FIRST FIVE-YEAR REVIEW REPORT FOR COMPUTER CIRCUITS CORPORATION SUPERFUND SITE SUFFOLK COUNTY, NEW YORK

Prepared by

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Region 2
New York, New York

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Date

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LIST OF ABBREVIATIONS & ACRONYMS

ARAR	Applicable or Relevant and Appropriate Requirement
AWQS	Ambient Water Quality Standard
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
EPA	United States Environmental Protection Agency
FS	Feasibility Study
FYR	Five-Year Review
ICs	Institutional Controls
MCLs	Maximum Contaminant Levels pursuant to the Safe Drinking Water Act
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NPL	National Priorities List
NYSDEC	New York State Department of Environmental Conservatio
NYSDOH	New York State Department of Health
O&M	Operation and Maintenance
PCE	perchloroethylene
PRP	Potentially Responsible Party
PRG	Preliminary Remediation Goal
RAO	Remedial Action Objectives
RI	Remedial Investigation
ROD	Record of Decision
RPM	Remedial Project Manager
TBC	To be considereds
TCE	trichloroethylene

I. INTRODUCTION

The purpose of a Five-Year Review (FYR) is to evaluate the implementation and performance of a remedy in order to determine if the remedy is and will continue to be protective of human health and the environment. The methods, findings, and conclusions of reviews are documented in FYR reports such as this one. In addition, FYR 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 FYR pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Section 121, consistent with the National Contingency Plan (NCP)(40 CFR Section 300.430(f)(4)(ii)), and considering EPA policy.

This is the first FYR for the Computer Circuits Corportation Superfund Site (the Site). The triggering action for this policy review is the Preliminary Close-Out Report, which was signed on December 23, 2008. The FYR has been prepared due to the fact that hazardous substances, pollutants, or contaminants will not remain at the Site above levels that allow for unlimited use and unrestricted exposure (UU/UE), but the remedy requires more than five years complete.

The Site is addressed in its entirety, under one operable unit. The Computer Circuits Corporation Superfund Site FYR was led by Mark Dannenberg, the Remedial Project Manager for the Site. Participants included Salvatore Badalamenti (EPA Section Chief, Eastern New York Section), Robert Alvey (EPA Geologist), Chuck Nace (EPA Human Health Risk Assessor), Mindy Pensak (EPA Ecological Risk Assessor), and Cecilia Echols (EPA Community Involvement Coordinator). Representatives of the property owner (145 Marcus Blvd, Inc.) were notified of the initiation of the FYR. The review began on February 1, 2016.

Site Background

The Site is located within an industrial park in Hauppauge, New York. The Site includes a property that is approximately two acres in size, and has a 21,600 square foot, one-story building. The Site is bordered by Marcus Boulevard to the west and other industrial and commercial properties to the north, south, and east. A residential area is located a few blocks to the north of the site with the nearest residence approximately one-half mile from the Site property (see Figure 1).

The Site property was owned by MCS Realty from 1969 to 1991. The Computer Circuits Corporation was the first tenant on this property and leased the entire property from MCS Realty from 1969 to 1977. In 1991, ownership of the Site was transferred to 145 Marcus Blvd, Inc. Since 1991, the Site property has been leased to various companies.

Computer Circuits Corporation was a manufacturer of printed circuit boards for both military and commercial applications. Waste liquids from the circuit board manufacturing process were discharged to five industrial leaching pools (e.g., industrial cesspools) located beyond the southeast corner of the building. These waste liquids contained metals, acids, and solvents. In addition, photographic chemicals and trichloroethylene (TCE), both of which were used in association with dark room and silk screening operations, were discharged to a single industrial leaching pool adjacent to the north side of the building.

EPA placed the Site on CERCLA's National Priorities List (NPL) on May 10, 1999. Under an agreement between EPA and 145 Marcus Boulevard, Inc., 145 Marcus Boulevard, Inc. conducted a Remedial Investigation (RI) and Feasibility Study (FS) at the Site to determine the nature and extent of contamination. The chronology of site events is presented in Table 1.

Activities performed as part of the RI included: geophysical studies, on-Site soil borings, soil sampling, monitoring well drilling and installation, groundwater sampling, soil-gas sampling, and indoor air monitoring. These activities were primarily performed by 145 Marcus Blvd, Inc., the owner of the Site property, consistent

with a consent agreement signed by 145 Marcus Blvd, Inc. and EPA on September 29, 2000. Some additional activities (including indoor air and sub-slab soil gas monitoring) were performed by the EPA in 2008. The RI identified the presence of elevated levels of several contaminants in the soil and groundwater including tetrachloroethylene (PCE) and TCE. In addition, air samples collected from the indoor air of the building at the Site identified the presence of volatile organic compounds (VOCs), including TCE and methylene chloride. TCE was identified at levels of concern in indoor air, in soils just beneath the slab of the northern portion and the southern portion of the on-Site building, in soils within the leaching pool adjacent to the north side and south side of the building, and in groundwater.

All residences in the vicinity of the Site rely on public water for their potable water supply. Two public water supply wells are located approximately three-quarters of a mile to the north of the site. As the direction of groundwater flow under the Site is generally in an east-northeasterly direction, these public water supply wells are not directly downgradient of the Site, nor within the zone of influence. Nonetheless, these public water supply wells are equipped with well-head treatment that removes VOCs (including TCE and PCE) prior to distribution to the public. The public water supply is routinely monitored to ensure compliance with federal and state standards for drinking water.

