

May 17, 2021

North Carolina Department of Environmental Quality
Division of Waste Management – DSCA Program
1646 Mail Services Center
Raleigh, NC 27699-1646

Attn: Mr. Mike Cunningham
DSCA Project Manager

Re: **Risk Management Plan**
Bee Cleaners - DSCA Site ID DC340038
5395 Shattalon Drive
Winston-Salem, Forsyth County, North Carolina

Dear Mr. Cunningham:

AECOM Technical Services of North Carolina, Inc. (includes legacy URS and herein referred to as AECOM) is pleased to provide the attached Risk Management Plan (RMP) for the Bee Cleaners site formerly located at 5395 Shattalon Drive in Winston-Salem, North Carolina. A risk assessment conducted for the site indicates that contaminant concentrations at the site do not pose an unacceptable risk with appropriate land-use controls applied to the impacted properties. The primary purpose of this RMP is to ensure that the assumptions made in the risk assessment remain valid in the future. Based on the documentation outlined in this report, AECOM recommends issuance of a No Further Action letter for the site.

If you have any questions or require additional information, please do not hesitate to call either Rob MacWilliams at (704) 499-4839 or Jeffrey T. Hvozdk at (704) 499-4706.

Sincerely,

AECOM TECHNICAL SERVICES OF NORTH CAROLINA, INC.



Jeffrey T. Hvozdk, PG
Project Manager



Robert H. MacWilliams, PG
Program Manager

**Risk Management Plan
Bee Cleaners - DSCA Site ID DC340038
5395 Shattalon Drive
Forsyth County
Winston-Salem, North Carolina 27016**

Submitted To:
NC Department of Environmental Quality
Division of Waste Management – DSCA Program
1646 Mail Services Center
Raleigh, NC 27699-1646



Jeffrey T. Hvozdek, PG
Project Manager



Robert H. MacWilliams, PG
Program Manager

AECOM

AECOM Technical Services of North Carolina, Inc.
SouthPark Towers
6000 Fairview Road, Suite 200
Charlotte, North Carolina 28210

TABLE OF CONTENTS

<u>SECTION</u>	<u>PAGE</u>
1.0 INTRODUCTION	1
2.0 OBJECTIVES OF RISK MANAGEMENT PLAN	1
3.0 SUMMARY OF RISK ASSESSMENT REPORT	2
4.0 REMEDIAL ACTION PLAN	5
4.1 ASSESSMENT ACTIVITIES AND INTERIM ACTIONS	5
4.2 REMEDIAL ACTION	8
5.0 DATA COLLECTED DURING RMP IMPLEMENTATION	10
6.0 LAND-USE CONTROLS	10
7.0 LONG-TERM STEWARDSHIP PLAN	12
8.0 RMP IMPLEMENTATION SCHEDULE.....	12
9.0 CRITERIA FOR DEMONSTRATING RMP SUCCESS	12
10.0 CONTINGENCY PLAN IF RMP FAILS.....	13
11.0 CONCLUSIONS AND RECOMMENDATIONS	13

FIGURES

Figure 1	Site Location Map
Figure 2	Exposure Unit Location Map
Figure 3	Groundwater Quality Summary Map
Figure 4	Soil Quality Summary Map
Figure 5	Soil-Gas/Vapor/Indoor Air Quality Summary Map
Figure 6	Land-Use Restriction Map

APPENDICES

Appendix A Plume Stability Demonstration

Appendix B Level 1 Ecological Risk Assessment Checklists

Appendix C Notice of Dry-Cleaning Solvent Remediation for the Source Property (*Kanan Holdings LLC, PIN 6818-54-3108.000*)

Appendix D Example Annual Certification of Land-Use Restrictions

Appendix E Example Documents Announcing Public Comment Period

1.0 INTRODUCTION

AECOM Technical Services of North Carolina, Inc. (includes legacy URS and herein referred to as AECOM) has prepared this Risk Management Plan (RMP) to address dry-cleaning solvent contamination associated with the Bee Cleaners facility (DSCA Site ID DC340038) on behalf of the North Carolina Department of Environmental Quality (NCDEQ) Dry-Cleaning Solvent Cleanup Act (DSCA) Program. The former dry-cleaning operation conducted business as A Cleaner World #192 and/or Bee Cleaners (circa 1992 to 2008) within an approximately 45-foot by 60-foot (or 2,700 square foot) tenant space inside the Shattalon Station Shopping Center located at 5395 Shattalon Drive (source property) in a mixed-use area of Winston-Salem, Forsyth County, North Carolina, as shown on the attached **Figure 1**. The tenant space where the Bee Cleaners facility was located is currently occupied by Tienda Mexicana La Palmera, a grocery store.

The Bee Cleaners site (herein referred to as the “Site”) includes the source property (where the former dry-cleaning facility source was located). The site property is as follows:

1. Source property – **Kanan Holdings LLC, 5399 Shattalon Drive, PIN 6818-54-3108.000**, which encompasses the Shattalon Station Shopping Center, including the former Bee Cleaners tenant space formerly located at 5395 Shattalon Drive.

This RMP is intended to comply with the requirements of the DSCA (N.C.G.S. 143-215.104A et seqs) and promulgated rules and follows the outline provided in the DSCA Program’s risk-based corrective action (RBCA) guidance.

2.0 OBJECTIVES OF RISK MANAGEMENT PLAN

AECOM has completed assessment activities at the site which identified the following:

- The presence of tetrachloroethylene (also referred to herein as tetrachloroethene, or PCE); 1,2-dichloroethane, and chloromethane in groundwater beneath the source property at concentrations exceeding the Title 15A NCAC 2L .0202 Groundwater Standards (2L Standards);
- The presence of PCE in soil beneath the source property at concentrations above the Division of Waste Management (DWM) health based and/or protection of groundwater Preliminary Soil Remediation Goals (PSRGs); and

- The presence of site contaminants in soil-gas beneath the source property, as identified in the *Risk Assessment Report* dated, September 16, 2020, that exceed calculated risk for Residential and Non-Residential worker exposure.

AECOM completed a risk assessment for the site in September 2020 in accordance with the DSCA Program's risk assessment procedures. The results of the risk assessment indicated that there are risks that exceed applicable target levels on the source property. These risks will be managed using site-specific land-use conditions that have been selected as part of the risk assessment evaluation and which require an RMP. Thus, the objective of the RMP is to ensure that those site-specific land-use conditions remain valid in the future.

3.0 SUMMARY OF RISK ASSESSMENT REPORT

AECOM performed a risk assessment to address the applicable exposure pathways based on the identified impacts summarized in **Section 2.0**. Comprehensive results of the risk assessment, which are summarized herein, are documented in the *Risk Assessment Report*, dated September 16, 2020.

The site is currently zoned as non-residential; however, to be protective of unknown future zoning and mixed-use development in the future, both residential and non-residential scenarios were considered as part of the risk assessment.

The risk assessment process consisted of evaluating exposure pathways for the exposure units shown on **Figure 2**. A summary of the groundwater quality data used in the risk assessment is included on **Figure 3**. A summary of the soil quality data referenced in the risk assessment is included on **Figure 4**. A summary of the soil-gas/vapor/indoor air quality data used in the risk assessment is included on **Figure 5**.

The exposure model evaluation included the following exposure pathways for each Exposure Unit:

Exposure Unit #1

Exposure Unit #1 (EU#1) encompasses a portion of the Shattalon Station Shopping Center (5399 Shattalon Drive) source property (identified as PIN 6818-54-3108.000) owned by Kanan Holdings LLC, which is comprised of the former Bee Cleaners (5395 Shattalon Drive) tenant

space as well as a portion of the adjoining Shattalon Discount (5391 Shattalon Drive) tenant space to the west.

- **Vapor Intrusion Pathway** – For the vapor intrusion exposure pathway, indoor air data was used to evaluate current risk and sub-slab vapor data was used to evaluate future risk. The maximum indoor air and soil-gas contaminant concentrations detected within EU#1 were conservatively used as exposure point concentrations (EPC's) for contaminants of concern (COC's) to evaluate the vapor intrusion pathway using the NCDEQ Risk Calculator (December 2019) for current conditions (non-residential), and future conditions (residential and non-residential). As indicated on **Figure 5**, the risk assessment results were within acceptable risk levels for current non-residential land use conditions. However, the risk assessment results were not within acceptable risk levels for the indoor air exposure pathway for residential or non-residential use under future conditions. The future indoor air inhalation exposure pathway in **Area A** of EU#1, as designated on **Figure 6** and in the source property survey plat attached as “Exhibit A” of the Notice of Dry-Cleaning Solvent Remediation (NDCSR) in **Appendix C**, can be addressed through the imposition of land-use controls where soil-gas contaminant concentrations exceed applicable risk levels as defined herein.
- **Soil Combined Pathways** – For the soil combined pathways evaluation, soil quality data was used to evaluate current and future risk. The maximum soil contaminant concentrations detected within EU#1 were conservatively used as EPC's for COC's. Soil combined risk was evaluated using the NCDEQ Risk Calculator (December 2019) for current conditions (non-residential) and future conditions (residential and non-residential). Soil combined pathway risk levels did not exceed calculated acceptable risk for current non-residential or future residential and/or non-residential land use conditions. However, soil contamination exceeds NCDEQ Preliminary Soil Remediation Goals (PSRGs) in **Area B** of EU#1, as designated on the source property survey plat attached as “Exhibit A” of the NDCSR in **Appendix C**. Therefore, this can be addressed through the imposition of a land-use control whereupon soil in **Area B** may not be removed or disturbed unless approved in writing in advance by NCDEQ or its successor in function. No other land-use controls are necessary to address the Soil Combined exposure pathway in EU#1.

Since groundwater contaminant concentrations above the 2L Standards are present within EU#1, land-use controls should be implemented preventing the use of, or exposure to, groundwater within EU#1.

Exposure Unit #2

Exposure Unit #2 (EU#2) includes the remaining portion of the source property and is currently a non-residential facility including portions of a strip mall.

- **Vapor Intrusion Pathway** – For the vapor intrusion exposure pathway, sub-slab vapor and soil-gas data was used to evaluate current and future risk. The maximum sub-slab vapor contaminant concentrations detected within EU#2 were conservatively used as EPC's for COC's to evaluate the vapor intrusion pathway using the NCDEQ Risk Calculator (December 2019) for current conditions (non-residential), and future conditions (residential and non-residential). The results of the risk assessment were within acceptable risk levels for current and future non-residential land use conditions. However, soil-gas sample results were not within acceptable levels of risk for the indoor air exposure pathway for residential use under future conditions. The future indoor air inhalation exposure pathway in EU#2 can be addressed through the imposition of non-residential land-use controls.

Since groundwater contaminant concentrations above the 2L Standards are present within EU#2, land-use controls should be implemented preventing the use of groundwater within EU#2.

Point of Exposure Modeling

Site-specific Domenico groundwater modeling results did not indicate an exceedance of the site-specific target level (SSTL) for PCE in source soil as modeled to be protective of the closest point of exposure (POE). As indicated on **Figure 2**, the closest POE was selected to be the first property (PIN 6818-44-9006) on which impacts have not been observed and is located approximately 520 feet southwest (downgradient) from what is considered to be the soil source area. As indicated on **Figure 2**, the closest surface water POE was selected to be the closest downgradient surface water body, an unnamed tributary of Mill Creek located approximately 780 feet southwest from the soil source area.

Site-specific Domenico groundwater modeling results did indicate an exceedance of the SSTLs for PCE and bromomethane in source groundwater as modeled to be protective of both above listed POEs. However, an evaluation of site groundwater quality indicates that the plume has not migrated as far as either of the above listed POEs. As indicated on **Figure 3**, the absence of PCE and bromomethane in downgradient monitoring wells MW-1, MW-2 and MW-4 empirically demonstrate that the Domenico groundwater model utilized as part of this evaluation has over

estimated contaminant migration in respect to the above listed POEs. This is likely attributable to the fact that the conservative predictive modeling calculations of the Domenico Model does not account for physical and/or biological mediated contaminant degradation that may be occurring naturally in the subsurface as the contaminant(s) migrate between the source area and the selected downgradient POEs.

In addition to contaminant degradation, the rate of infiltration is a significant variable in the leaching of contaminants from contaminated soil to groundwater. Specifically, the concentration of dissolved phase contaminants in the groundwater beneath the site is proportional to the degree of partitioning of contaminants from affected source soils to groundwater. As the rate of infiltration is a significant variable in the leaching of contaminants from contaminated soil to groundwater it is reasonable to assume that groundwater contaminant concentrations and possible plume expansion would occur in the event that infiltration rates increase in the area of source soil contamination. In general, increased contaminant partitioning from soil to groundwater may result in a greater groundwater contaminant mass and ultimately a larger contaminant plume. As such, in some instances it is recommended that land-use controls be utilized to maintain infiltration conditions in areas where structures and/or paved surfaces may currently limit infiltration rates above areas where soil contaminant concentrations exceed the calculated SSTLs. This is not necessary at this site as soil contaminant levels did not exceed the calculated SSTLs. However, because soil contaminant concentrations exist at levels above the PSRGs, soil in **Area B** (as indicated on **Figure 4**) may not be removed or disturbed unless approved in writing in advance by NCDEQ.

As further detailed in **Section 6.0**, institutional controls will also be implemented to ensure that land-use conditions are maintained and monitored until the land-use controls are no longer required for the site.

4.0 REMEDIAL ACTION PLAN

4.1 Assessment Activities and Interim Actions

A *Phase I/Phase II Environmental Site Assessment* (ESA) report, dated February 10, 2017, was prepared by Logic Environmental (Logic) at the Shattalon Station Shopping Center. The report identified the former Bee Cleaners as a recognized environmental concern. Sampling activities included the collection of three soil and two groundwater samples from three locations (B1, B-2 and B-3) to assess potential subsurface impacts related to historic dry-cleaning operations.

Review of the soil and groundwater analytical results indicated the subsurface was impacted by chlorinated dry-cleaning solvents; specifically, PCE.

On March 20, 2017, the site was certified into the DSCA Program, and the DSCA Program subsequently performed assessment and monitoring activities at the site between 2017 and 2019 to assess the extent of dry-cleaning solvent impacts and to evaluate potential receptors within a one-half mile radius of the site. Between May and June 2017, AECOM initiated prioritization assessment (PA) activities which included: receptor survey activities; an ecological risk assessment; advancement of seven soil borings (SB-1 through SB-7); and the installation of five groundwater monitoring wells (MW-1 through MW-5). Following installation all monitoring wells were gauged and sampled. Rising-head slug tests were conducted on monitoring wells MW-2, MW-4, and MW-5. In addition, AECOM performed vapor intrusion-related assessment activities in accordance with applicable guidance. The following vapor samples were collected from the former dry-cleaning tenant space: ambient air (AA-1); indoor air (IA-1); and sub-slab vapor (SSV-1). One sub-slab vapor sample was collected from the adjacent Discount Store tenant space (SSV-2). Pertinent groundwater, soil, and soil-gas/vapor/indoor air sample locations and analytical results are shown on **Figures 3, 4 and 5**, respectively.

The receptor survey identified numerous water supply wells (WSWs) within the specified search radius, but the ecological risk assessment did not identify ecological receptors with the likelihood of impacts within a one-half mile radius of the site. Review of the soil data generated as part of the May/June 2017 PA activities did not identify any significant soil contaminant concentrations, but some samples were collected from depths that historically have been saturated with contaminated groundwater. As such, supplemental soil sampling was warranted. Review of the groundwater data generated as part of the May/June 2017 PA activities appeared to have adequately defined the source groundwater impacts beneath the site. In addition, vapor intrusion (VI) assessment activities were adequate in respect to evaluating current VI exposure routes. However, additional soil-gas sampling was warranted as part of establishing the area of VI land use restrictions if the site were to be considered for closure in anticipation of completing a risk assessment. Results of the PA activities and ecological risk assessment were submitted to the DSCA Program in the following reports:

- *Vapor Intrusion-Related Sampling Results* letter report dated September 7, 2017.
- *Ecological Risk Assessment Report* dated September 7, 2017.
- *Prioritization Assessment Report (PAR)* dated October 20, 2017.

As documented in the *Prioritization Assessment Report Update* prepared by AECOM, and dated January 17, 2018, AECOM completed seven supplemental soil borings (SB-4A, SB-5A, SB-6A, and SB-7A; SB-8 through SB-10) beneath the footprint of the former Bee Cleaners tenant space and installed one soil-gas point (SG-1) to further assess potential VI risks to the north adjacent residential property at 4740 Murray Road. In addition, groundwater monitoring wells MW-1 through MW-5 were gauged and sampled, and requests to sample select off-site WSWs in close proximity to the site were sent via certified mail.

Review of the supplemental soil quality data identified soil contaminant concentrations above NCDEQ PSRGs for unrestricted use in shallow soil borings SB-4A and SB-7A, and deep soil borings B-1-8, SB-4, SB-6, and SB-7. Based on the supplemental soil quality data, no further soil assessment was warranted. In addition, VI assessment of on-site and off-site receptors were adequate for evaluating current VI exposure routes. Further VI assessment was warranted to evaluate future VI exposure routes at the site.

A *Groundwater Monitoring Report (GWMR)*, prepared by AECOM and dated August 6, 2018, documents two additional quarters (March and May 2018) of comprehensive groundwater monitoring activities. Through four quarters of groundwater sampling, PCE was not detected in MW-1, MW-2, MW-4 or MW-5. PCE concentrations were detected in MW-3 but a concentration trend could not be established. Since a trend for the PCE concentrations observed in MW-3 could not be established, additional sampling was recommended.

A limited sampling event at monitoring well MW-3 was conducted on August 17, 2018. In addition, two soil-gas samples (SG-2 and SG-3) were collected to evaluate soil-gas quality around the former Bee Cleaners tenant space and further define future VI exposure routes at the site.

Groundwater analytical results of the sample collected from monitoring well MW-3 reported the highest PCE concentration detected to date; however, a PCE concentration trend still could not be established. As such, it was recommended that MW-3 be sampled again to further evaluate contaminant concentration trends.

Soil-gas sample results from SG-2 and SG-3 were acceptable for current (non-residential) and future (residential) use conditions. Based on the data generated to date, additional vapor intrusion-related assessment activities were not warranted.

Results of the August 2018 groundwater and soil-gas assessment activities were submitted to the DSCA Program in an *Additional Groundwater and Soil-Gas Sample Results* letter report, prepared by AECOM and dated September 11, 2018.

A limited sampling event at monitoring well MW-3 was conducted on November 12, 2018. In addition, one groundwater sample (WSW-1) was collected from the inactive WSW at 4740 Murry Road located immediately north of the site. AECOM returned to the site on February 20, 2019 and collected another groundwater sample from monitoring well MW-3. The results of these sampling activities are documented in *Additional Groundwater Sampling Results* letter report dated April 23, 2019 and concluded that – based on a review of the groundwater quality data generated to date – the extent of PCE groundwater impacts exceeding 2L Standards is limited to source area monitoring well MW-3 and no further assessment was warranted.

Pertinent groundwater, soil, and soil-gas/vapor/indoor air sample locations and analytical results from all site investigation activities are shown on **Figures 3, 4, and 5**, respectively.

Once sufficient data was available to demonstrate groundwater plume stability and soil and air/vapor assessment activities were completed at the site, AECOM submitted a draft risk assessment on September 16, 2020, and the final Risk Assessment Report was approved on September 18, 2020. As discussed in detail in **Section 3.0**, the risk assessment concluded that the risks associated with chlorinated solvent contamination at the site could be managed through implementation of site-specific land-use controls as detailed in this RMP. Therefore, the risk assessment recommended risk-based closure for the site. The purpose of this RMP is to ensure that the assumptions made in the risk assessment remain valid in the future.

4.2 Remedial Action

According to the DSCA Program's RBCA guidance, no remedial action is necessary if the following four site conditions are met:

- (i) the dissolved plume is stable or decreasing;
- (ii) the maximum concentration within the exposure domain for every complete exposure pathway of any COC is less than ten times the representative concentration (RC) of that COC;
- (iii) adequate assurance is provided that the land-use assumptions used in the DSCA Program's RBCA process are not violated for current or future conditions; and,

- (iv) there are no ecological concerns at the site.

The site's compliance with the four above referenced conditions confirms that the contaminant concentrations are not likely to pose an unacceptable risk either at present or in the future and remedial action at the site is not required. Each of these conditions and their applicability to the subject site are summarized in the following sections.

4.2.1 Condition 1 – The dissolved plume is stable or decreasing

A total of seven groundwater sampling events (June 2017, November 2017, March 2018, May 2018, August 2018, November 2018, and February 2019) have been conducted using existing monitoring wells to document plume stability at the site. Constituents detected in groundwater samples from the site include: PCE, 1,2-dichloroethane, chloromethane, bromomethane, chloroform, methyl isobutyl ketone, diisopropyl ether, and methyl-tert-butyl ether. AECOM focused on PCE as the primary COC for evaluation of plume stability.

AECOM utilized the GSI Environmental Inc. (GSI) Mann-Kendall Toolkit for Constituent Trend Analysis (Mann-Kendall Analysis) for the sampling events conducted at the site, which are included in **Appendix A**. As shown on the Mann-Kendall Analysis plots, downgradient PCE concentrations have not exhibited a trend during the sampling events completed from June 2017 to February 2019. Based on this data, AECOM concluded that the size of the plume is stable and concentrations in the source area are likely to remain generally stable.

Documentation of the plume stability evaluation, including a table showing historical groundwater analytical data, and the Mann-Kendall Analysis for PCE are included in **Appendix A**.

4.2.2 Condition 2 – The maximum concentration within the exposure domain for every complete exposure pathway of any COC is less than ten times the RC of that COC

Representative concentrations were not calculated as part of the risk assessment for this site. Instead, a more conservative approach was utilized by using the maximum concentration for each COC within the exposure unit. Hence, this condition has been met for each COC and exposure pathway for the site.

4.2.3 Condition 3 – Adequate assurance is provided that the land-use assumptions used in the DSCA Program’s RBCA process are not violated for current or future conditions.

The risk assessment completed for the source property was based on current land use being non-residential. However, using the most conservative approach, future conditions at the site were considered to be residential. As discussed in **Section 6.0**, land-use controls will be implemented for the site to ensure that these assumptions remain valid.

4.2.4 Condition 4 – There are no ecological concerns at the site.

AECOM completed a *Level 1 Ecological Risk Assessment* for the site in accordance with the DSCA Program’s RBCA guidance. The results of the evaluation indicate that the release does not pose an unacceptable ecological risk. The completed Level 1 Ecological Risk Assessment Checklists A and B are attached as **Appendix B**.

The site’s compliance with the four above referenced conditions confirms that the contaminant concentrations are not likely to pose an unacceptable risk either at present or in the future. The plume is expected to naturally attenuate over time and the appropriate remedial action is to implement appropriate land-use controls on the properties where soil and/or groundwater contamination is present.

5.0 DATA COLLECTED DURING RMP IMPLEMENTATION

No further sampling or other data collection activities are proposed for the site, assuming the assumptions detailed in the Notice of Dry-Cleaning Solvent Remediation (NDCSR) remains valid. As such, this section is not applicable.

6.0 LAND-USE CONTROLS

As discussed in detail in **Section 3.0**, the recommendation for closure in the risk assessment for the site was based on the following land-use controls:

- The source property should be used exclusively for non-residential land use and related amenities.
- The source property shall not be used for childcare centers or schools.
- The source property shall not be used for mining or extraction of coal, oil, gas or any mineral or non-mineral substances without prior written approval from NCDEQ.

- Groundwater will not be used on the source property without prior approval of NCDEQ.
- Any activities within **Area A** of the source property as shown on **Figure 6**, that cause or create a vapor intrusion risk should not be completed without prior approval of NCDEQ, as detailed below:
 - Except for routine maintenance, no construction activities or change in property use that cause or create an unacceptable human health risk from vapor intrusion may occur on the Property without prior approval of the NCDEQ. These activities include but are not limited to: construction of new buildings, removal and construction of part of a building, construction of sub-grade structures that encounter contaminated soil or places building users in close proximity to contaminated groundwater, change from non-residential to residential property, change in tenant space usage, and addition of residential property use on higher floors.
 - Structural modifications that may cause or create an increased risk from vapor intrusion require the property owner to demonstrate to the satisfaction of the NCDEQ that the indoor air in the structure does not pose an unacceptable risk to the occupants following modifications. These modifications include but are not limited to: modification or replacement of heating, ventilation or air conditioning (HVAC) systems, removal or replacement of the building slab, installation of multiple conduits or piping through the building slab, modifications to building walls or ceilings that may change air flow.
- Soil in **Area B** as shown on **Figure 6** may not be removed or disturbed unless approved in writing in advance by DEQ or its successor in function, except for routine landscape maintenance and emergency utility repair. In the event of emergency utility repair, DEQ shall be given written notice of any such emergency repair no later than the next business day, and further related assessment and remedial measures may be required.

Institutional controls will also be implemented to ensure that land-use conditions are maintained and monitored until the land-use controls are no longer required for the site. NDCSRs were prepared for the source property and the off-source property to comply with the land-use control requirement. The NDCSR is included in **Appendix C**. Refer to the NDCSR for the specific language to be incorporated to address each of the risk assessment assumptions.

A plat showing the locations and types of dry-cleaning solvent impacts on the site is included as an exhibit to the NDCSR. The locations of dry-cleaning solvent impacts are where contaminants have been detected above unrestricted use standards.

7.0 LONG-TERM STEWARDSHIP PLAN

The NDCSR for the source property contains a clause which requires the owner of the site to submit a notarized “Annual Certification of Land-Use Restrictions” to NCDEQ on an annual basis certifying that the NDCSR remains recorded with the Register of Deeds and that land-use restrictions (LURs) are being complied with. An example of such a certification is included in **Appendix D**.

8.0 RMP IMPLEMENTATION SCHEDULE

Since the groundwater plume is stable and confined to the source property, and possible exposure to the contamination is managed through the NDCSRs, no additional site remediation activities are required to implement the RMP. A 30-day public comment period will be held to allow the community an opportunity to comment on this proposed strategy. **Appendix E** includes example documents used to announce the public comment period in the local newspaper and to inform local officials, nearby property owners, and interested parties. As such, upon completion of the 30-day public comment period and final approval of the RMP, the NDCSRs will be filed with the Forsyth County Register of Deeds and will complete the RMP schedule.

9.0 CRITERIA FOR DEMONSTRATING RMP SUCCESS

The RMP will be successfully implemented once the required NDCSRs have been executed and recorded with the Forsyth County Register of Deeds. The NDCSRs for the properties may, at the request of the property owner, be canceled by the NCDEQ after the risk to public health and the environment associated with the dry-cleaning solvent contamination and any other contaminants included in the dry-cleaning solvent assessment and remediation agreement has been eliminated as a result of the remediation of the property. If the NCDEQ is notified of a change in site conditions, per the notification requirements detailed in the NDCSRs, the RMP will be reviewed to determine if the site conditions have impacted the requirements set forth in the NDCSR and if changes are required. Enforcement of the RMP will be maintained through receipt of the “Annual Certification of Land-Use Restrictions” from the property owner as part of the NDCSR requirements.

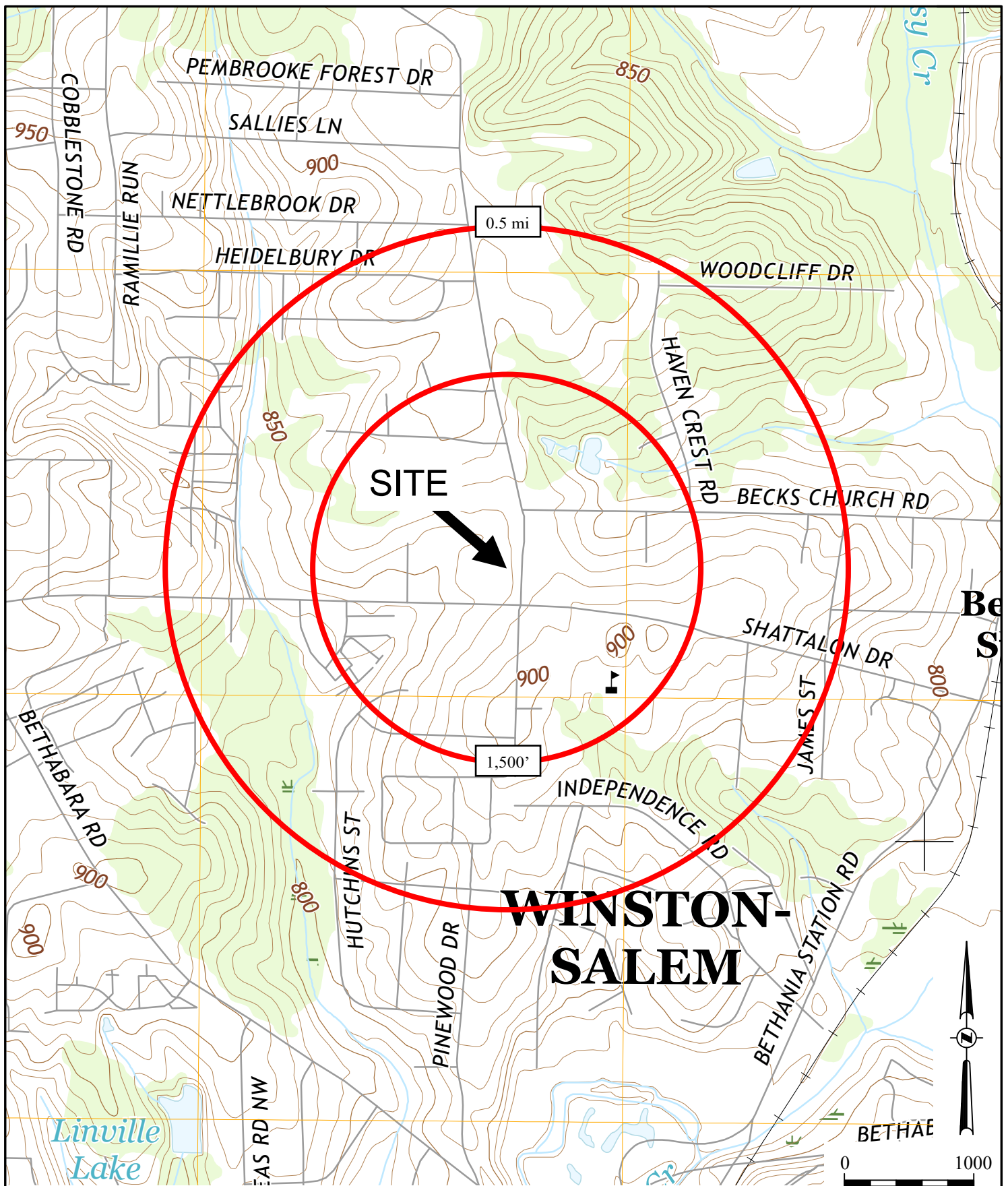
10.0 CONTINGENCY PLAN IF RMP FAILS

As discussed above, unless the DSCA Program is notified of a change in land use at the subject site, per the notification requirements detailed in this plan, the RMP will remain in effect until the RMP has met its objectives and is considered a success. Pursuant to N.C.G.S. 143-215.104K, if any of the LURs set out in the NDCSRs are violated, the owners of the properties at the time the LURs are violated, the owner's successors and assigns, and the owner's agents who direct or contract for alteration of the site in violation of the LURs, shall be held liable for the remediation of all contaminants to unrestricted use standards.

11.0 CONCLUSIONS AND RECOMMENDATIONS

AECOM has prepared this RMP for Bee Cleaners site on behalf of the DSCA Program. The results of the risk assessment completed for the site indicate that the contaminant concentrations do not pose an unacceptable risk with appropriate land-use controls applied to the impacted properties. The contaminant plume associated with the site appears generally stable or decreasing. This RMP specifies that the NDCSR requirements provide notification that land-use conditions observed during the risk assessment evaluation remain valid in the future. Based on the documentation contained in this report, AECOM recommends issuance of a "No Further Action" letter.

FIGURES



Reference: 7.5 Minute USGS Topographic Map: Rural Hall, North Carolina (2016)

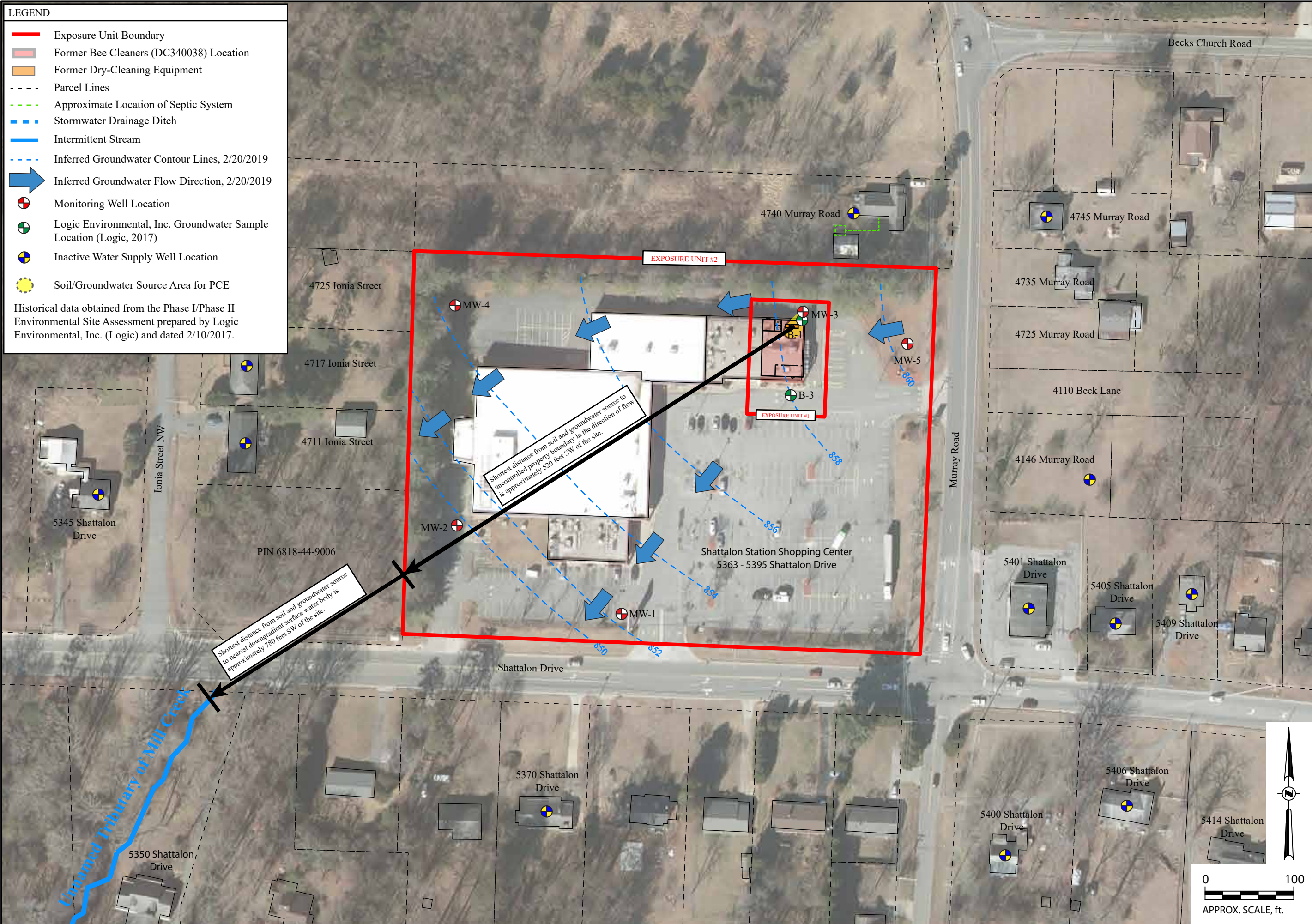
APPROX. SCALE, ft.

 <p>AECOM TECHNICAL SERVICES OF NORTH CAROLINA, INC. 6000 FAIRVIEW ROAD, SUITE 200 CHARLOTTE, NC 28210 TEL: (704) 522-0330 FAX: (704) 522-0063</p>	 <p>DEPARTMENT OF ENVIRONMENTAL QUALITY</p>	<p>Site Location Map Bee Cleaners 5395 Shattalon Drive Winston-Salem, NC DSCA Site ID DC340038</p>	<table border="1"> <tr> <td>DRAWN BY: JTH - 08/31/18</td> <td>CHECKED BY: RHM - 08/31/18</td> <td>PROJECT NO.:</td> </tr> <tr> <td colspan="2">SHEET</td> <td>60645433</td> </tr> <tr> <td colspan="3">Figure 1</td> </tr> </table>	DRAWN BY: JTH - 08/31/18	CHECKED BY: RHM - 08/31/18	PROJECT NO.:	SHEET		60645433	Figure 1		
DRAWN BY: JTH - 08/31/18	CHECKED BY: RHM - 08/31/18	PROJECT NO.:										
SHEET		60645433										
Figure 1												

LEGEND

- Exposure Unit Boundary
- Former Bee Cleaners (DC340038) Location
- Former Dry-Cleaning Equipment
- - - Parcel Lines
- - - Approximate Location of Septic System
- - - Stormwater Drainage Ditch
- Intermittent Stream
- - - Inferred Groundwater Contour Lines, 2/20/2019
- Inferred Groundwater Flow Direction, 2/20/2019
- ⊕ Monitoring Well Location
- ⊕ Logic Environmental, Inc. Groundwater Sample Location (Logic, 2017)
- ⊕ Inactive Water Supply Well Location
- ⊕ Soil/Groundwater Source Area for PCE

Historical data obtained from the Phase I/Phase II Environmental Site Assessment prepared by Logic Environmental, Inc. (Logic) and dated 2/10/2017.



Exposure Unit Location Map
 Bee Cleaners
 5395 Shattalon Drive
 Winston-Salem, NC
 DSCA Site ID DC340038

AECOM TECHNICAL SERVICES
 OF NORTH CAROLINA, INC.
 6000 FAIRVIEW ROAD, SUITE 200
 CHARLOTTE, NC 28210
 TEL: (704) 522-0330
 FAX: (704) 522-0063



DRAWN BY: JTH - 11/01/2019	CHECKED BY: RHM - 11/01/2019	PROJECT NO.: 60645433
SHEET: Figure 2		

LEGEND

- Exposure Unit Boundary
- Former Bee Cleaners (DC340038), 5395 Shattalon Drive
- Former Dry-Cleaning Equipment
- - - Parcel Lines
- - - Approximate Location of Septic System
- Intermittent Stream
- - - Inferred Groundwater Contour Lines, 2/20/2019
- Inferred Groundwater Flow Direction, 2/20/2019
- Monitoring Well Location
- Logic Environmental, Inc. Groundwater Sample Location (Logic, 2017)
- Inactive Water Supply Well Location
- Area of PCE groundwater impacts above NCDEQ 2L Standards

PCE Tetrachloroethene
 MIBK 4-Methyl-2-pentanone
 MTBE Methyl tert butyl ether
 BDL Below Detection Limits
 ug/l micrograms per liter

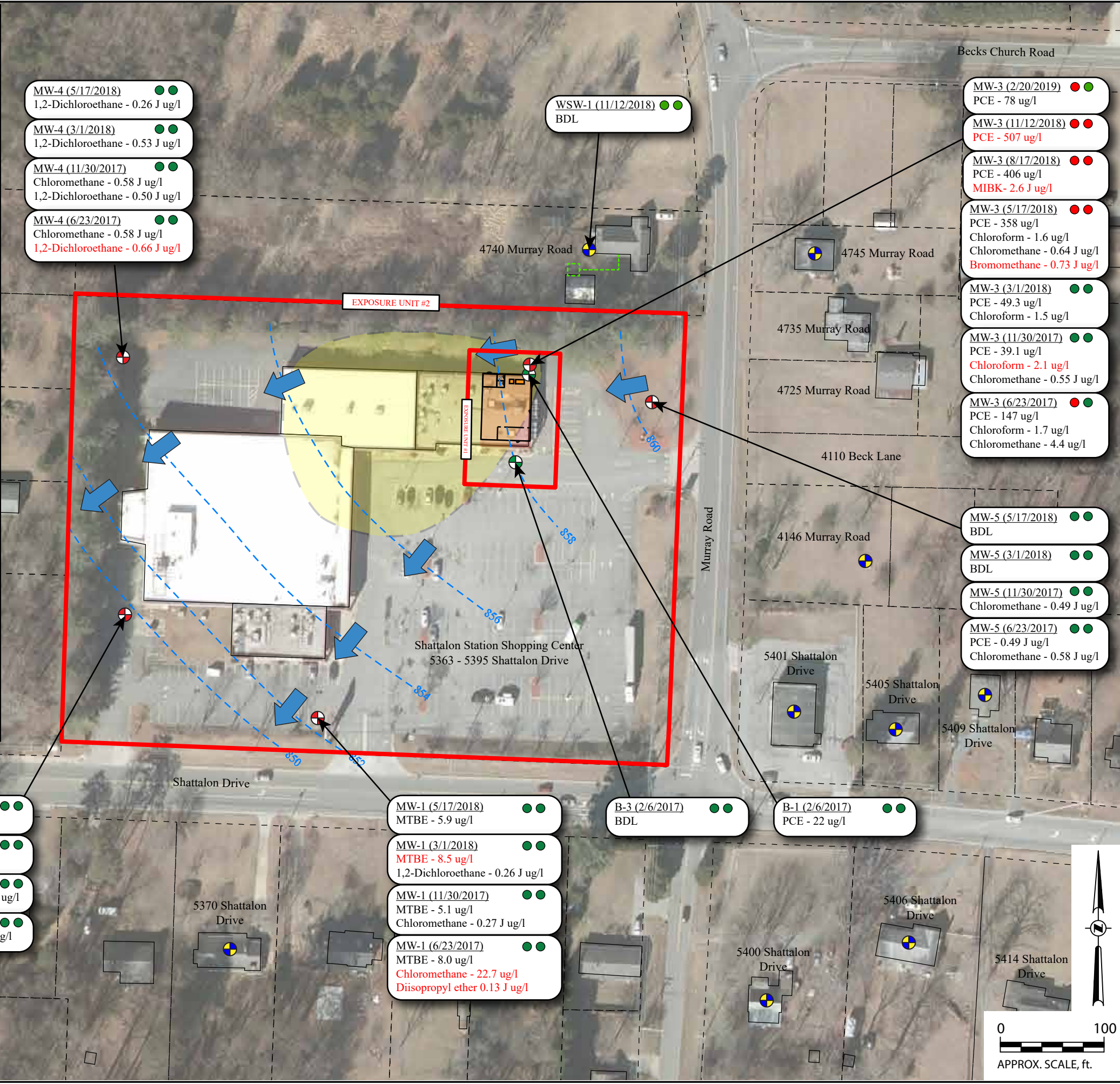
Groundwater to Indoor Air Risk Calculations - DSCA Calculator (Ver. 7 - August 2019)

- Analytical results do not exceed calculated vapor intrusion risk for residential or non-residential exposure – DSCA Indoor Air Risk Calculator, Version 7, August 2019
- Analytical results do not exceed calculated vapor intrusion risk for non-residential exposure but do exceed for residential exposure – DSCA Indoor Air Risk Calculator, Version 7, August 2019
- Analytical results exceed calculated vapor intrusion risk for residential and non-residential exposure – DSCA Indoor Air Risk Calculator, Version 7, August 2019

Red highlighted text indicates concentrations used in DSCA Risk Assessment Model.

If COC is not shown, it was not detected above the method detection limit (MDL) in a particular sample.

Historical data obtained from the Phase I/Phase II Environmental Site Assessment prepared by Logic Environmental, Inc. (Logic) and dated 2/10/2017.



Groundwater Quality Summary Map
 Bee Cleaners
 5395 Shattalon Drive
 Winston-Salem, NC
 DSCA Site ID DC340038

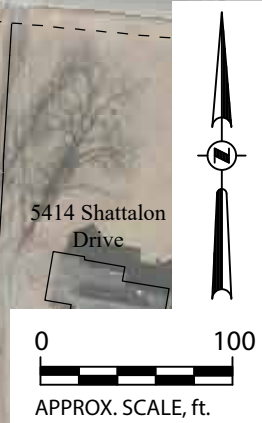
ACOMETECHNICAL SERVICES
 OF NORTH CAROLINA, INC.
 6000 FAIRVIEW ROAD, SUITE 200
 CHARLOTTE, NC 28210
 TEL: (704) 522-0330
 FAX: (704) 522-0063

AECOM

DEQ

DRAWN BY: JTH - 11/01/2019
 CHECKED BY: RHM - 11/01/2019
 PROJECT NO.: 60645433

SHEET: Figure 3

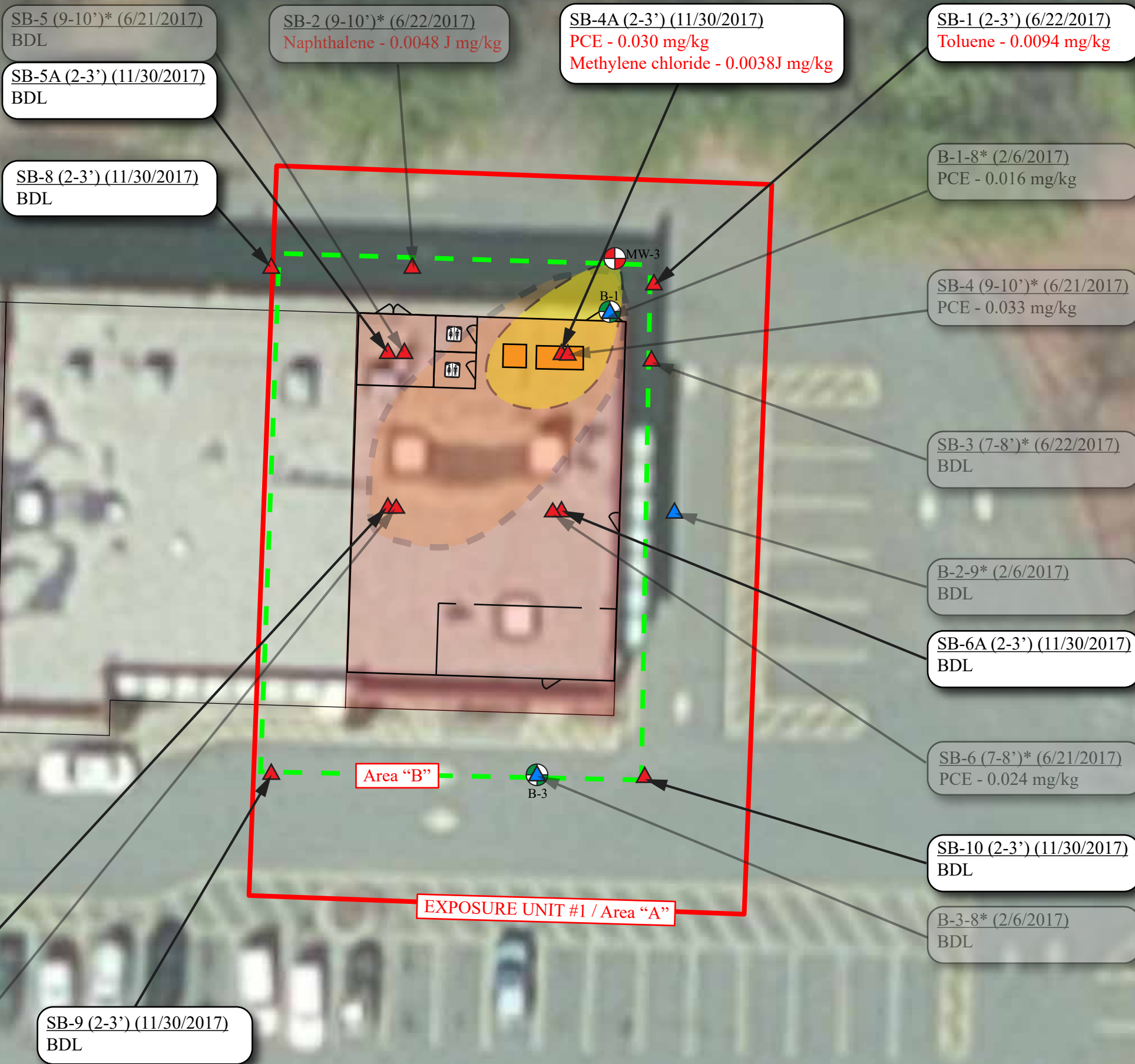


LEGEND

- Exposure Unit Boundary
 - Former Bee Cleaners (DC340038) , 5395 Shattalon Drive
 - Former Dry-Cleaning Equipment
 - Restroom
 - ▲ AECOM Soil Boring Location
 - ▲ Logic Environmental, Inc. Soil Boring Location
 - AECOM Monitoring Well Location
 - Logic Environmental, Inc. Groundwater Sample Location (Logic, 2017)
 - Soil/Groundwater Source Area for PCE
 - PCE in soil exceeding Unrestricted PSRG
 - Soil Disturbance Land Use Restriction (Area "B")
- mg/kg milligrams per kilogram
BDL Below Detection Limits
PCE Tetrachloroethylene
J Estimated Value

Notes:

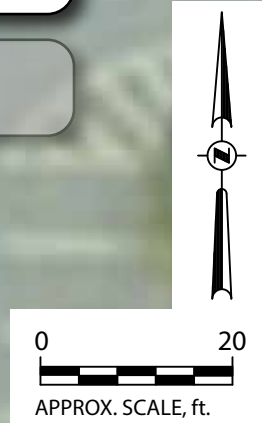
1. Historical data obtained from the Phase I/Phase II Environmental Site Assessment prepared by Logic Environmental, Inc. (Logic) and dated 2/10/2017.
2. * Indicates soil sample collected from an interval at or below the water table. As such, the soil samples should be considered saturated and not considered representative of subsurface soil data.
3. Red highlighted text indicates concentrations used in DSCA Risk Assessment Model.
4. All internal dimensions are approximate and are not drawn to scale.
5. Acetone was detected in the samples collected from soil borings SB-1, SB-2, SB-3, SB-4, SB-4A, SB-5, SB-6, SB-6A, SB-7, and SB-8. However, Acetone is a common laboratory contaminant. As such, the reported concentrations of Acetone are not considered to be representative of site conditions. Therefore, Acetone was not shown on this figure or used as a contaminant of concern in the risk assessment model.



SB-7A (2-3') (11/30/2017)
PCE - 0.018 mg/kg

SB-7 (9-10')* (6/21/2017)
PCE - 0.076 mg/kg

SB-9 (2-3') (11/30/2017)
BDL



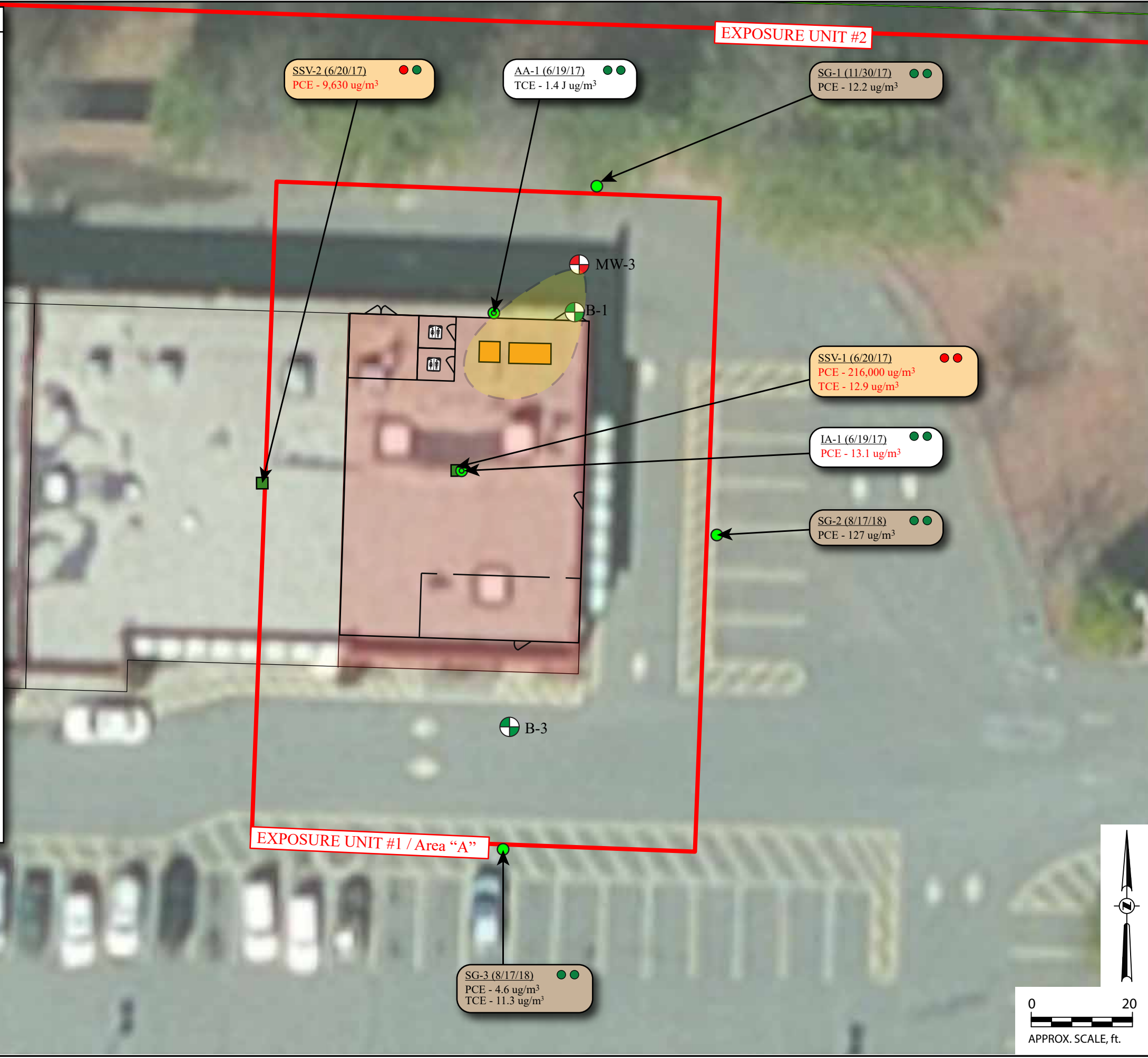
Soil Quality Summary Map Bee Cleaners 5395 Shattalon Drive Winston-Salem, NC DSCA Site ID DC340038		
AECOM TECHNICAL SERVICES OF NORTH CAROLINA, INC. 6000 FAIRVIEW ROAD, SUITE 200 CHARLOTTE, NC 28210 TEL: (704) 522-0330 FAX: (704) 522-0063		
DRAWN BY: JTH - 11/01/2019	CHECKED BY: RHM - 11/01/2019	PROJECT NO.: 60645433
SHEET: Figure 4		

LEGEND

- Exposure Unit Boundary
 - Former Bee Cleaners (DC340038), 5395 Shattalon Drive
 - Former Dry-Cleaning Equipment
 - - - - Parcel Lines
 - Restroom
 - Sub-slab Vapor Sample Location
 - Indoor/Ambient Air Sample Location
 - Soil-Gas Sample Location
 - AECOM Monitoring Well Location
 - Logic Environmental, Inc. Groundwater Sample Location (Logic, 2017)
 - Soil/Groundwater Source Area for PCE
- ug/m³ microgram per cubic meter
- BDL Below Detection Limits
- PCE Tetrachloroethylene
- TCE Trichloroethylene
- J Estimated Value
- Analytical results do not exceed calculated vapor intrusion risk for residential or non-residential exposure – DSCA Indoor Air Risk Calculator, Version 7, August 2019
 - Analytical results do not exceed calculated vapor intrusion risk for non-residential exposure but do exceed for residential exposure – DSCA Indoor Air Risk Calculator, Version 7, August 2019
 - Analytical results exceed calculated vapor intrusion risk for residential and non-residential exposure – DSCA Indoor Air Risk Calculator, Version 7, August 2019

Notes:

1. Historical data obtained from the Phase I/Phase II Environmental Site Assessment prepared by Logic Environmental, Inc. (Logic) and dated 2/10/2017.
2. Red highlighted text indicates concentrations used in DSCA Risk Assessment Model.
3. All internal dimensions are approximate and are not drawn to scale.



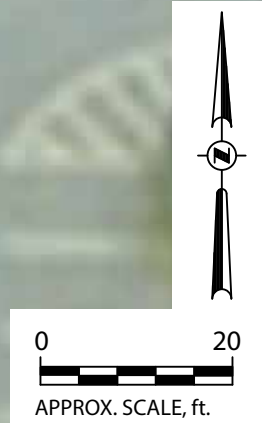
Soil Gas/Vapor/Indoor Air Quality
Summary Map
Bee Cleaners
5395 Shattalon Drive
Winston-Salem, NC
DSCA Site ID DC340038

AECOM TECHNICAL SERVICES
OF NORTH CAROLINA, INC.
6000 FAIRVIEW ROAD, SUITE 200
CHARLOTTE, NC 28210
TEL: (704) 522-0330
FAX: (704) 522-0063










DRAWN BY: JTH - 11/01/2019	CHECKED BY: RHM - 11/01/2019	PROJECT NO.:
		60645433


SHEET:
Figure 5




LEGEND

-  Former Bee Cleaners (DC340038), 5395 Shattalon Drive
-  Parcel Lines
-  Intermittent Stream
-  Monitoring Well Location
-  Logic Environmental, Inc. Groundwater Sample Location (Logic, 2017)
-  Inactive Water Supply Well Location

 Assuming current conditions with Area "A" and Area "B", the levels of carcinogenic risk and hazard index are acceptable for non-residential use. However, vapor intrusion land use restrictions should be implemented in Area "A" and Area "B" as the levels of carcinogenic risk and hazard index are not acceptable for future residential and/or non-residential use due to exceedences of the soil-gas to indoor air exposure pathway.

 As Area "B" contains impacted soils exceeding the PSRGs, land use controls should be utilized to limit soil disturbance.

 Assuming current conditions, the levels of carcinogenic risk and hazard index are acceptable for non-residential use. However, the Property shall be used exclusively for retail, commercial or industrial purposes and related amenities (parking, landscape areas and walkways), as the levels of carcinogenic risk and hazard index are not acceptable for future residential use due to exceedences of the soil gas to indoor air exposure pathway. In addition, as groundwater contaminant concentrations above the NCDEQ 2L Groundwater Standards are present beneath the source property, land use controls should be implemented preventing these of groundwater. Further, the source property shall not be used for child care centers or schools, or for mining or extraction of coal, oil, gas or any mineral or non-mineral substances without prior written approval from NCDEQ.

Historical data obtained from the Phase I/Phase II Environmental Site Assessment prepared by Logic Environmental, Inc. (Logic) and dated 2/10/2017.



Land-Use Restriction Map
 Bee Cleaners
 5395 Shattalon Drive
 Winston-Salem, NC
 DSCA Site ID DC340038

AECOM TECHNICAL SERVICES
 OF NORTH CAROLINA, INC.
 6000 FAIRVIEW ROAD, SUITE 200
 CHARLOTTE, NC 28210
 TEL: (704) 522-0330
 FAX: (704) 522-0063



DRAWN BY: JTH - 11/01/2019	CHECKED BY: RHM - 11/01/2019	PROJECT NO.:
		60645433

SHEET:
Figure 6

APPENDIX A
PLUME STABILITY DEMONSTRATION

Table 6: Monitoring Well Construction Data**ADT 6****DSCA ID No.: DC340038**

Well ID	Date Installed (mm/dd/yy)	Number of Samples	Well Depth [feet]	Well Diameter [inch]	Screen Interval [feet]	Status (Active/Inactive)
MW-1	06/21/17	4	20	2	10-20	Active
MW-2	06/20/17	4	43	2	33-43	Active
MW-3	06/20/17	7	25	2	15-25	Active
MW-4	06/20/17	4	20	2	10-20	Active
MW-5	06/20/17	4	25	2	10-25	Active

Table 7: Groundwater Elevation Data**ADT 7****DSCA ID No.: DC340038**

Groundwater Sampling Point	Sampling Date (mm/dd/yy)	TOC Elevation [feet]	Depth to Water [feet btoc]	Groundwater Elevation [feet]	Depth to NAPL [feet bgs]	NAPL Thickness [feet]	Corrected* Groundwater Elevation [feet]
MW-1	06/23/17	861.58	11.40	850.18	NM	NM	NA
	11/30/17		13.57	848.01	NM	NM	NA
	03/01/18		14.25	847.33	NM	NM	NA
	05/17/18		12.10	849.48	NM	NM	NA
	08/17/18		12.42	849.16	NM	NM	NA
	11/12/18		10.72	850.86	NM	NM	NA
	02/20/19		9.40	852.18	NM	NM	NA
MW-2	06/23/17	858.08	10.53	847.55	NM	NM	NA
	11/30/17		13.03	845.05	NM	NM	NA
	03/01/18		11.55	846.53	NM	NM	NA
	05/17/18		10.97	847.11	NM	NM	NA
	08/17/18		11.14	846.94	NM	NM	NA
	11/12/18		9.91	848.17	NM	NM	NA
	02/20/19		8.66	849.42	NM	NM	NA
MW-3	06/23/17	863.90	8.88	855.02	NM	NM	NA
	11/30/17		14.02	849.88	NM	NM	NA
	03/01/18		10.95	852.95	NM	NM	NA
	05/17/18		9.68	854.22	NM	NM	NA
	08/17/18		10.27	853.63	NM	NM	NA
	11/12/18		8.38	855.52	NM	NM	NA
	02/20/19		5.41	858.49	NM	NM	NA

Table 8: Analytical Data for Groundwater

DSCA ID No.: DC340038

Groundwater Sampling Point	Sampling Date (mm/dd/yy)	Benzene	cis-1,2-Dichloroethylene	Ethylbenzene	Methyl tert-butyl ether (MTBE)	Naphthalene	Tetrachloroethylene	Toluene	trans-1,2-Dichloroethylene	Trichloroethylene	Vinyl chloride	Xylenes (total)	Chloroform	Chloromethane	Diisopropyl ether	1,2-Dichloroethane	Bromomethane	Methylene Chloride	4-Methyl-2-pentanone (MIBK)			
		[mg/L]																				
B-1	02/06/17	<0.001	<0.002	<0.001	<0.005	<0.005	0.022	<0.001	<0.002	<0.002	<0.002	<0.001	<0.002	<0.002	NA	<0.002	<0.002	<0.005	<0.005			
B-3	02/06/17	<0.001	<0.002	<0.001	<0.005	<0.005	<0.002	<0.001	<0.002	<0.002	<0.002	<0.001	<0.002	<0.002	NA	<0.002	<0.002	<0.005	<0.005			
MW-1	06/23/17	<0.001	<0.001	<0.001	0.008	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0227	0.0001 3 J	<0.001	<0.002	<0.002	<0.005			
	11/30/17	<0.001	<0.001	<0.001	0.0051	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0002 7 J	<0.001	<0.001	<0.002	<0.002	<0.005			
	03/01/18	<0.001	<0.001	<0.001	0.0085	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0002 6 J	<0.002	<0.002	<0.005			
	05/17/18	<0.001	<0.001	<0.001	0.0059	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.005			
MW-2	06/23/17	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0146	<0.001	<0.001	<0.002	<0.002	<0.005			
	11/30/17	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0003 7 J	<0.001	<0.001	<0.002	<0.002	<0.005			
	03/01/18	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.005			
	05/17/18	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.005			
MW-3	06/23/17	<0.001	<0.001	<0.001	<0.001	<0.001	0.147	<0.001	<0.001	<0.001	<0.001	<0.001	0.0017	0.0044	<0.001	<0.001	<0.002	<0.002	<0.005			
	11/30/17	<0.001	<0.001	<0.001	<0.001	<0.001	0.0391	<0.001	<0.001	<0.001	<0.001	<0.001	0.0021	0.0005 5 J	<0.001	<0.001	<0.002	<0.002	<0.005			
	03/01/18	<0.001	<0.001	<0.001	<0.001	<0.001	0.0493	<0.001	<0.001	<0.001	<0.001	<0.001	0.0015	<0.001	<0.001	<0.001	<0.002	<0.002	<0.005			
	05/17/18	<0.001	<0.001	<0.001	<0.001	<0.001	0.358	<0.001	<0.001	<0.001	<0.001	<0.001	0.0016 J	0.0006 4 J	<0.001	<0.001	0.0007 3 J	<0.005	<0.012 5			
	08/17/18	<0.002 5	<0.002 5	<0.002 5	<0.002 5	<0.002 5	0.406	<0.002 5	<0.002 5	<0.002 5	<0.002 5	<0.002 5	<0.002 5	<0.002 5	<0.002 5	<0.002 5	<0.002 5	<0.005	0.0052*	0.0026 J		
	11/12/18	<0.005	<0.005	<0.005	<0.005	<0.005	0.507	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.01	<0.025		
	02/20/19	<0.001	<0.001	<0.001	<0.001	<0.001	0.078	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.002	<0.005	<0.012 5		

Table 8: Analytical Data for Groundwater

DSCA ID No.: DC340038

Groundwater Sampling Point	Sampling Date (mm/dd/yy)	Benzene	cis-1,2-Dichloroethylene	Ethylbenzene	Methyl tert-butyl ether (MTBE)	Naphthalene	Tetrachloroethylene	Toluene	trans-1,2-Dichloroethylene	Trichloroethylene	Vinyl chloride	Xylenes (total)	Chloroform	Chloromethane	Diisopropyl ether	1,2-Dichloroethane	Bromomethane	Methylene Chloride	4-Methyl-2-pentanone (MIBK)		
		[mg/L]																			
MW-4	06/23/17	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0115	<0.001	0.0006 6 J	<0.002	<0.002	<0.005		
	11/30/17	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0005 8 J	<0.001	0.0005 0 J	<0.002	<0.002	<0.005		
	03/01/18	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0005 3 J	<0.002	<0.002	<0.005		
	05/17/18	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0002 6 J	<0.002	<0.002	<0.005		
MW-5	06/23/17	<0.001	<0.001	<0.001	<0.001	<0.001	0.0004 9 J	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0005 8 J	<0.001	<0.001	<0.002	<0.002	<0.005		
	11/30/17	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0004 9 J	<0.001	<0.001	<0.002	<0.002	<0.005		
	03/01/18	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.005		
	05/17/18	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.005		
* - analyte concentration was flagged in the laboratory analytical report as a common laboratory contaminant																					
J - estimated analyte concentration above the adjusted method detection limit and below and below the adjusted reporting limit																					

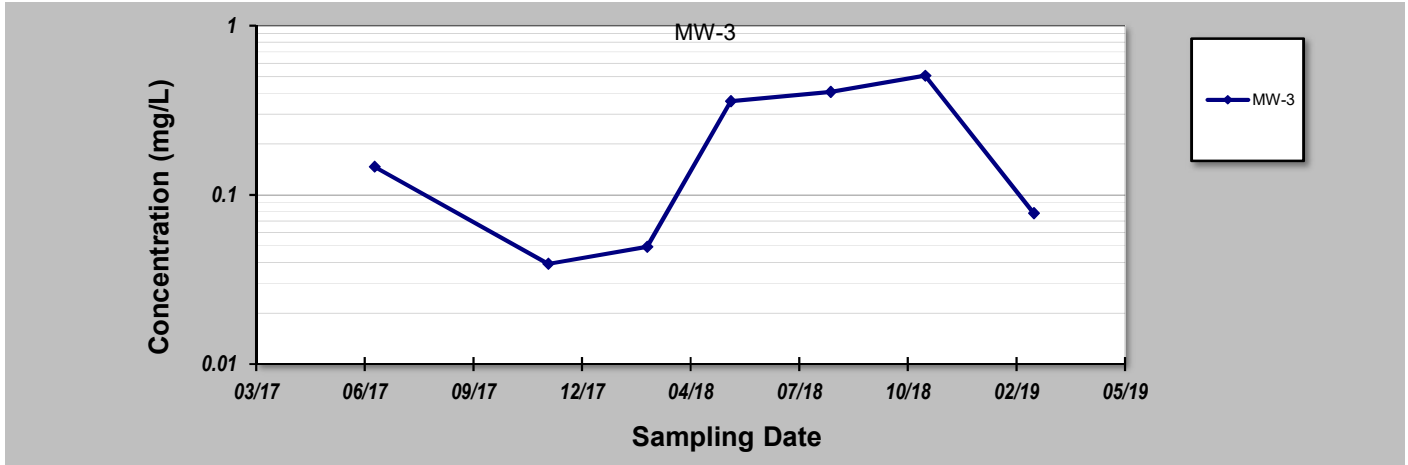
GSI MANN-KENDALL TOOLKIT

for Constituent Trend Analysis

Evaluation Date: 31-Aug-18	Job ID: 60568279
Facility Name: Bee Cleaners, DC340038	Constituent: Tetrachloroethene (PCE)
Conducted By: J. Hvozdk	Concentration Units: mg/L

Sampling Point ID: **MW-3**

Sampling Event	Sampling Date	TETRACHLOROETHENE (PCE) CONCENTRATION (mg/L)					
1	23-Jun-17	0.147					
2	30-Nov-17	0.0391					
3	1-Mar-18	0.0493					
4	17-May-18	0.358					
5	17-Aug-18	0.406					
6	12-Nov-18	0.507					
7	20-Feb-19	0.078					
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
Coefficient of Variation:		0.85					
Mann-Kendall Statistic (S):		9					
Confidence Factor:		88.1%					
Concentration Trend:		No Trend					



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.

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.

APPENDIX B
LEVEL I ECOLOGICAL RISK ASSESSMENT CHECKLISTS

Level 1 Ecological Risk Assessment
Checklist A for Potential Receptors and Habitats
Bee Cleaners, DSCA Site ID DC340038

- 1. Are there any navigable water bodies or tributaries to a navigable water body on or within the one-half mile of this site?** Yes. The Clean Water Act (CWA) protects “navigable waters,” a term defined in the act to mean “the waters of the United States”. This would include, but is not limited to: (1) traditional navigable waters; (2) “all interstate waters including interstate wetlands”; (3) “all other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds...”; (4) “all impoundments of waters otherwise defined as ‘waters of the United States’ under the definition”; (5) “tributaries of waters...”; (6) “the territorial seas”; and (7) “wetlands adjacent to waters (other than waters that are themselves wetlands)...”.

Upon review of the United States Geological Survey (USGS) Topographic Map of Rural Hall, North Carolina dated 1994 (**Figure 1**) and the Physical Setting Source Summary provided in the Environmental Data Resources (EDR) Radius MapTM report with GeoCheck® (**Appendix A**), Mill Creek and its tributaries thereof were identified within a one-half mile radius of the Bee Cleaners dry cleaning facility formerly located at 5395 Shattalon Drive (site). The surface water features within one-half mile of the site are attached to this report as **Figure 1**. As evident on **Figure 1**, unnamed tributaries of Mill Creek are located approximately 1,025 feet northeast of the site, approximately 1,900 feet southwest of the site, and approximately 2,450 feet southeast of the site. However, site reconnaissance identified the closest surface water feature to be an unnamed drainage feature approximately 800 feet southwest of the site which discharges to the unnamed tributary of Mill Creek approximately 1,900 feet southwest of the site. In addition, the Physical Setting Source Summary provided in the EDR Radius MapTM report with GeoCheck® (**Appendix A**) indicates that the site is not located within the 100-year and 500-year floodplains of Mill Creek.

- 2. Are there any non-navigable water bodies or tributaries to a non-navigable water body on or within the one-half mile of the site?** No. Under the CWA, “waters of the United States” does not include groundwater, prior converted cropland (included under the U.S. Department of Agriculture’s administrative definition of the term “wetland”) or waste treatment systems (including treatment ponds or lagoons), as well as: exemptions for normal farming, ranching, and silviculture activities such as plowing, seeding, and cultivation; exemptions for permitting of agricultural stormwater discharges and return flows from irrigated agriculture; or exemptions for water transfers that do not introduce pollutants into a waterbody.

As such, the site’s stormwater management system does not appear to be incorporated on the list of existing waters and/or features excluded from CWA jurisdiction. However, AECOM does not consider the site’s stormwater management system a “water” or feature

subject to the CWA at this time based on the rule changes proposed by the EPA and Corps which would specifically identify these features as exclusions.

- 3. Are there any wetland areas such as marshes or swamps on or within one-half mile of the site?** Yes. According to the EDR NEPACheck® report (**Appendix B**), the National Wetland Inventory (NWI) identified five wetland features within a one-half mile radius of the site. The off-site wetland features included:
- PUBHh - [P] Palustrine, [UB] Unconsolidated Bottom [H] Permanently Flooded [h] Diked/Impounded located 936 feet north-northeast;
 - PUBHh - [P] Palustrine, [UB] Unconsolidated Bottom [H] Permanently Flooded [h] Diked/Impounded located 978 feet northeast;
 - PUBHh - [P] Palustrine, [UB] Unconsolidated Bottom [H] Permanently Flooded [h] Diked/Impounded located 2,061 feet west-northwest;
 - PUBHh - [P] Palustrine, [UB] Unconsolidated Bottom [H] Permanently Flooded [h] Diked/Impounded located 2,244 feet southwest; and
 - PFO1A - [P] Palustrine [FO] Forested [1] Broad-Leaved Deciduous [A] Temporarily Flooded located 2,319 feet southwest.
- 4. Are there any sensitive environmental areas on or within one-half mile of the site?** Yes. AECOM considers the aforementioned surface water bodies, their tributaries and the identified national wetland features, to be sensitive environmental areas. Habitats, foraging areas or refuges by rare, threatened, endangered, candidate and/or proposed species (plants or animals), or any otherwise protected species are further discussed under **Question 6**. Breeding, roosting or feeding areas by migratory bird species are further discussed under **Question 7**. Ecologically, recreationally or commercially important species, as well as threatened and/or endangered species are further discussed under **Question 8**. No other sensitive environmental areas have been identified within a one-half mile radius of the site.
- 5. Are there any areas on or within one-half mile of the site owned or used by local tribes?** No. None were identified on the Indian Reservation Database in the EDR NEPACheck® report (**Appendix B**).
- 6. Are there any habitats, foraging areas or refuges by rare, threatened, endangered, candidate and/or proposed species (plants or animals), or any otherwise protected species on or within one-half mile of the site?** No. The EDR NEPACheck® report (**Appendix B**) also identified four endangered species or two threatened species and one Federal Species of Concern (FSC) within Forsyth County: 1) the Bog turtle (Reptiles); 2) the Red-cockaded woodpecker (Bird); 3) Brook floater (Clams); 4) Roanoke logperch (Fishes); 5) Schweinitz's sunflower (Flowering Plants); and 6) Small-anthered bittercress (Flowering Plants). Further, the US Fish and Wildlife Service (FWS) identified the Northern long-eared bat (Mammal) as an additional threatened species, (<https://www.fws.gov/raleigh/species/cntylist/forsyth.html>). However, none of these species have specifically been identified at or within one-half mile of the site.
- 7. Are there any breeding, roosting or feeding areas by migratory bird species on or within one-half mile of the site?** No. The North Carolina Audubon Society

<http://netapp.audubon.org/iba/state/US-NC>) does not identify any Important Bird Areas (IBAs) within one-half mile of the site.

8. **Are there any ecologically, recreationally or commercially important species on or within one-half mile of the site?** No. Four endangered species, two threatened species and one FSC were identified in Forsyth County by the EDR NEPACheck® report (**Appendix B**) and/or the US FWS. However, none of these species have specifically been identified at or within one-half mile of the site.

9. **Are there any threatened and/or endangered species (plant or animal) on or within one-half mile of the site?** No. The EDR NEPACheck® report (**Appendix B**) also identified four endangered species or two threatened species and one FSC within Forsyth County: 1) the Bog turtle (Reptiles); 2) the Red-cockaded woodpecker (Bird); 3) Brook floater (Clams); 4) Roanoke logperch (Fishes); 5) Schweinitz's sunflower (Flowering Plants); and 6) Small-anthered bittercress (Flowering Plants). Further, the US FWS identified the Northern long-eared bat (Mammal) as an additional threatened species, (<https://www.fws.gov/raleigh/species/cntylist/forsyth.html>). However, none of these species have specifically been identified at or within one-half mile of the site.

If the answer is “Yes” to any of the above questions, then complete Level 1 Ecological Risk Assessment, Checklist B for Potential Exposure Pathways.

Wetlands are defined in 40 CFR §232.2 as “areas inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances does support, a prevalence of vegetation typically adapted for life in saturated soil conditions.” The sources to make the determination whether or not wetland areas are present may include, but not limited to, national wetland inventory available at <http://nwi.fw.gov>, federal or state agency, and USGS topographic maps. Areas that provide unique and often protected habitat for wildlife species. These areas typically used during critical life stages such as breeding, rearing or young and overwintering. Refer to Attachment 1 for examples of sensitive environments. Ecologically important species include populations of species which provide a critical food resource for higher organisms. Ecologically important species include pest or opportunistic species that populate an area if they serve as a food source for other species, but do not include domesticated animals or plants/animals whose existence is maintained by continuous human interventions.

March 2007

DSCA Program

Level 1 Ecological Risk Assessment
Checklist B for Potential Receptors and Habitats
Bee Cleaners, DSCA Site ID DC340038

- 1A. Can chemicals associated with the site leach, dissolve, or otherwise migrate to groundwater?** Yes. The primary chemical of concern (COC) is tetrachloroethene (PCE).
- 1B. Are chemicals associated with the site mobile in groundwater?** Yes.
- 1C. Does groundwater from the site discharge to ecological receptor habitat?** Yes. Groundwater beneath the site was interpreted to be to the south-southwest. In the downgradient direction of groundwater flow, the nearest receptor and/or point of exposure (POE) from the soil/groundwater source area was identified as an unnamed drainage feature located approximately 800 feet southwest of the site that discharges to an unnamed tributary of Mill Creek located approximately 1,900 feet southwest of the site. As such, groundwater beneath the site is likely to discharge to the unnamed tributary of Mill Creek.
- Question 1. Could chemicals associated with the site reach ecological receptors through groundwater?** Potentially. Groundwater assessment activities completed to date have identified impacted groundwater beneath the site. However, the identified groundwater impacts appear to be confined to the site. Given the distance to the receptor(s) and/or POE, surface water impacts from groundwater discharge are not a concern.
- 2A. Are chemicals present in surface soils on the site?** Yes. COCs have been detected at the site in surface soil samples collected from 2-3 feet below ground surface (bgs).
- 2B. Can chemicals be leached from or be transported by erosion of surface soils on the site?** No. To date, the surface soil impacts have only been identified under impervious surfaces (i.e. asphalt and/or concrete) at the site.
- Question 2. Could chemicals associated with the site reach ecological receptors through runoff or erosion?** No. To date, the only impacted areas of the site have been identified under impervious surfaces (i.e. asphalt and/or concrete).
- 3A. Are chemicals present in surface soil or on the surface of the ground?** Yes. COCs have been detected at the site in surface soil samples collected from 2-3 feet bgs. However, the ground surface in the area of the identified surface soil impacts is capped with either asphalt and/or concrete. To date, the asphalt and/or concrete surfaces have not been sampled.
- 3B. Are potential ecological receptors on the site?** No. Based on the responses provided on Checklist A for Potential Receptors and Habitats, no ecological receptors have been identified at the site.
- Question 3. Could chemicals associated with the site reach ecological receptors through direct contact?** No. To date, no ecological receptors have been identified at the site. In addition, COCs detected at the site in surface soil samples collected from 0-10 feet bgs are currently capped by asphalt and/or concrete.
- 4A. Are chemicals on the site volatile?** Yes.

4B. Could chemicals on the site be transported in air as dust or particulate matter? Yes. PCE has been identified in surface soil samples collected from the beneath the site. Due to the volatile nature of PCE, the potential exists for PCE to be transported by air. However, because the surface soil impacts have only been identified under impervious surfaces at the site, AECOM does not consider PCE transport by dust or particulate matter to be likely.

Question 4. Could chemicals associated with the site reach ecological receptors through inhalation of volatilized chemicals or adhered chemicals to dust in ambient air or in subsurface burrows? Yes. However, as previously stated, AECOM does not consider PCE transport by dust or particulate matter to be likely because the surface soil impacts have only been identified under impervious surfaces at the site. Further, AECOM assessed the soil gas to indoor air cumulative risk and hazard indices for current and future site use during the Prioritization Assessment (PA) activities completed in June 2017. Impacts identified during analysis of soil gas samples collected from subsurface vapor samples SSV-1 and SSV-2 on June 20, 2017 were used in the DSCA soil gas to indoor air calculators. Although these impacts could reach ecological receptors, AECOM does not consider inhalation of volatilized chemicals in ambient air or in subsurface burrows to be significant based on the results of the soil gas to indoor air risk calculations, which indicated acceptable levels of cumulative carcinogenic risk and hazard index for current commercial use. The subsurface vapor sampling results for SSV-1 and SSV-2 and the results of the DSCA Soil Gas to Indoor Air Risk Calculators were included with the *Vapor Intrusion-Related Sampling Results* letter report dated August 30, 2017.

5A. Is Non-Aqueous Phase Liquid (NAPL) present at the site? No.

5B. Is NAPL migrating? No.

5C. Could NAPL discharge occur where ecological receptors are found? No.

Question 5. Could chemicals associated with site reach ecological receptors through migration of NAPL? No.

6A. Are chemicals present in surface and shallow subsurface soils or on the surface of the ground? Yes. COCs have been identified beneath the impervious surfaces at the site from 0-10 feet bgs.

6B. Are chemicals found in soil on the site taken up by plants growing on the site? No. Vegetative growth was not observed in the area of the identified source area.

6C. Do potential ecological receptors on or near the site feed on plants (e.g., grasses, shrubs, forbs, trees, etc.) found on the site? No. No ecologically, recreationally, or commercially important species, endangered, threatened or otherwise protected species have been specifically identified at the site. In addition, vegetative growth was not observed near the identified soil source area(s).

6D. Do chemicals found on the site bioaccumulate? No. The primary COC is PCE, which has a low bioaccumulation potential and is not likely to accumulate in the tissue of organisms through respiration, ingestion, or direct contact.

Question 6. Could chemicals associated with the site reach ecological receptors through direct ingestion of soil, plants animals or contaminants? No. To date: soil impacts have only been identified beneath the site's impervious surfaces in areas not observed to support vegetative growth; groundwater impacts beneath the site have been

horizontally delineated and do not appear to be flowing off-site; and although the potential for site COCs to reach ecological receptors through inhalation of volatilized chemicals exists, available risk calculations indicate that these risks are within acceptable limits. Furthermore, the site has not been identified as a sensitive environmental area, habitat, breeding, roosting or foraging area for: ecologically, recreationally, or commercially important species; endangered, threatened or otherwise protected species; and/or migratory species. Therefore, AECOM does not consider the potential for direct ingestion to be a concern.

If the answer to one or more of the above six questions is “Yes”, the NCDEQ may require further assessment to determine whether the site poses an unacceptable risk to ecological receptors.

March 2007

DSCA Program

APPENDIX C
NOTICE OF DRY-CLEANING SOLVENT REMEDIATION
KANAN HOLDINGS LLC
PIN 6818-54-3108.000

NOTICE OF DRY-CLEANING SOLVENT REMEDIATION

Property Owner: Kanan Holdings LLC
Recorded in Book _____, Page _____
Associated plat recorded in Plat Book _____, Page _____

This documentary component of a Notice of Dry-Cleaning Solvent Remediation (hereinafter "Notice") is hereby recorded on this ____ day of _____, 20____ by Kanan Holdings LLC (hereinafter "Property Owner"). The survey plat component of the Notice is being recorded concurrently with this documentary component. The real property (hereinafter "Property") which is the subject of this Notice is located at 5399 Shattalon Drive, Winston-Salem, Forsyth County, North Carolina, Parcel Identification Number (PIN) 6818-54-3108.000.

The Property is contaminated with dry-cleaning solvent, as defined at North Carolina General Statutes (hereinafter "N.C.G.S."), Section (hereinafter "§") 143-215.104B(b)(9) and other contaminants. This Notice has been approved by the North Carolina Department of Environmental Quality, or its successor in function (hereinafter "DEQ") under the authority of the Dry-Cleaning Solvent Cleanup Act of 1997, as amended, N.C.G.S. § 143-215.104A *et seq.* (hereinafter "DSCA"), and is required to be filed in the Register of Deeds' Office in the county or counties in which the land is located, pursuant to NCGS § 143-215.104M.

Soil and groundwater at the Property are contaminated with dry-cleaning solvents associated with dry-cleaning operations at the former Bee Cleaners (DSCA Site ID DC340038) located at 5395 Shattalon Drive, Winston-Salem, in the Shattalon Station Shopping Center. Dry-cleaning operations were conducted on the Property from approximately 1992 to 2008.

Pursuant to N.C.G.S. § 143-215.104M, this Notice is being filed in order to reduce or eliminate the danger to public health or the environment posed by the Property. Attached hereto as **Exhibit A** is a reduction, to 8 1/2" x 11", of the survey plat component of the Notice required by N.C.G.S. § 143-215.104M. The survey plat has been prepared and certified by a professional land surveyor and meets the requirements of G.S. 47-30, and contains the following information required by N.C.G.S. § 143-215.104M:

- (1) A description of the location and dimensions of the areas of potential environmental concern with respect to permanently surveyed benchmarks; and
- (2) The type, location and quantity of regulated dry-cleaning solvent contamination and other contaminants known to exist on the Property.

Attached hereto as **Exhibit B**, is a legal description of the Property that would be sufficient as a description in an instrument of conveyance.

Pursuant to NCGS § 143-215.104M, a certified copy of this Notice must be filed within 15 days of receipt of DEQ's approval of the Notice or the effective date of the dry-cleaning solvent remediation agreement, whichever is later. Pursuant to NCGS § 143-215.104M, the copy of the Notice certified by DEQ must be recorded in the grantor index under the names of the owners of the land.

LAND-USE RESTRICTIONS

NCGS § 143-215.104M requires that the Notice identify any restrictions on the current and future use of the Property that are necessary or useful to maintain the level of protection appropriate for the designated current or future use of the Property and that are designated in the dry-cleaning remediation agreement. The restrictions shall remain in force in perpetuity unless canceled by the Secretary of DEQ, or his/her designee, after the hazards have been eliminated, pursuant to NCGS §143-215.104M. Those restrictions are hereby imposed on the Property, and are as follows:

1. The Property shall be used exclusively for non-residential land use pursuant to North Carolina Administrative Code (NCAC) 15A NCAC 02S.0102(21) and related amenities (parking, landscape areas and walkways), and all other uses of the Property are prohibited except as approved in writing by DEQ.
2. Without prior written approval from DEQ, the Property shall not be used for:
 - a. childcare centers or schools; or
 - b. mining or extraction of coal, oil, gas or any mineral or non-mineral substances.
3. No activities that encounter, expose, remove or use groundwater (for example, installation of water supply wells, fountains, ponds, lakes or swimming pools that use groundwater, or construction or excavation activities that encounter or expose groundwater) may occur on the Property without prior approval of DEQ.
4. In January of each year, on or before January 31st, the owner of any portion of the Property shall submit a notarized Annual Certification of Land-Use Restrictions to DEQ certifying that this Notice remains recorded at the Register of Deeds' office, and that the land-use restrictions are being complied with.
5. No person conducting environmental assessment or remediation at the Property or involved in determining compliance with applicable land-use restrictions, at the direction of, or pursuant to a permit or order issued by DEQ may be denied access to the Property for the purpose of conducting such activities.
6. The owner of any portion of the Property shall cause the instrument of any sale, lease, grant, or other transfer of any interest in the property to include a provision expressly

requiring the lessee, grantee, or transferee to comply with this Notice. The failure to include such a provision shall not affect the validity or applicability of any land-use restriction in this Notice.

The following restrictions apply only to the portions of the Property identified as Area “A” and Area “B” as shown on the survey plat attached as Exhibit A:

7. Except for routine maintenance, no construction activities or change in property use that cause or create an unacceptable human health risk from vapor intrusion may occur in Area “A” of the Property without prior approval of DEQ. These activities include but are not limited to: construction of new buildings, removal and construction of part of a building, construction of sub-grade structures that encounter contaminated soil or places building users in close proximity to contaminated groundwater, change from non-residential to residential property, change in tenant space usage, and addition of residential property use on higher floors.
8. Structural modifications that may cause or create an increased risk from vapor intrusion require the property owner to demonstrate to the satisfaction of DEQ that the indoor air in Area “A” modifications include but are not limited to: modification or replacement of heating, ventilation or air conditioning (HVAC) systems, removal or replacement of the building slab, installation of multiple conduits or piping through the building slab, modifications to building walls or ceilings that may change air flow.
9. Soil in Area “B” may not be removed or disturbed unless approved in writing in advance by DEQ or its successor in function, except for routine landscape maintenance and emergency utility repair. In the event of emergency utility repair, DEQ shall be given written notice of any such emergency repair no later than the next business day, and further related assessment and remedial measures may be required.

RIGHT OF ENTRY

The property owner grants and conveys to DEQ, its agents, contractors, and employees, and any person performing pollution remediation activities under the direction of DEQ, access at reasonable times and under reasonable security requirements to the Property to determine and monitor compliance with the land-use restrictions set forth in this Notice. Such investigations and actions are necessary by DEQ to ensure that use, occupancy, and activities of and at the Property are consistent with the land-use restrictions and to ensure that the structural integrity and continued effectiveness of any engineering controls (if appropriate) described in the Notice are maintained. Whenever possible, at least 48 hours advance notice will be given to the Property Owner prior to entry. Advance notice may not always be possible due to conditions such as response time to complaints and emergency situations.

REPRESENTATIONS AND WARRANTIES

The Property Owner hereby represents and warrants to the other signatories hereto:

- i) that the Property Owner is the sole owner of the Property; **or** that the Property Owner has provided to DEQ the names of all other persons that own an interest in or hold an encumbrance on the Property and have notified such persons of the Property Owner's intention to enter into this Notice;
- ii) that the Property Owner has the power and authority to enter into this Notice, to grant the rights and interests herein provided and to carry out all obligations hereunder; and
- iii) that this Notice will not materially violate or contravene or constitute a material default under any other agreement, document or instrument to which the Property Owner is a party or by which the Property Owner may be bound or affected.

ENFORCEMENT

The above land-use restrictions shall be enforceable without regard to lack of privity of estate or contract, lack of benefit to particular land, or lack of any property interest in particular land. The land-use restrictions shall be enforced by any owner of the Property. The land-use restrictions may also be enforced by DEQ through the remedies provided in NCGS § 143-215.104P or by means of a civil action; by any unit of local government having jurisdiction over any part of the Property; and by any person eligible for liability protection under the DSCA who will lose liability protection if the restrictions are violated. Any attempt to cancel any or all of this Declaration without the approval of the Secretary of DEQ (or its successor in function), or his/her delegate, shall be subject to enforcement by DEQ to the full extent of the law. Failure by any party required-or authorized to enforce any of the above restrictions shall in no event be deemed a waiver of the right to do so thereafter as to the same violation or as to one occurring prior or subsequent thereto.

If a land-use restriction set out in this Notice required under NCGS § 143-215.104.M is violated, the owner of the Property at the time the land-use restriction is violated, the owner's successors and assigns, and the owner's agents who direct or contract for alteration of the contamination site in violation of a land-use restriction shall be liable for remediation of all contaminants to unrestricted use standards.

FUTURE SALES, LEASES, CONVEYANCES AND TRANSFERS

When any portion of the Property subject to this Notice is sold, leased, conveyed or transferred, the deed or other instrument of transfer shall contain in the description section, in no smaller type than that used in the body of the deed or instrument, (1) a statement that the property has been contaminated with dry-cleaning solvent and, if appropriate, cleaned up under the Act and (2) a reference by book and page to the recordation of this Notice.

The Property Owner shall notify DEQ within fourteen (14) calendar days of the effective date of any conveyance, grant, gift, or other transfer, whole or in part, of the Property Owner's

interest in the Property. This notification shall include the name, business address and phone number of the transferee and the expected date of transfer.

The Property Owner shall notify DEQ within thirty (30) days following the petitioning or filing of any document by any person initiating a rezoning of the Property that would change the base zone of the Property.

This provision shall not apply to leases that do not provide for the right to take actions that would violate the prohibitions and restrictions of this Notice.

PROPERTY OWNER SIGNATURE

IN WITNESS WHEREOF, Property Owner has caused this instrument to be duly executed this ___ day of _____, 20__.

Kanan Holdings LLC

By:

Name of contact

STATE OF _____
COUNTY OF _____

I, _____, a Notary Public of the county and state aforesaid, certify that _____ personally came before me this day and acknowledged that he/she is a Member of Kanan Holdings LLC, a North Carolina limited liability corporation, and its Manager, and that by authority duly given and as the act of the company, the foregoing Notice of Dry-Cleaning Solvent Remediation was signed in its name by him.

WITNESS my hand and official stamp or seal, this ___ day of _____, 20__.

Name typed or printed
Notary Public

My Commission expires: _____
[Stamp/Seal]

APPROVAL AND CERTIFICATION

The foregoing Notice of Dry-Cleaning Solvent Remediation is hereby approved and certified.

North Carolina Department of Environmental Quality

By: _____
Jim Bateson, LG
Chief, Superfund Section
Division of Waste Management

Date

ATTACHMENT

LIMITED POWER OF ATTORNEY

I _____ “Property Owner”, do hereby grant a limited power of attorney to DEQ and to DEQ’s independent contractors, as follows:

DEQ and DEQ’s independent contractors shall have the limited power of attorney to record this Notice, including its documentary and survey plat components, in accordance with N.C.G.S. § 143-215.104M on my “Property Owner” behalf. This limited power of attorney shall terminate upon completion of the recordation of the Notice.

Signature of Property Owner _____

Dated this ____ day of _____, 20__.

STATE OF _____

COUNTY OF _____

I, _____, a Notary Public, do hereby certify that _____ personally appeared before me this day and signed this “Limited Power of Attorney”.

WITNESS my hand and official stamp or seal, this ____ day of _____, 20__.

Name typed or printed

Notary Public

My Commission expires: _____

[Stamp/Seal]

EXHIBIT A
REDUCTION OF SURVEY PLAT

EXHIBIT B
PROPERTY LEGAL DESCRIPTION

Land of
Kanan Holdings LLC
Bee Cleaners
DSCA Site ID DC340038

Beginning at a set #4 Rebar on the northerly margin of Shattalon Drive, a common corner of lands now or formerly of Buck Rentals LLC (Deed Bk-3475, Pg-3723), said point being located N68°30'04"E 18,279.47' of NGS Monument "Office", having grid coordinates N:877283.936' and E:1597986.819; thence turning and running with said "Buck Rentals" property, passing an existing 0.25" Pipe, 0.37' left of line at 161.39', N03°27'45"E 190.84' to an existing 0.25" pipe, a common corner of lands now or formerly of Bonnie G. Brooks (Deed Bk-1947, Pg-3354); thence turning and running with said "Brooks" property, passing an existing 0.25" Pipe, 0.25' left of line at 60.62' and an existing 0.25" Pipe, 0.04' left of line at 150.79', N02°55'32"E 240.86' to an existing 1" Pipe, a common corner of lands now or formerly of J&K Property Management, LLC (Deed Bk-2983, Pg-610); thence turning and running with said "J&K" property S88°13'03"E 591.03' to an existing 1" Pipe on the westerly margin of Murray Road, said point being located S08°46'13"W 102.36' of an existing 1" Pipe; thence turning and running with Murray Road S04°03'07"W 435.68' to a set #4 Rebar on the northerly margin of Shattalon Drive; thence turning and running with Shattalong Drive N87°50'51"W 584.19' to the Point and Place of Beginning.

Contains 254,509 square feet or 5.843 acres.

APPENDIX D
EXAMPLE ANNUAL CERTIFICATION OF LAND-USE
RESTRICTIONS



NORTH CAROLINA
Environmental Quality

ROY COOPER
Governor

DIONNE DELLI-GATTI
Secretary

MICHAEL SCOTT
Director

<date>

<property owner>
<address>
<city, state, zip>

Subj: Annual Certification of Land-Use Restrictions
<site name>, <address>
<city>, <county> County, North Carolina
DSCA Site ID DC<site#>

Dear <property owner>:

On <date>, the Division of Waste Management made a “No Further Action” decision for the above referenced site. As part of that decision, it was determined that land-use restrictions were necessary to ensure protection of human health and the environment. The land-use restrictions for this site are specified in the Notice of Dry-Cleaning Solvent Remediation (Notice) signed by the property owner and the Division of Waste Management.

As owner of at least a portion of the DSCA Site, you are required to comply with Condition of the Notice by submitting to DEQ a notarized Annual Certification of Land-Use Restrictions certifying that the Notice remains recorded at the <county> County Register of Deeds’ office and that the Land-Use Restrictions are being complied with. Please complete the enclosed Annual Certification of Land-Use Restrictions and return it to me on or before **January 31, 20__** at the following address:

NCDEQ
Division of Waste Management
DSCA/Mike Cunningham
1646 Mail Service Center
Raleigh, NC 27699-1646

In accordance with § 143-215.104M(f), any person who fails to comply within the time specified in this letter, shall then be subject to the applicable enforcement procedures. The Notice further states that if a land-use restriction is violated, the owner of the contamination site at the time the land-use restriction is violated, the owner’s successors and assigns, and the owner’s agents who direct or contract for alteration of the contamination site in



North Carolina Department of Environmental Quality | Division of Waste Management
217 West Jones Street | 1646 Mail Service Center | Raleigh, North Carolina 27699-1646
919.707.8200

violation of a land-use restriction shall be liable for remediation of all contaminants to unrestricted use standards.

If you have any questions concerning these documents or the site, please contact me at (919) 707-xxxx or via email at <dscapm>@ncdenr.gov.

Sincerely,

<dscapm>, Project Manager
DSCA Remediation Unit
Superfund Section
Division of Waste Management

Attachments: Annual Certification of Land-Use Restrictions form

Cc: DSCA Site ID DC<site#> File



North Carolina Department of Environmental Quality | Division of Waste Management
217 West Jones Street | 1646 Mail Service Center | Raleigh, North Carolina 27699-1646
919.707.8200

Annual Certification of Land-Use Restrictions

Site Name: Bee Cleaners

Site Address: 5399 Shattalon Drive, Winston-Salem, Forsyth County

DSCA Site ID: DC340038

ANNUAL CERTIFICIATION of LAND-USE RESTRICTIONS

Pursuant to Condition [] in the Notice of Dry-Cleaning Solvent Remediation (Notice) signed by <property owner or authorized designee> and recorded in Deed Book <blank>, Page <blank> on <date> at the <blank> County Register of Deeds Office, <property owner or authorized designee> hereby certifies, as an owner of at least part of the property that is the subject of the Notice, that the Notice remains recorded at the [] County Register of Deeds office and the land-use restrictions therein are being complied with.

Duly executed this ____ day of _____, 20__.

<property owner or authorized designee>

By: _____

Name typed or printed: _____

STATE OF _____
COUNTY OF _____

I, _____, a Notary Public of the county and state aforesaid, certify that _____ personally came before me this day and the foregoing certification was signed by him/her.

WITNESS my hand and official stamp or seal, this ____ day of _____, 20__.

Name typed or printed:
Notary Public

My Commission expires: _____
[Stamp/Seal]

APPENDIX E
EXAMPLE DOCUMENTS ANNOUNCING PUBLIC
COMMENT PERIOD

Public Notice

SUMMARY OF NOTICE OF INTENT TO REMEDIATE A DRY-CLEANING SOLVENT FACILITY OR ABANDONED SITE

**N.C. Department of Environmental Quality
Division of Waste Management
Dry-Cleaning Solvent Cleanup Act (DSCA) Program**

Bee Cleaners
DSCA Site ID DC340038

Pursuant to N.C.G.S. §143-215.104L, on behalf of Kanan Holdings LLC, the North Carolina Department of Environmental Quality's (NCDEQ's) private contractor has prepared a Notice of Intent to Remediate a Dry-Cleaning Solvent Facility or Abandoned Site (NOI). The purpose of this Summary of the NOI is to notify the community of the proposed remedy for the contamination site and invite comment on the proposed remedy.

Bee Cleaners formerly conducted dry-cleaning operations at 5395 Shattalon Drive in Winston-Salem, North Carolina. The tenant space within the Shattalon Station Shopping Center where the former Bee Cleaners was located is currently occupied by Tienda Mexicana La Palmera, a grocery store. Dry-cleaning solvent contamination in soil and/or groundwater has been identified at the following parcel(s):

5399 Shattalon Drive in Winston-Salem: PIN 6818-54-3108.000

An investigation of the extent of contamination has been completed. A risk assessment of the contaminated properties concluded that the contamination poses no unacceptable risks. A Risk Management Plan (RMP) has been prepared which proposes using land-use controls to prevent current and future risks at the affected properties.

The elements of the complete NOI are included in the RMP which is available online at <https://deq.nc.gov/about/divisions/waste-management/superfund-section/special-remediation-branch/dsca-public-notice-announcements>

The public comment period begins [REDACTED], 20 [REDACTED], and ends [REDACTED], 20 [REDACTED]. Comments must be in writing and submitted to NCDEQ no later than [REDACTED], 20 [REDACTED]. Written requests for a public meeting may be submitted to NCDEQ no later than [REDACTED], 20 [REDACTED]. Requests for additional information should be directed to Mike Cunningham at (919) 707-8361. All comments and requests should be sent to:

Mike Cunningham, DSCA Remediation Unit
Division of Waste Management, NCDEQ
1646 Mail Service Center
Raleigh, North Carolina 27699-1646

ROY COOPER

Governor

DIONNE DELLI-GATTI

Secretary

MICHAEL SCOTT

Director



NORTH CAROLINA
Environmental Quality

<Date>

<name>, <City Manager/County Health Director>

<address>

<city>, NC <zip>

Subj: Remediation of Dry-Cleaning Solvent Contamination
DSCA Site ID DC340038
Bee Cleaners, 5395 Shattalon Drive
Winston-Salem, NC

Dear <name>:

The Dry-Cleaning Solvent Cleanup Act of 1997 (DSCA), North Carolina General Statutes (N.C.G.S.) Sections 143-215.104A through 143-215.104U, provides for the assessment and remediation of properties that may have been or were contaminated by chlorinated solvents. To satisfy the requirements of N.C.G.S. 143-215.104L, this letter serves as the **Notice of Intent to Remediate a Dry-Cleaning Solvent Facility or Abandoned Site** (NOI) approved by the North Carolina Department of Environmental Quality (DEQ).

The NOI must provide, to the extent known, a legal description of the location of the DSCA Site, a map showing the location of the DSCA Site, a description of the contaminants involved and their concentrations in the media of the DSCA Site, a description of the intended future use of the DSCA Site, any proposed investigation and remediation, and a proposed Notice of Dry-Cleaning Solvent Remediation (NDCSR) prepared in accordance with N.C.G.S. Section 143-215.104M. The required components of the NOI are included in the attached Risk Management Plan, and are available during the public comment period on our website at:

<https://deq.nc.gov/about/divisions/waste-management/superfund-section/special-remediation-branch/dsca-public-notices-announcements>

The DSCA Program is providing a copy of the NOI to all local governments having jurisdiction over the DSCA Site. A 30-day public comment period is being held from <date>, until <date>. Written comments may be submitted to DEQ no later than <date>. Written requests for a public meeting may be submitted to DEQ no later than <date>. All such comments and requests should be sent to:

Mike Cunningham, DSCA Remediation Unit
Division of Waste Management, NCDEQ
1646 Mail Service Center
Raleigh, North Carolina 27699-1646



North Carolina Department of Environmental Quality | Division of Waste Management
217 West Jones Street | 1646 Mail Service Center | Raleigh, North Carolina 27699-1646
919.707.8200

A Summary of the NOI is being published in the <newspaper>, copies are being sent to owners of property within and contiguous with the area of contamination, and a copy of the Summary will be conspicuously posted at the Site during the public comment period.

If you have any questions, please feel free to contact me at (919)707-8361.

Sincerely,

[SIGNATURE]

Mike Cunningham, DSCA Project Manager
Division of Waste Management, NCDEQ



North Carolina Department of Environmental Quality | Division of Waste Management
217 West Jones Street | 1646 Mail Service Center | Raleigh, North Carolina 27699-1646
919.707.8200



NORTH CAROLINA
Environmental Quality

ROY COOPER
Governor

DIONNE DELLI-GATTI
Secretary

MICHAEL SCOTT
Director

<date>

<property owner>
<mailing address>
<city, state, zip>

Subj: Dry-Cleaning Solvent Contamination Associated with Bee Cleaners, 5395 Shattalon Drive, Winston-Salem, Forsyth County, NC
DSCA Site ID DC340038

Dear <property owner>:

You are receiving this letter because your property at <adjacent property address> is adjacent to an area contaminated with dry-cleaning solvents. There are no actions required on your part and your property is not contaminated. This letter is only for notification purposes. The Dry-Cleaning Solvent Clean-up Act (DSCA) Program has completed an assessment of the dry-cleaning solvent contamination associated with the former Bee Cleaners at 5395 Shattalon Drive in Winston-Salem. The tenant space within the Shattalon Station Shopping Center where the former Bee Cleaners was located is currently occupied by Tienda Mexicana La Palmera, a grocery store. A remedial strategy to address the site contamination has been prepared, and in accordance with our program's statutes, the community has an opportunity to review and comment on the proposed strategy.

The attached Summary of the Notice of Intent to Remediate a Dry-Cleaning Solvent Facility or Abandoned Site (NOI) provides a brief description of the proposed remedy, a web link to the complete NOI, and the dates and procedures for commenting on the proposed remedy. If you do not have access to the internet, we ask that you contact us to request a hard copy of the complete NOI.

If you have questions, please contact me at mike.cunningham@ncdenr.gov or (919) 707-8361.

Sincerely,

[SIGNATURE]

Mike Cunningham, DSCA Project Manager
Division of Waste Management, NCDEQ

Attachments: Summary of the NOI
Cc: DSCA Site ID DC340038 File



North Carolina Department of Environmental Quality | Division of Waste Management
217 West Jones Street | 1646 Mail Service Center | Raleigh, North Carolina 27699-1646
919.707.8200