



November 16, 2017

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

Attn: Mr. Jay W. King  
DSCA Project Manager

Re: **Risk Management Plan**  
People's Cleaners - DSCA Site ID DC600040  
2133 Beatties Ford Road  
Charlotte, Mecklenburg County, North Carolina

Dear Mr. King:

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 former People's Cleaners (site) located at 2133 Beatties Ford, Charlotte, North Carolina. A risk assessment conducted for the site indicates that contaminant concentrations at the site do not pose an unacceptable risk. 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 contact either Rob MacWilliams at 704-553-6150 or Carlin Slusher at 919-461-1341.

Sincerely,

**AECOM TECHNICAL SERVICES OF NORTH CAROLINA, INC.**

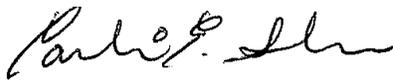
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**Risk Management Plan  
People's Cleaners - DSCA Site ID DC600040  
2133 Beatties Ford Road  
Mecklenburg County  
Charlotte, North Carolina 28216**

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



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Carlin Slusher  
Project Manager



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Robert H. MacWilliams, PG  
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N.C. Professional Geologist #1467

**AECOM**

AECOM Technical Services of North Carolina, Inc.  
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## 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 People's Cleaners site (DSCA Site DC600040) on behalf of the North Carolina Department of Environmental Quality (NCDEQ) Dry-Cleaning Solvent Cleanup Act (DSCA) Program. The People's Cleaners facility was located at 2133 Beatties Ford Road in Charlotte, Mecklenburg County, North Carolina; however, the current address for the property is 2119 Beatties Ford Road, Charlotte, Mecklenburg County, North Carolina. This current address is part of Parcel Identification Number (PIN) 06917122. The former People's Cleaners facility operated in the former University Shopping Plaza from the 1980s until approximately 1993. In approximately 1996, the shopping center was demolished and the property was redeveloped with the existing shopping center. The former People's Cleaners footprint occupied the northeastern portion of the existing Food Lion grocery store. The site location is shown on the attached **Figure 1**.

The contiguous area of dry-cleaning solvent contamination associated with the People's Cleaners site will be referred to herein as the "site," and includes the following property:

1. The source property – **A&B University Park, LLC** (2119 Beatties Ford Road, PIN 06917122), on which the People's Cleaners facility was located.

A map which identifies the above listed property is included as **Figure 2**. As documented herein, site assessment activities have confirmed that contamination is present on the above listed property.

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**

Assessment activities completed at the site identified the following:

- Tetrachloroethylene (PCE) in groundwater beneath the source property at concentrations exceeding the Title 15A North Carolina Administrative Code (NCAC) 2L .0202 Groundwater Standards (2L Standards);
- PCE soil impacts above unrestricted land-use standards beneath the source property; and,
- Concentrations of PCE in soil gas exceeding the Division of Waste Management residential and non-residential soil gas screening levels beneath the source property.

A risk assessment was completed at the site in June 2013 in accordance with the applicable DSCA Program's risk assessment procedures. The results of the risk assessment indicated that there are risks to the source property that exceed applicable target levels. These risks will be managed based on site-specific land-use conditions that have been selected as part of the evaluation and which require a 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**

As documented in the following reports, Prioritization Assessment Report (PAR), dated October 2008 prepared by Withers & Ravenel (W&R); Updated Assessment Report, dated March 2009 prepared by W&R; Results of Outdoor & Indoor Air Analysis report, dated August 2010 prepared by W&R; and Plume Stability Evaluation, dated February 2013 prepared by W&R, investigation activities completed to date have indicated the presence of soil, soil gas, and groundwater contaminants at the site above unrestricted land-use standards. As such, W&R performed a risk assessment to address the applicable exposure pathways based on the identified impacts. The results of the risk assessment are documented in the Risk Assessment Report for the site, dated June 2013, and summarized below.

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

The risk assessment process consisted of evaluating exposure pathways for the exposure unit shown on **Figure 2**. In lieu of representative concentrations (RCs), W&R used maximum soil and subslab vapor contaminant concentrations observed within Exposure Unit #1 as part of this evaluation. For groundwater, W&R used the average of the contaminant concentrations detected in the source area for applicable monitoring wells. The maximum calculated average of each contaminant was utilized as the RC. A summary of the groundwater quality data used in the risk assessment is included on **Figure 3**. A summary of the soil quality data used in the risk assessment is included on **Figure 4**. A summary of the subslab vapor and 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 (Source)**

- **Indoor Inhalation of Vapor Emissions** – Impacted soil and groundwater is present making a complete exposure pathway. Indoor inhalation of vapor emissions was evaluated for current conditions (commercial) and future conditions (residential and commercial). The complete indoor air exposure pathway in Exposure Unit #1 passed the risk evaluation for current land use conditions; however, the pathway failed for both future residential and commercial land use conditions. Therefore, vapor intrusion land-use controls should be implemented within Exposure Unit #1.
- **Surface Soil Combined** – Impacted surface soil is present making a complete exposure pathway. Surface soil exposure was evaluated for current conditions (commercial), future conditions (residential and commercial), and construction worker. As documented in the Risk Assessment Report, dated June 26, 2013, surface soil combined pathway risk levels passed the risk evaluation for current land use conditions; however, the pathway failed for future (residential) land use conditions. Therefore, land-use controls should be implemented preventing residential land use within Exposure Unit #1.

As groundwater contaminant concentrations above the 2L Standards are present within Exposure Unit #1, land-use controls should be implemented preventing the installation of water supply wells within Exposure Unit #1.

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### **Point of Exposure Modeling**

According to the Risk Assessment, prepared by W&R on June 26, 2013, the protection of groundwater use at the point of exposure (POE) pathway was assessed under current (commercial) conditions, as well as conservative future conditions (residential). The selected POE was the downgradient property line to the west of the groundwater source area at a distance of 147.4 feet. According to W&R, a conservative infiltration rate was utilized for the future residential land use scenario, which indicated that steady-state exposure at the POE resulting from source soil leaching to groundwater would exceed the site-specific target level (SSTL) for PCE. However, under the commercial land use scenario, the calculated steady-state exposure at the POE resulting from source soil leaching to groundwater would not exceed the SSTL. The models for both current and future scenarios indicated that the PCE exposure concentration at the POE resulting from source groundwater PCE concentrations would exceed the SSTL if biodegradation did not occur in the surficial aquifer. Based on historical groundwater concentrations, W&R concluded that the groundwater plume appeared to be stable and contaminant concentrations were potentially decreasing. The presence of PCE breakdown products were also detected in the downgradient monitoring wells further indicating that conditions do exist in the surficial aquifer for the biodegradation of chemicals of concern (COCs) and exposure of PCE at the POE would be limited. W&R concluded that PCE concentrations in the groundwater and soil source area would not impact the POE as long as the low permeability of the source area's ground cover remained in place. Therefore, an infiltration land-use control is recommended over the area depicted by W&R on Figure 5 of the June 2013 Risk Assessment (herein referred to as Area A within Exposure Unit #1).

The closest surface water POE was selected to be the closest downgradient surface water body, an unnamed tributary to Stewart Creek, located approximately 1,130 feet northwest and cross-gradient from the soil and groundwater source area. However, based on this distance, the inferred cross-gradient hydrologic location with respect to the site, and relatively low concentrations in groundwater on site, the protection of surface water pathway was not evaluated as part of the risk assessment.

## 4.0 REMEDIAL ACTION PLAN

### 4.1 Assessment Activities and Interim Actions

The source property consists of one parcel, which includes the former People's Cleaners that performed dry-cleaning operations onsite from the 1980s to approximately 1993.

A Phase I Environmental Site Assessment (ESA) and a Limited ESA were performed for the site in April 2006 by Shield Engineering for GHI of West Palm Beach, LLC. The Phase I ESA indicated that the People's Cleaners facility had operated within the former shopping center until approximately 1993. The report identified Holiday Cleaners (DSCA ID# DC600041), located off-site and adjacent to the northeast of the former People's Cleaners, and two other adjacent properties that utilized petroleum underground storage tanks. The Limited ESA included advancement of four direct-push borings and collection of a groundwater sample from each boring (GP-1 through GP-4). The groundwater samples were analyzed for volatile organic compounds (VOCs) by Environmental Protection Agency Method 8260B. The analytical results indicated that groundwater at temporary point GP-4, located along the property line adjacent to the former Holiday Cleaners, was impacted by PCE at a concentration of 610 micrograms per liter ( $\mu\text{g/L}$ ), which exceeded the 2L Standard of  $0.7 \mu\text{g/L}$ . PCE was also detected above the 2L Standard in the groundwater sample collected from GP-3, located along the rear (west) side of the shopping center complex, at a concentration of  $5.6 \mu\text{g/L}$ . In addition, cis-1,2-dichloroethene (cis-1,2-DCE), trichloroethene (TCE), and vinyl chloride (VC) were reported in excess of their respective 2L Standards in the groundwater sample collected from GP-4. Petroleum related constituents benzene and methyl-tert-butyl-ether (MTBE) were also detected in GP-4. No compounds were reported in the groundwater samples collected from GP-1 and GP-2.

Upon confirmation of the release, the property owner, A&B University Park, LLC, submitted a petition on May 31, 2006, to the NCDEQ to request admittance of the site into the DSCA Program. The site was subsequently certified into the DSCA program.

Prioritization assessment activities were initiated in June 2007 when W&R conducted a soil assessment in the approximate location of the former People's Cleaners facility. The soil assessment included advancement of 10 soil borings (WR-1 through WR-10) in what was inferred to be the footprint of the former dry-cleaner. In addition, four shallow monitoring wells (PMW-1S, PMW-2S, PMW-3S, and PMW-4) were installed along the sides of the Food Lion

grocery store and off-site monitoring wells HMW-1, HMW-2S, and HMW-3 were also installed at this time. Soil analytical results indicated that PCE and other COCs were detected at concentrations above the applicable screening levels in samples collected from 4 to 6 feet below ground surface. PCE was detected at concentrations above the 2L Standard in wells PMW-3S and PMW-4. In December 2007, W&R advanced an additional 10 borings (WR-11 through WR-20) to further delineate the PCE soil plume under the building. W&R also installed an additional 21 monitoring wells (PMW-1I, PMW-2I, PMW-3I, HMW-2I, MW-5, MW-6, MW-7, MW-8S/I, MW-9S/I, MW-10S/I, MW-11S/I, MW-12, MW-13, MW-14S/I, and MW-15S/I) to delineate both the former People's Cleaners and the former Holiday Cleaners groundwater plumes. Results of the soil assessment indicated that the source area was located near the northern wall of the grocery store. Groundwater analytical results indicated that concentrations of PCE, TCE, cis-1,2-DCE, and VC were detected above their respective 2L Standards in many of the newly installed wells. The locations of monitoring wells are indicated on **Figure 3** and soil boring locations are indicated on **Figure 4**.

From March to June 2008, W&R re-mobilized to the site to install additional Type II monitoring wells (MW-16 through MW-20, MW-23, and MW-24) on two adjacent properties and two Type III monitoring wells (MW-21D and MW-22D) on the site. W&R also advanced six soil borings (WR-21 through WR-26) within the grocery store to vertically delineate the PCE soil impacts and installed four subslab (SG-1 to SG-4) vapor sample points. PCE was detected at concentrations above applicable screening levels in soil samples to a depth of 19 feet below ground surface. In November 2008, W&R advanced three soil borings (WR-27 through WR-29) in the tenant space to the north of the Food Lion grocery store. Based on the analytical results of the November 2008 assessment, PCE impacts in soil appeared to have been delineated. The locations of monitoring wells are indicated on **Figure 3** and soil boring locations are indicated on **Figure 4**.

Additionally, in June 2008, W&R conducted subslab vapor sampling beneath the dry-cleaning facility. The highest PCE concentration detected was 120,000 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ), which exceeded the applicable screening levels. The finding of the subslab vapor assessment activities were submitted in the Prioritization Assessment report, dated October 13, 2008. Therefore, in July 2010, W&R returned to the site to collect an ambient and indoor air sample from the current building and sample results did not exceed applicable screening levels. The findings of the indoor air sampling activities were submitted in a Results of Outdoor and Indoor Analysis letter report, dated August 11, 2010. The locations of vapor quality samples are indicated on **Figure 5**.

W&R conducted groundwater sampling events in February 2010, August 2010, April 2012, July 2012, October 2012, and January 2013 to supplement the groundwater data generated to date. PCE has consistently exceeded the 2L Standard in on-site groundwater monitoring wells PMW-1S, PMW-1I, PMW-2I, PMW-3S, PMW-3I, MW-5, MW-6, MW-8I, MW-9S, MW-9I, MW-10I, MW-11I, MW-16, MW-19, MW-20, MW-22D, MW-23, MW-25S, MW-25I, MW-26S, MW-26I, MW-28S, MW-28I, as well as, off-site groundwater monitoring well HMW-2S, HMW-2I, HMW-3, MM-4, MW-13, MW-14S, MW-14I, MW-15I, MW-29S, and MW-29I. Groundwater assessment activities at the site have been conducted in conjunction with assessment activities completed at the adjacent former Holiday Cleaners facility. Analytical results suggested that the impacts from both former dry-cleaners are co-mingled. Various petroleum constituents have been detected in groundwater samples and the source of the petroleum contamination is believed to be related to a release from a former gas station (Leaking Underground Storage Tank Incident #11304) located adjacent to the former Holiday Cleaners site. Based on the trends observed over the sampling events, the COCs appeared to be relatively stable to decreasing for the monitoring wells associated with the former People's Cleaners site. The results of the groundwater monitoring activities were submitted in W&R's Plume Stability Evaluation report, dated February 21, 2013.

W&R completed a 1,500-foot receptor survey in October 2008 as part of the DSCA Prioritization Assessment activities. Land use within 1,500-feet of the site was identified as a mixture of residential and commercial use. