse Electric Corp. Superfund Site Project
Manager

Any party may change its address or the individual to whose attention a Notice is to be sent by giving written Notice in compliance with this paragraph.

7.04. Partial Invalidity. If this Covenant or any of its terms are determined by a court of competent jurisdiction to be invalid for any reason, the surviving portions of this Covenant, or the application of it to any person or circumstance, shall remain in full force and effect as if such portion found invalid had not been included herein.

7.05. Statutory and Regulatory References. All statutory and regulatory references include successor provisions.

7.06. Incorporation of Attached Exhibits. All attached exhibits to this Covenant are incorporated herein by reference. The exhibits to this Land Use Covenant are:

- A. Legal Description of Property
- B. Property Parcel Map
- C. Map of Westinghouse Sunnyvale Superfund Site

7.07. California Law. This Covenant shall be governed, performed and interpreted under the laws of the State of California.

7.08. No Delegation. Nothing set forth in this Covenant shall be construed to be a delegation of any authorities of the Department under any statute or regulation.

IN WITNESS WHEREOF, the Parties execute this Covenant.

Northrop Grumman Systems Corporation, a Delaware corporation:



By: _____ Date: DECEMBER 18, 2018

A. J. Paz, Director of Real Estate
Northrop Grumman Systems Corporation

Department of Toxic Substances Control:

By: _____ Date: 12/24/2018

JanyNaito, Branch Chief
Ste Mitigation and Restoration Program - Berkeley
Department of Toxic Substances Control

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of ~~California~~
County of Alameda

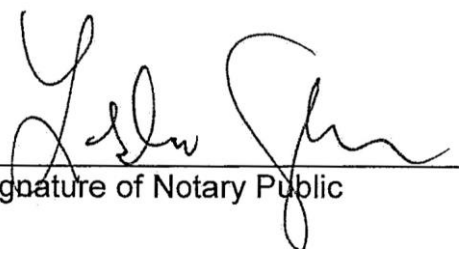
On December 24, 2018 before me,
Leslie M. Johnson, Notary Public
(space above this line is for name and title of the officer/notary),
personally appeared Janet Naito, who
County of _____


17.1. (space above this line

personally appeared who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESSEY hand and official seal;

 (Seal)
Signature of Notary Public

 MICHELLE
JOHNSON
Public •
California
Contra Costa County
Commission 2241582
• MY Comm. Expires May 7, 2022

Exhibit

ACKNOWLEDGMENT

California
of Los Angeles

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of Calif n' County
of

On December 19, 2008 before me, Dalia Sofia Rios Notary Public
(insert name and title of the officer)

personally appeared A. J. Paz
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are
the basis of satisfactory evidence subscribed to the instrument and acknowledged to me that his/her/their signature(s) within
he/she/they executed the same in his/hér/their person(s) acted, executed the authorized capacity(j.e.\$) and that by on the instrument the the entity upon behalf of which the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature Dalia Sofia Rios (S) (Seal)



DALIA SOFIA RIOS
Notary Public -
California
Los Angeles County
Commission # 2237202
My Comm. Expires Apr 7, 2022

17.2.

A: LEGAL DESCRIPTION

SANTA CLARA COUNTY APN 204-46-008, 204-47-002, 204-48-028

Real property in the City of Sunnyvale, County of Santa Clara, State of California, described as follows:

Parcel One:

Lots 17, 18, 27, 28, 61 and 62 and a portion of Oak Avenue (now abandoned) as shown upon that certain map entitled, "Map of Crossman Park," which map was 'filed for record in the Office of the

Recorder of the County of Santa Clara, State of California, on October 22, 1907 in Book L of maps, at page 97, and more particularly described as follows:

Beginning at a point in the easterly line of Sunnyvale Avenue, where the same is intersected by the dividing line between Lots 18 and 19, as shown upon the map of Crossman Park, hereinabove referred to; and running thence northerly along the easterly line of Sunnyvale Avenue 100 feet; thence at right angles easterly 459.90 feet to the northeasterly corner of Lot 61 of said Crossman Park; thence southerly and along the easterly line of Lots 61 and 62 of said Crossman Park, 100 feet; thence at right angles westerly 459.90 feet to the point of beginning.

Excepting therefrom that portion conveyed to the City of Sunnyvale, a municipal corporation, by instrument recorded February 26, 1987 in Book K051, page 2176, Official Records, described as follows:

Beginning at a point on the easterly line of Sunnyvale Avenue at the intersection thereof with the southerly line of Lot 20, as said avenue and lot are shown on that certain map entitled, "Map of the Crossman Park," which map was filed for record on October 22, 1907 in Book L of maps, at page 97, Santa Clara County records; thence leaving said point of beginning along said easterly line of Sunnyvale Avenue, north $14^{\circ} 52'$ east 160.55 feet; thence leaving said easterly line from a tangent bearing of south $14^{\circ} 52'$ west along a curve to the left, with a radius of 192.00 feet, through a central angle of $16^{\circ} 15' 37''$ for an arc length of 54.49 feet to a point of reverse curvature; thence from a tangent bearing of south $1^{\circ} 23' 37''$ east along a curve to the right, with a radius of 208.00 feet, through a central angle of $16^{\circ} 15' 37''$ for an arc length of 59.03 feet to a point on a line parallel with and distant 16.00 feet easterly, measured at right angles from said southerly line of Sunnyvale Avenue; thence along said parallel line south $14^{\circ} 52'$ west 48.55 feet to a point on said southerly line of Lot 20; thence leaving said parallel line along said southerly line north $75^{\circ} 08'$ west 16.00 feet to the point of beginning.

Parcel Two:

Lots 25, 26, 63, 64 and a portion of Oak Avenue (now abandoned) as shown upon that certain map entitled "Map of Crossman Park," which map was filed for record in the Office of the Recorder of the County of Santa Clara, State of California, on October 22, 1907 in Book L of maps, at page 97, and more particularly described as follows:

Beginning at the common corner for Lots 20, 21, 24 and 25 as shown upon the map hereinabove referred to; running thence northerly along the line between Lots 19, 20, 25 and 26, as shown on said map, 100 feet; thence at right angles easterly 317.45 feet to the northeasterly corner of Lot 63, as shown on said map; thence at right angles southerly along the easterly line of Lots 63 and 64, 100 feet; thence at right angles westerly 317.45 feet to the point of beginning.

Exhibit A continued

Parcel Three:

All of Lots 23, 24, 65 and 66, as shown upon that certain map entitled, "Map of Crossman Park," which map was filed for record in the Office of the Recorder of the County of Santa Clara, State of California, on October 22, 1907 in Book L of maps, at page 97 together with that portion of Oak Avenue (now abandoned) as said avenue is shown upon that certain map entitled, "Map of Crossman Park," which map was filed for record in the Office of the Recorder of the County of Santa Clara, State of California, on October 22, 1907 in Book L of maps, at page 97, and more particularly described as follows:

Beginning at the point of intersection of the northeasterly line of Hendy Avenue with the northwesterly line of Oak Avenue, as said avenue are shown upon the map above referred to; thence northeasterly and along said northwesterly line of Oak Avenue 113.82 feet to the corner common to Lots 24 and 25, as shown on said map; thence southeasterly and along the prolongation southeasterly of the dividing line between said Lots 24 and 25, 50 feet to the corner common to Lots 64 and 65 on the southeasterly line of Oak Avenue, as shown on said map; thence running southwesterly and along the southeasterly line of Oak Avenue 120.54 feet to the point of intersection thereof with the said northeasterly line of Hendy Avenue; thence northwesterly and along the northeasterly line of Hendy Avenue 50.44 feet to the point of beginning.

Parcel Four:

Lots 19 and 20, as shown upon that certain map entitled, "Map of Crossman Park," which map was filed for record in the Office of the Recorder of the County of Santa Clara, State of California, on October 22, 1907 in Book L of maps, at page 97.

Excepting therefrom that portion conveyed to the City of Sunnyvale, a municipal corporation, by instrument recorded February 26, 1987 in Book K051, page 2176, Official Records, described as follows:

Beginning at a point on the easterly line of Sunnyvale Avenue at the intersection thereof with the southerly line of Lot 20, as said avenue, and lot are shown on that certain map entitled, "Map of the Crossman Park," which map was filed for record on October 22, 1907 in Book L of maps, at page 97, Santa Clara County records; thence leaving said point of beginning along said easterly line of Sunnyvale Avenue, north $14^{\circ} 52'$ east 160.55 feet; thence leaving said easterly line from a tangent bearing of south $14^{\circ} 52'$ west along a curve to the left, with a radius of 192.00 feet, through a central angle of $16^{\circ} 15' 37''$ for an arc length of 54.49 feet to a point of reverse curvature; thence from a tangent bearing of south $1^{\circ} 23' 37''$ east along a curve to the right, with a radius of 208.00 feet, through a central angle of $16^{\circ} 15' 37''$ for an arc length of 59.03 feet to a point on a line parallel with and distant 16.00 feet easterly, measured at right angles from said southerly line of Sunnyvale Avenue; thence along said parallel line south $14^{\circ} 52'$ west 48.55 feet to a point on said southerly line of Lot 20; thence leaving said parallel line along said southerly line north $75^{\circ} 08'$ west 16.00 feet to the point of beginning.

Parcel Five:

All of Lots 59 and 60 and the southwesterly 1/2 of Lot 58, as shown upon that certain map entitled, "Map of Crossman Park," which map was filed for record in the Office of the Recorder of the County of Santa Clara, State of California, on October 22, 1907 in Book L of maps, at page 97, and more particularly described as follows:

Exhibit A continued

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Beginning at a point on the southeasterly line of Oak Avenue, (now abandoned), distant thereon south $14^{\circ} 52'$ west 791 .00 feet from the point of intersection of the said southeasterly line of Oak Avenue with the southwesterly line of California Avenue, as said avenue are shown upon the map above referred to; running thence south $14^{\circ} 52'$ west along the said southeasterly line of Oak Avenue, 125.00 feet to the dividing line between Lots 60 and 61, as said lots are shown upon the map above referred to; running thence south $75^{\circ} 08'$ east along the said dividing line between Lots 60 and 61, a distance of 125.00 feet to the easterly common corner thereof; running thence north $14^{\circ} 52'$ east along the southeasterly line of Lots 60, 59 and 58 of said Crossman Park, 125.00 feet; running thence north $75^{\circ} 08'$ west and parallel with the said southwesterly line of California Avenue, 125.00 feet to the point of beginning.

Parcel Six:

Portion of Lot 2, as shown upon that certain map entitled, 'Map of the partition of that part of the Rancho Pastoria de las Borregas patented to Martin Murphy Jr.' which map was filed for record in the Office of the Recorder of the County of Santa Clara, State of California, on April 29, 1893 in Book G of maps, at pages 74 and 75, and more particularly described as follows:

Beginning at a stake in the north line of County Road, also known as Railroad Avenue and on the line between Lots 1 and 2, as shown on the map hereinabove referred to, said point being north $14^{\circ} 52'$ east 85.8 feet from stake mc as shown on the map of said partition above referred to; thence north $14^{\circ} 52'$ east 768.4 feet to a stake; thence north $71^{\circ} 30'$ west 321 feet to a stake; thence south $14^{\circ} 52'$ west 745.4 feet to a stake on the north side of Railroad Avenue; thence south $67^{\circ} 32'$ east 324.9 feet to the place of beginning.

Together with the right to lay and maintain a sewer pipe as granted by Henry Bonetti and Artemisa Bonetti, his wife, to Jacob Brack by deed dated October 19, 1917, recorded November 5, 1917 in Book 465 of deeds, page 74, Santa Clara County records, from the premises above described, over and across the premises now owned by said grantors and lying to the east of the premises above described, provided, however, that such sewer pipe shall be so laid and located in the manner and position as may be manually agreed upon by the parties thereto.

Parcel Seven:

All of Lots 53 54, 55, 56, 57 and 68 and portion of Lots 52 and 58, and a portion of Oak Avenue (now abandoned), as shown upon that certain map entitled "Map of Crossman Park," which map was filed for record in the Office of the Recorder of the County of Santa Clara, State of California, on October 22, 1907 in Book L of maps, at page 97, and more particularly described as follows:

Beginning at a point on the northerly line of Hendy Avenue, said point of beginning being the most southerly corner of Lot 66, as shown on the above said map; thence north $14^{\circ} 52'$ east 462.28 feet to the true point of beginning, said true point of beginning being distant south $14^{\circ} 52'$ west 25.00 feet from the easternmost corner of Lot 58, as shown on said map; thence north $14^{\circ} 52'$ east 430.73 feet to a point distant south $14^{\circ} 52'$ west 10.00 feet from the southeasterly common corner for Lots 51 and 52, as said lots are shown on the said map of Crossman Park; thence north $75^{\circ} 10' 31''$ west 175.04 feet to a point on the northwesterly line of Oak Avenue, now abandoned; thence along said northwesterly line south $14^{\circ} 52'$ west 430.73 feet; thence leaving the said northwesterly line and running south $75^{\circ} 10' 31''$ east and parallel with the northeasterly line of said Lot 58 and its northwesterly prolongation for a distance of 175.04 feet to the true point

Exhibit A continued

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of beginning, and being shown upon that certain map entitled "Record of Survey of Portion of Crossman Park Subdivision — City of Sunnyvale, California, for Wooldridge Mfg. Company", which map was filed for record in the Office of the Recorder of the County of Santa Clara, State of California, on May 3, 1951, in Book 32 of maps, at Page 19..

Parcel Eight:

Beginning at a point on the easterly line of Sunnyvale Avenue, distant thereon south $14^{\circ} 52'$ west 791 feet from the point of intersection of the easterly line of Sunnyvale Avenue with the southerly line of California Avenue; thence running south $14^{\circ} 52'$ west along the easterly line of Sunnyvale Avenue, 125 feet to a point on the dividing line between Lots 16 and 17 of Crossman Park, as shown on the map thereof hereinafter referred to; thence running south $75^{\circ} 08'$ east along said dividing line and the easterly prolongation thereof 334.9 feet to the easterly line of Oak Avenue, as shown on said map and now abandoned; thence running north $14^{\circ} 52'$ east along said easterly line of Oak Avenue, 125 feet; thence parallel with the southerly line of California Street, north $75^{\circ} 08'$ west 334.9 feet to the point of beginning, and being all of Lots 15, 16, 29 and 30 and the southwesterly one-half of Lots 14 and 31 and a portion of Oak Avenue, now abandoned, as shown on the map of Crossman Park, which map was filed for record in the Office of the Recorder of the County of Santa Clara, State of California, on October 22, 1907 in Book L of maps, at page 97.

Parcel Ten:

All of Lots 1, 2, 9 and 10, as shown upon that certain map entitled, "Map of Crossman Subdivision No. 4", which map was filed for record in the Office of the Recorder of the County of Santa Clara, State of California, on December 21, 1909 in Book M of maps, page 88.

Excepting therefrom that portion thereof as conveyed to the county of Santa Clara by deed recorded August 23, 1968 in Book 8239, page 341, official records described as follows:

Parcel "A" on that certain map entitled "Record of Survey, Central Expressway Unit No. 3, etc.", and filed for record December 29, 1966 in Book 217 of maps, at page 55, Santa Clara County records.

Also excepting therefrom that portion conveyed to Valin Corporation, a California corporation, by instrument recorded July 31, 1997, instrument no. 13797290, official records, described as follows:

All of Parcel 2, as shown upon that certain map entitled, "Parcel Map being portions of Lots 1, 2, 9 and 10, and a portion of American Avenue, as shown on that certain map of Crossman subdivision no. 4 filed for record on December 21, 1909 in Volume 'M' of maps, at page 99, Santa Clara County records," which map was filed for record in the Office of the Recorder of Santa Clara, State of California on July 23, 1997 in Book 691 of maps, at pages 39 and 40.

APN: 204-46-008 as to Parcel Ten; 204-47-002 as to Parcel Six; and 204-48-028 as to Parcels One thru Five, Seven and Eight

Exhibit A continued

BKF

of 4

Exhibit A continued

EXHIBIT B -- PROPERTY PARCEL MAP: SAN A CLARA CO48-
028, 204-

LEGEND

PARCEL NUMBER
AS DESCRIBED
IN EXHIBIT A

APN 204-48-028

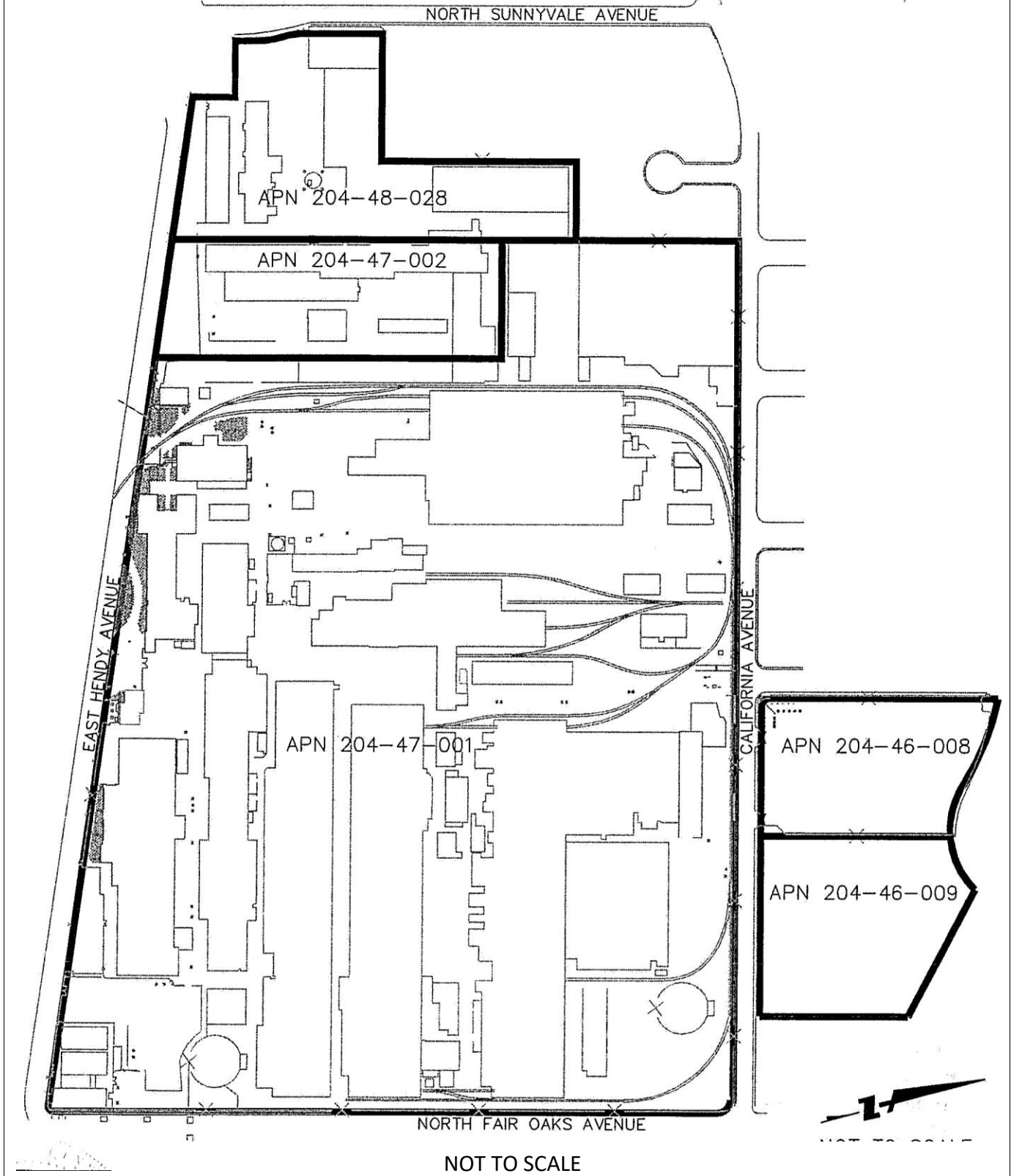
204 Uö2

NOR FAIR OAKS AVENUE

NOT TO SCALE

		EXHIBIT B		
		SANTA CLARA COUNTY		
255 <small>REDWOCO QTY,</small>				
		APN 204-48-028,		
		204-47-002. 204-46-008		
(FAX)				
Ene	f PUB	Drawn CHG Job No. 20140095	Checked RKB Dote 09 26 2014	Approved TRH Sheet 1

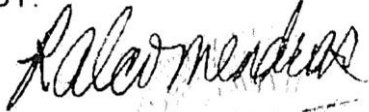
**EXHIBIT C WESTINGHOUSE SUNNYVALE SUPERFUND SITE ALL PARCELS
INCLUDING WESTINGHOUSE ELECTRIC (SUNNYVALE PLANT)**



 <p>255 SHOREUNE DRIVE SUITE 200SANTA CLARA COUNTY REDWOOD CITY, CA 94065 650/482-6300 APN 650/482-6399 (FAX)</p>	<p>EXHIBIT C</p> <p>204-48-028,204-47-001,204-47-002,204-46-008,204-46-009</p>	
	<p>Drawn CHG Job No. 20140095</p>	<p>Checked RKB Date 10/03/2014</p>
<p>ENGINEERS SURVEYORS PLANNERS</p>		

This is to certify that this is

... in this office. **DEC 28 2018**
EST:



~~COUNTY CLERK-RECORDER~~

a true copy of the document on file in this office.

17.3. ATTEST

SANTA CLARA COUNTY, CALIFORNIA