FIVE-YEAR REVIEW SUMMARY FORM

SITE IDENTIFICATION		
Site Name: Computer Circuits Corporation Superfund Site		
EPA ID: NYD125499673		
Region: 2	**State:** NY	**City/County:** Hauppague, Suffolk County
SITE STATUS		
NPL Status: Final		
Multiple OUs? No	**Has the site achieved construction completion?** Yes	
REVIEW STATUS		
Lead agency: EPA		
Author name (Federal or State Project Manager): Mark Dannenberg		
Author affiliation: EPA Remedial Project Manager		
Review period: 9/1/2008 8/30/2016		
Date of site inspection: 6/14/2016		
Type of review: Policy		
Review number: 1		
Triggering action date: 12/23/2008		
Due date ***(five years after triggering action date)***: 12/23/2013		

II. RESPONSE ACTION SUMMARY

Basis for Taking Action

As part of the RI/FS, a baseline human health risk assessment was conducted, which evaluated the following exposure pathways: ingestion of tap water, dermal contact with tap water, and inhalation in the shower by adult and child residents. In addition, ingestion of tap water and inhalation of indoor air were assessed for on-Site workers. The risk assessment concluded that PCE and TCE in groundwater, as well as TCE and methylene chloride through vapor intrusion contribute to unacceptable risks and hazards to receptor populations that may use the Site or lie over contaminated groundwater.

A screening-level ecological risk assessment (SLERA) was prepared to identify the potential environmental risks associated with groundwater and soil. The results of the SLERA suggested that contaminants in groundwater and soils are not present at levels posing significant risks to ecological receptors. Furthermore, based on the industrial nature of the former facility and surrounding properties and the minimal natural vegetation at the Site, it was determined that the Site does not have any valuable ecological resources.

A response action was warranted for the following reasons:

1. The contaminated soil was a source of groundwater and indoor air contamination. As such, a remedial action was warranted to reduce or eliminate contamination in the soil, in particular, the two existing source areas;
2. Groundwater data from 2006, 2007, and 2008 supported the conclusion that there was no groundwater contaminant plume associated with the Site. However, groundwater data did reflect the presence of VOCs above MCLs. The long-term groundwater monitoring will be used to monitor background groundwater contaminant levels and to ensure that residual soil contamination at the Site is not contaminating the groundwater; and
3. Indoor air COCs were present in concentrations both above New York State guidelines and that posed a potential risk from direct exposure to potentially exposed populations (i.e., tenants in the building). As such, a remedial action was warranted to remove contamination from below the slab of the building and eliminate the source of indoor air contamination.

Response Actions

Several removal actions have been implemented to remove residual contamination from source areas. In 2002, the owner of the property hired a contractor that removed sediments from the base of the industrial cesspool on the north side of the building.

Indoor air samples collected at the Site on July 24, 2002 showed detections of several VOCs (including: TCE, 1,1-dichloroethene (1,1-DCE), 1,1,1 trichloroethane, 1,2-dichloroethane, chloromethane, methylene choride, and vinyl chloride) at concentrations of concern. To remedy this situation and protect people working in the building, the EPA and the owner of the property entered into an Administrative Order on Consent that provides for the performance of a removal action. Specifically, 145 Marcus Boulevard, Inc. installed and operated a soil vapor extraction (SVE) system and a sub-slab depressurization system on the north side of the building at the Site for the purpose of removing VOCs

from the contaminant source area (the former source area (the former industrial cesspool on the north side of the building) and also mitigating vapor intrusion into the building.

An evaluation of the data collected by EPA in May 2008 showed that the SVE system operating on the north side of the building was operating effectively. However, the data results showed concentrations which exceeded the indoor air criteria for TCE in the southern portion of the building. Soil gas samples collected around the perimeter of the building and beneath the slab of the building reflected maximum concentrations for TCE of 80,613 $\mu g/m^3$ and for PCE of 8,815 $\mu g/m^3$. In July 2008, indoor air sampling showed the presence of TCE and 1,2-DCE on the south (southeast) side of the building. The highest detected concentrations were 6.07 $\mu g/m^3$ (TCE) and 0.381 $\mu g/m^3$ (1,2-DCE). These results showed the need to conduct additional corrective actions in the vicinity of the former industrial cesspools located near the southeast corner of the building. In September 2008, a time-critical removal action was implemented which involved the construction and installation of an additional SVE system on the south/southeast side of the building, to reduce the concentrations of VOCs in soils and to mitigate vapor intrusion into the building. The additional SVE system was installed and began operation in September 2008.

In September of 2008, the EPA signed a Record of Decision (ROD) to implement additional remedial actions at the Site. The 2008 ROD addresses the remediation of the contaminated soil, groundwater, and indoor air at the Site.

The Remedial Action Objectives identified for the Site are:

- to prevent exposure of human receptors to contaminated groundwater;
- to minimize migration of contaminants from soils to groundwater;
- to ensure that hazardous constituents within the soil meet acceptable levels consistent with reasonably anticipated future use;
- to prevent exposure of human receptors to contaminated indoor air; and
- to minimize migration of contaminants from soils to indoor air.

The site-specific media impacted at the Site are soils, groundwater, and indoor air in the on-Site building. The selected remedy includes:

- Treatment of soils by operating SVE systems;
- Implementation of a Long-Term Groundwater Monitoring Program;
- Implementation of Institutional Controls;
- Development of a Site Management Plan (SMP);
- Implementation of Engineering Controls; and
- Conduct Five-Year Reviews

Table A below lists the cleanup levels for the Site contaminants in groundwater, soil, and indoor air based on federal and state promulgated Applicable or Relevant and Appropriate Requirements (ARARs), risk-based levels, background concentrations, and guidance values.

Table A: Cleanup Objectives

Contaminant	Groundwater (µg/L) *	Soil (µg/kg) **	Indoor air (µg/m³)
TCE	5	470	0.36 ***
PCE	5	1,300	
cis-1,2-dichloroethylene	5	250	
trans-1,2-dichloroethylene	5	190	
1,1,1-trichloroethane	5	680	

** Groundwater cleanup levels for organic COCs are based on the more conservative of the Federal Maximum Contaminant Levels (MCLs) and the New York Ambient Groundwater Standards and Guidance Values (NYSDEC TOGs 1.1.1, June 1998).*

*** The values shown are from NYSDEC Subpart 375: Remedial Program Soil Cleanup Objectives.*

**** Indoor Air cleanup levels are based on levels agreed to in an Administrative Order on Consent for Removal Action signed by EPA and 145 Marcus Blvd, Inc.*

Status of Implementation

The SVE systems were installed under removal authority and continue to operate. A schematic of the SVE System/vapor mitigation system is presented in Figure 2.

Institutional Controls:

The ROD references that certain institutional controls may be necessary for the property. Specifically, the ROD notes that ICs "may include an environmental easement/restrictive covenant filed in the property records of Suffolk County that would: (a) limit the use of the property to commercial and industrial uses; (b) restrict new construction at the Site unless an evaluation of the potential for vapor intrusion is conducted and mitigation, if necessary, is performed; and (c) restrict the use of groundwater as a source of potable or process water unless groundwater quality standards are met. The property continues to be used for commercial purposes. Furthermore, there has been no new construction at the Site since the ROD was issued. The recommendation that deed and well restrictions be imposed to prevent the installation of drinking water wells in impacted areas has been carried out in part by compliance with Suffolk County, Department of Health Services Private Water Systems Standards and with NYSDEC's Part 602, Applications for Long Island wells, which states that all new private wells with total property capacity over 45 gpm are required to obtain a well permit. Furthermore, residences and businesses in the vicinity of the Computer Circuits Corporation Site are supplied with public water. Finally, groundwater quality standards are being met.

Systems Operations/Operation & Maintenance

The SVE/vapor mitigation systems have been, and continue to be operated. The SVE systems and indoor air are monitored to evaluate the effectiveness of these systems. Based on a review of indoor air monitoring data, a decision was made (on June 4, 2015) to reduce the amount of indoor air sampling locations from eight locations to five locations. The monitoring locations that were eliminated reflected either those locations where contaminants were consistently below the ROD value for TCE or were co-located and redundant with other sampling locations.

Groundwater monitoring has been ongoing since December 2008. Based on a review of the data, it was determined, on June 4, 2015, to discontinue groundwater monitoring. This decision was justified because site-related contaminants in groundwater were at or below MCLs for four consecutive years.

Finally, potential site impacts from climate change have been assessed, and the performance of the remedy is currently not at risk due to the expected effects of climate change in the region and near the site.

III. PROGRESS SINCE THE LAST REVIEW

This is the first FYR for the Site.

IV. FIVE-YEAR REVIEW PROCESS

Community Notification, Involvement & Site Interviews

A public notice was made available by posting a notice on the Town Hall website (http://www.smithtownny.gov/), which was done on 7/28/2016, stating that a FYR was being conducted and that the public was invited to submit any comments to the U.S. EPA. The results of the review and the report will be made available at the Site information repositories located at the Smithtown Public Library at One North Country Road, Smithtown, NY 11787, at the EPA Records Center at 290 Broadway, 18th Floor, New York, NY, and on the U.S. EPA website.

Document Review

This FYR involved performing a review and evaluation of reports, groundwater monitoring data (from monitoring wells both on and off-site), indoor air monitoring data, Progress Reports, Annual Site Management Reports, and of the physical conditions of the contaminant source(s) or physical hazard(s) at or near the Site. The documents and information reviewed in the process of this five-year review are listed in Table 2.

Data Review

Groundwater

Groundwater monitoring data from 2008 through 2014 was reviewed for this FYR report. The data is presented in Table 3. Twenty monitoring wells were sampled either semi-annually or annually during this time period. Figure 4 depicts the locations of the groundwater monitoring wells.. The primary VOCs found in the groundwater impacted by the Site are: dichloroethane; 1,1-DCE; TCE; 1,1,1-trichloroethane; and PCE. From 2008 to 2010, groundwater monitoring was conducted on a semi-annual basis from all 20 wells. At that time, contaminant levels were either below MCLs or approaching MCLs for all groundwater contaminants identified in the ROD. Based on these results and trends, the frequency of groundwater monitoring was adjusted (after the December 2010 groundwater monitoring activities) to be conducted on an annual basis. An evaluation of the groundwater monitoring data from 2011 through 2014 showed that all contaminants in groundwater were below MCLs for all four annual monitoring events for every

well in the monitoring well network. In June of 2015, the EPA removed the need for ongoing groundwater monitoring, though a caveat was included that groundwater monitoring could be started up again in the future if Site conditions warranted. The monitoring wells have not been decommissioned, in case future groundwater monitoring events are considered necessary.

Indoor Air

The two SVE systems, namely, the northside SVE and the southside SVE, have been operating at the Site since 2002 and 2008 respectively. The SVE systems (see Figure 2) have operated continuously with the exception of two weather events, namely, a lightning strike and Hurricane Sandy, each of which caused a brief shutdown. The systems resumed operation within a couple of days of each of these events.

Between July 2008 and December 2014, indoor air samples were collected twice each year from eight specified locations throughout the building, pursuant to the Remedial Action Work Plan. In addition, the performance of the SVE systems and the influent lines entering the SVE systems are routinely monitored. Beginning with the July 2015 sampling event, indoor air sampling has been collected from five locations on an annual basis. A summary of indoor air sampling data collected for TCE is presented in Table 4. A figure depicting the locations for collecting indoor air samples is presented as Figure 3.

Indoor air monitoring data from September 2008 through July 2015 reflects that only three samples exceeded the most stringent NYSDOH residential guideline of 2 $\mu g/m^3$ for TCE: sample IA-8 (from June 2010) at 2.09 $\mu g/m^3$, sample IA-6 (from July 2014) at 2.08 $\mu g/m^3$, and sample IA-8 (from July 2014) at 2.16 $\mu g/m^3$. Each of these three samples only slightly exceeded the NYSDOH guideline value.

Results from the July 2014 sampling event, indoor air concentrations for TCE ranged from non-detect (at several locations) to 2.16 $\mu g/m^3$. During the December 2014 sampling event, indoor air concentrations for TCE ranged from non-detect (at several locations) to 0.897 $\mu g/m^3$ During the July 2015 sampling event, indoor air concentrations for TCE ranged from non-detect to 0.844 $\mu g/m^3$ For each of these sampling events, the highest concentration for TCE was detected in samples collected from the southern portion of the building.

The indoor air monitoring data reflects that, in general, TCE concentrations have decreased significantly over time. Data reflects that, for over six years, indoor air concentrations from all locations in the north side office suites have been below EPA's Site-specific, health-based target concentration of 0.36 $\mu g/m^3$. TCE concentrations at four sampling locations on the south side of the building are sometimes above EPA's target concentration of 0.36 $\mu g/m^3$, but remain below NYSDOH indoor air guidance value of 2 ug/m3 for residential settings. Pursuant to the ROD, additional montoring needs to continue until indoor air concentrations meet the target concentration of 0.36 ug/m3.

As part of the routine operation, maintenance and monitoring (OM&M) of the SVE systems, both SVE systems are monitored on a monthly basis. OM&M visits consist of assessing the system's current condition, documenting gauge readings, and taking system air stream readings with a handheld photo-ionization detector (PID). In addition, air samples are periodically collected from the SVE system influent for laboratory analysis. Data from the SVE system influent air samples and SVE system air flow rates are used to calculate actual mass removal rates of VOCs. Based on mass removal calculations through December 2014, the north SVE system has removed approximately 14.83 pounds of total VOCs, and the south SVE system has removed approximately 2.62 pounds of total VOCs.

Site Inspection

An inspection of the Site was conducted on 6/14/2016. In attendance were Mark Dannenberg (EPA RPM), Robert Alvey (EPA hydrogeologist), Chuck Nace (EPA Human Health Risk Assessor), and Thomas Melia (Project Manager, PW Grosser, Inc.). The purpose of the inspection was to assess the protectiveness of the remedy, gather information about the current status of the Site, and to visually confirm and document the conditions of the remedy, the Site, and the surrounding area. Mr. Thomas Melia works with PW Grosser, the consultant to the owner of the property. The Site inspection confirmed that the SVE/Vapor mitigation systems continue to operate as designed.

V. TECHNICAL ASSESSMENT

QUESTION A: Is the remedy functioning as intended by the decision documents?

Yes, the remedy is functioning as intended by the ROD signed on September 30, 2008.

The remedial actions (namely, the SVE systems) have removed VOCs from the former source areas, thereby minimizing the amount of contamination that would be available to contaminate the groundwater and volatilize into the on-site building. Since the SVE systems have been installed, levels of contaminants in groundwater steadily decreased and remain below MCLs. The decision to cease groundwater monitoring was made on June 4, 2015. The wells have not been decommissioned and remain on site in case additional monitoring is required.

The SVE/vapor mitigation systems continue to remove VOCs from the soil and from below the subslab of the building. Based on a review of indoor air monitoring data, a decision was made (on June 4, 2015) to reduce the amount of indoor air sampling locations from eight locations to five locations. The remaining five locations are monitored on an annual basis. Indoor air monitoring data reflects that indoor air levels for TCE are sometimes above the EPA ROD cleanup level but are typically below the NYSDOH guideline value for residential scenarios and well below the EPA health-based value for industrial/commercial properties.

QUESTION B: Are the exposure assumptions, toxicity data, cleanup levels, and remedial action objectives (RAOs) used at the time of the remedy selection still valid?

Human Health – (a) The exposure assumptions and exposure pathways that were used in the risk assessment were reviewed and are still valid. The pathways that were evaluated included industrial/commercial and future residential exposure for ingestion, dermal contact and inhalation of vapors from showering from groundwater exposure and ingestion of groundwater and inhalation of indoor air for on-site workers. These pathways, assumptions and receptors are still valid. (b) The toxicity data for the site-related contaminants, PCE and TCE have changed since the ROD was signed. Although the toxicity values for these chemicals have changed, the outcome of the risk assessment would still be valid. (c) The cleanup levels that were used for the soil were the NYSDEC Part 375 soil cleanup values and the cleanup levels that were used for groundwater were the lower of the State or Federal MCLs. The soil and groundwater values are still valid. The cleanup value TCE in indoor air was established through an Administrative Order on Consent (AOC) based upon the former TCE toxicity value. The EPA ROD

cleanup number for indoor air, 0.36 ug/m^3, which is more conservative than the 2 ug/m^3 guidance action value recommended by NYSDOH for residential properties.* Furthermore, action values for industrial/commercial properties would be higher. The values chosen in the ROD are still valid and current indoor air concentrations are protective of building inhabitants. (d) The remedial action objectives (RAOs) for groundwater were to prevent exposure to groundwater; for soil to minimize migration from soil to groundwater, restore soil and minimize migration from soil to indoor air; and for indoor air to prevent exposure to indoor air from vapors migrating thorough the building slab. These RAOs are still valid.

* Recently, the New York State Department of Health (NYSDOH) lowered its guideline value in a residential setting for TCE in air from 5 µg/m^3 to 2 µg/m^3. This guideline set an air concentration lower than a level known to cause, or suspected of causing, effects in humans and animals. As such, exposure to TCE concentrations at or near to the guideline are not expected to cause health effects to people.

EPA uses a health-based value for a commercial/industrial setting for TCE of 8.8 µg/m^3; this guideline is set at a higher value than the residential value because the duration of exposure is considered to be 8-hours/day, for 5-days per week, as compared to the residential value which is conservatively based on 24-hours of exposure, 7-days per week.

Indoor air monitoring data from September 2008 through July 2015 reflects that only three samples exceeded the most stringent NYSDOH residential guideline of 2 µg/m^3, namely, sample IA-8 (from June 2010) at 2.09 µg/m^3, sample IA--6 (from July 2014) at 2.08 µg/m^3, and sample IA-8 (from July 2014) at 2.16 µg/m^3. Each of these three samples only slightly exceeded the NYSDOH guideline value, which, again, applies to a residential setting.

Ecological – The ecological evaluation that was conducted for the remedial investigation indicated that there are contaminants in groundwater and soils, but they are not present- at levels posing significant risks to ecological receptors. Furthermore, based on the industrial nature of the former facility and surrounding properties and the minimal natural vegetation at the Site, it was determined that the Site does not have any valuable ecological resources. In addition, two other physical factors also support the finding that there are no significant risks to ecological receptors, namely, that the depth to groundwater is approximately 105 feet, and that groundwater to surface water pathways are not present. As there are no complete exposure pathways, based on the absence of a suitable habitat to support ecological receptors, it was determined that the Site does not pose a potential for adverse ecological effects. These findings are still valid. Therefore the exposure assumptions and pathways, toxicity data, cleanup values and RAOs for ecological receptors are remain valid.

QUESTION C: Has any **other** information come to light that could call into question the protectiveness of the remedy?

No other information has come to light that would call into question the protectiveness of the remedy.

VI. ISSUES/RECOMMENDATIONS

Issues/Recommendations
OU(s) without Issues/Recommendations Identified in the Five-Year Review:
None

VII. PROTECTIVNESS STATEMENT

Protectiveness Statement(s)		
Operable Unit: NA	*Protectiveness Determination:* Protective	*Planned Addendum Completion Date:* Click here to enter a date
Protectiveness Statement: The remedy is protective of human health and the environment.		

Sitewide Protectiveness Statement	
Protectiveness Determination: Protective	*Planned Addendum Completion Date:* Click here to enter a date
Protectiveness Statement: The remedy is protective of human health and the environment.	

VIII. NEXT REVIEW

The next FYR report for the Computer Circuits Corp. Superfund Site is required five years from the completion date of this review.

APPENDIX A – TABLES

Table 1 : Chronology of Site Events	
Site added to the NPL	May 10, 1999
EPA and 145 Marcus Blvd., Inc. enter into a Consent Order to develop and implement a Remedial Investigation and a Feasibility Study	September 29, 2000
EPA and 145 Marcus Blvd., Inc. enter into a Consent Order to perform removal activities at the Site	September 28, 2004
Start-up of the SVE system on the north side of the building	2005
Remedial Investigation conducted	2000 to 2007
Feasibility Study prepared	2008
Issuance of the Record of Decision	September 30, 2008
EPA issues Order for 145 Marcus Blvd., Inc. to perform remedial activities at the Site.	November 30, 2008
Start-up of the SVE system on the south side of building	September 2008
Final inspection of the SVE systems	September 22, 2008
Preliminary Closeout Report	December 23, 2008
Five-Year Review Site Visit	June 14, 2016

Table 2: Documents Reviewed		
Author	**Date**	**Title/Description**
US Environmental Protection Agency	September 2008	Record of Decision, Computer Circuits Corp. Site
US Environmental Protection Agency/145 Marcus Blvd., Inc.	September 29, 2000	Administrative Order on Consent (perform an RI/FS)
US Environmental Protection Agency/145 Marcus Blvd., Inc	September 28, 2004	Administrative Order on Consent (perform a Removal Action)
US Environmental Protection Agency	March 31, 2009	Unilateral Administrative Order (perform Remedial Activities)
PW Grosser Consulting, Inc.	Monthly status reports (2011 to 2016)	Computer Circuits Site Updates
PW Grosser Consulting, Inc.	2012-2015	Site Management Report (Annual Report)
US Environmental Protection Agency	June 2001	"Comprehensive Five-Year Review Guidance"
US Environmental Protection Agency	November 2012	"Assessing Protectiveness at Sites for Vapor Intrusion: Supplement to the 'Comprehensive Five-Year Review Guidance'"

Table 3 - Historical TCE Concentrations in Groundwater
Former Computer Circuits Site

Sampling Date	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-8	MW-9
April 2002	**39**	**200**	**17**	**38**	**31**	**67**	1 J	**51**	**53**
July 2002	**46**	**280**	**14**	**23**	**100**	**96**	10 U	**42**	**56**
December 2006	**15**	**28**	10 U	3 J	5 U	4J	NS	NS	NS
June 2007	NS	NS	NS	NS	NS	NS	5 U	14	**17**
May 2008 *	**9.29**	1.32 J	5 U	5 U	NS	5U	5 U	**5.06**	**11.3**
June 2010	3.3	1.8	0.5 U	1.4	0.5 U	NS	0.5 U	NS	**5.4**
December 2010	0.5 U	0.83	0.5 U	NS	0.5 U	NS	0.5 U	NS	4.6
July 2011	1.2	0.66	0.5 U	0.5 U	0.5 U	NS	0.5 U	NS	4.1
July 2012	1	0.66	0.5 U	0.5 U	0.5 U	NS	0.5 U	NS	1.6
July 2013	0.31 J	0.35 J	0.5 U	0.5 U	0.5 U	NS	0.5 U	NS	0.59
July 2014	0.2 J	0.19 J	0.5 U	0.5 U	0.5 U	NS	0.5 U	NS	0.29 J

Sampling Date	MW-10	MW-11	MW-AR2	MW-12S	MW-12D	MW-13S	MW-13D	MW-14S	MW-14D
April 2002	**37**	5 J	10 U	NS	NS	NS	NS	NS	NS
July 2002	**170**	3 J	10 U	NS	NS	NS	NS	NS	NS
December 2006	NS	NS	NS	NS	NS	NS	NS	NS	NS
June 2007	**8.3**	5 U	NS	NS	NS	NS	NS	NS	NS
May 2008 *	2.98 J	5 U	5 U	**9.82**	5 U	**8.26**	5 U	**10.8**	5 U
June 2010	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	4.9	0.5 U	**6.4**	0.5 U
December 2010	0.85	0.5 U	0.5 U	NS	NS	0.5 U	**5.3**	0.5 U	3.4
July 2011	0.54	0.5 U	0.5 U	0.5 U	0.5 U	2.7	0.5 U	2.9 U	0.5 U
July 2012	0.54	0.5 U	0.5 U	0.5 U	0.62	2.1	0.5 U	4.2	0.65
July 2013	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.4	0.5 U	4.4	0.5 U
July 2014	0.21 J	0.5 U	NS	0.5 U	NS	0.43 J	0.5 U	4.3	0.5

Notes:
All concentrations are µg/L (ppb)
U = Compound not detected above the laboratory Method Detection Limit
J = Estimated value
* Samples collected by EPA-ERT
Bold concentrations exceed AWQS

Table 4
Historic TCE Concentrations in Ambient Air
Former Computer Circuits Site

LOCATION SAMPLING DATE	IA-1	IA-2	IA-3	IA-4	IA-5	IA-6	IA-7	IA-8	IA-9	IA-10
June 2010	0.231	0.209	**1.97**	0.489	0.388	**1.89**	**1.71**	**2.09**	NS	NS
December 2010	0.107U	0.107U	**1.16**	0.107U	0.118	**1.2**	**1.21**	**1.17**	NS	NS
July 2011	0.338	0.335	**1.13**	0.279	0.107U	**1.1**	**1.01**	**0.924**	NS	NS
December 2011	0.215	0.22	**1.34**	0.231	0.274	**1.34**	**1.32**	**1.41**	**1.27**	0.107U
July 2012	0.118	0.14	**1.12**	0.107U	0.107U	**0.897**	**0.946**	**1.03**	NS	NS
December 2012	0.107U	0.107U	**0.919**	0.107U	0.107U	**0.957**	**0.871**	**1.1**	0.14	NS
July 2013	0.263	0.236	**1.96**	0.236	0.183	**1.93**	**1.8**	**1.96**	NS	NS
December 2013	0.199	0.161	**1.41**	0.183	0.317	**1.08**	**1.03**	**1.67**	NS	NS
July 2014	0.107U	0.107U	**1.83**	0.107U	**0.602**	**2.08**	**1.9**	**2.16**	NS	NS
December 2014	0.107U	0.107U	**0.865**	0.107U	0.107U	**0.892**	**0.849**	**0.897**	NS	NS
July 2015	NS	0.285	**0.844**	0.269	0.376	NS	NS	**0.769**	NS	NS

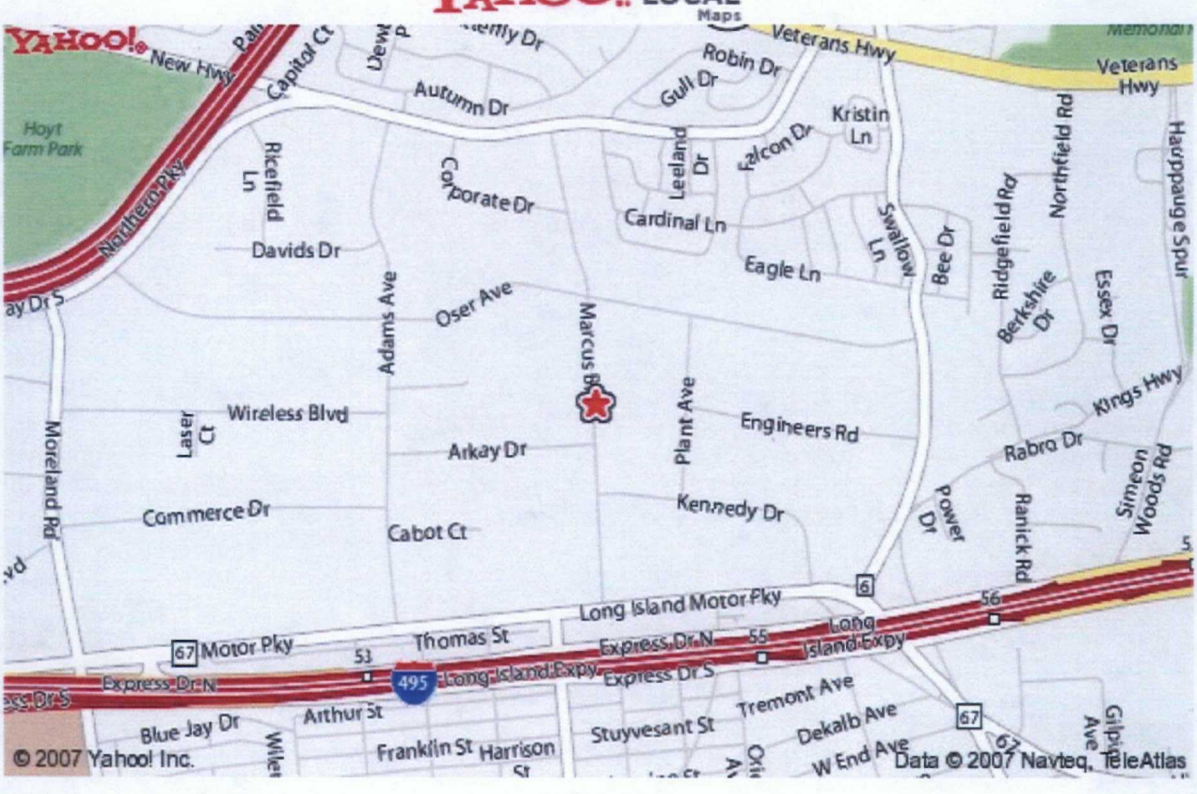
Notes:

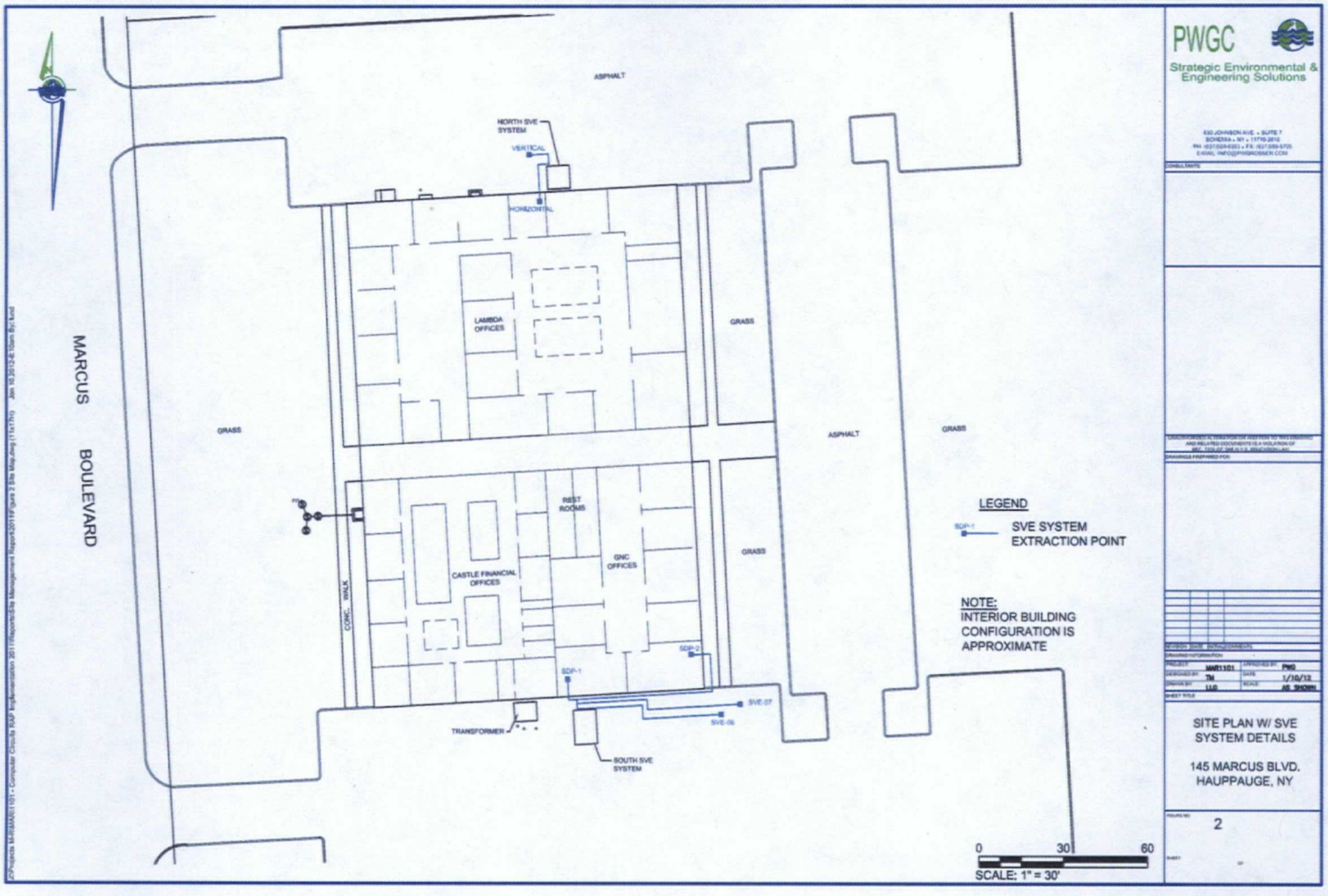
- All concentrations are µg/m^3
- U = non-detect
- Values in **Bold** exceed the site specific target concentration of 0.36 µg/m^3
- NS = not sampled

APPENDIX B – FIGURES

FIGURE 1
SITE LOCATION
145 MARCUS BLVD
HAUPPAUGE, NEW YORK

Yahoo! Maps - 145 MARCUS BLVD, Hauppauge, NY 11788, US





PWGC

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CONSULTANTS

DRAWINGS PREPARED FOR:

PROJECT	MAR1101
DESIGNED BY	TM
DRAWN BY	LLG
APPROVED BY	PWG
DATE	1/30/12
SCALE	AS SHOWN

SHEET TITLE

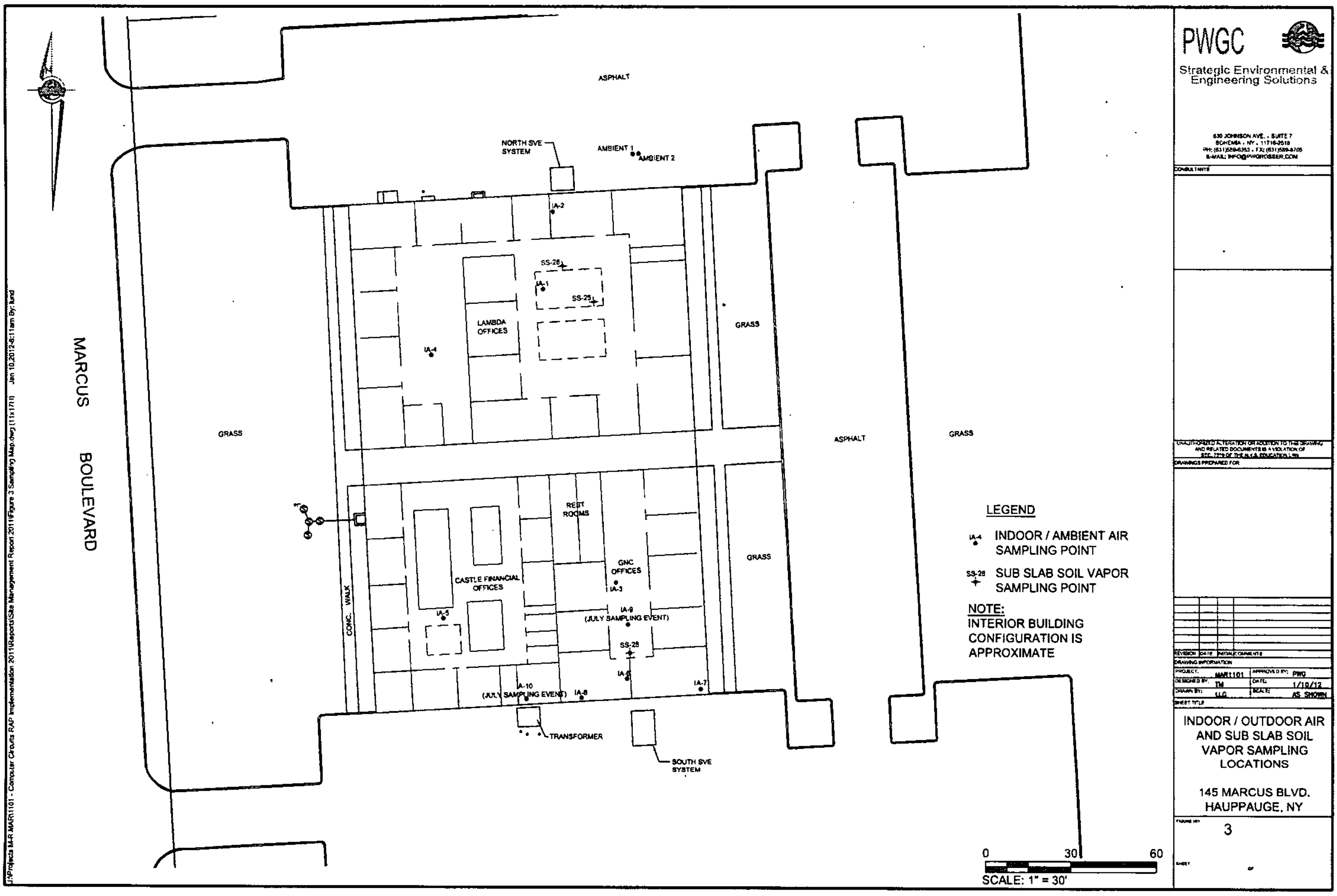
SITE PLAN W/ SVE SYSTEM DETAILS

145 MARCUS BLVD.
HAUPPAUGE, NY

FIGURE NO.

2

SHEET OF


MARCUS BOULEVARD
GRASS
ASPHALT
NORTH SVE SYSTEM
AMBIENT 1
AMBIENT 2
IA-2
SS-26
IA-1
SS-25
LAMBDA OFFICES
IA-4
GRASS
ASPHALT
GRASS
REST ROOMS
CASTLE FINANCIAL OFFICES
GNC OFFICES
IA-3
IA-5
IA-9
(JULY SAMPLING EVENT)
SS-28
CONC. WALK
IA-10
(JULY SAMPLING EVENT)
IA-8
IA-7
GRASS
TRANSFORMER
SOUTH SVE SYSTEM
LEGEND
INDOOR / AMBIENT AIR SAMPLING POINT
SUB SLAB SOIL VAPOR SAMPLING POINT
NOTE:
INTERIOR BUILDING CONFIGURATION IS APPROXIMATE
0
30
60
SCALE: 1" = 30'
PWGC
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REVISION
DATE
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COMMENTS
DRAWING INFORMATION
PROJECT: MAR1101
APPROVED BY: PWG
DESIGNED BY: TM
DATE: 1/10/12
DRAWN BY: LLG
SCALE: AS SHOWN
SHEET TITLE
INDOOR / OUTDOOR AIR AND SUB SLAB SOIL VAPOR SAMPLING LOCATIONS
145 MARCUS BLVD. HAUPPAUGE, NY
FIGURE NO.
3
SHEET
OF

BASEMAP PROVIDED BY:
U.S. EPA ENVIRONMENTAL RESPONSE TEAM
AERIAL PROVIDED BY:
GOOGLE

0 100 200
SCALE: 1" = 100'

WELL LOCATION MAP

SCALE: 1" = 100'

LEGEND

ERT MW-13 S/D — 2" GROUNDWATER MONITORING WELL COUPLETS: SHALLOW AND DEEP (ERT/ REAC)

MW-9 — EXISTING GROUNDWATER MONITORING WELL

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MONITORING WELL LOCATIONS

COMPUTER CIRCUITS SUPERFUND SITE
HAUPPAUGE, NY

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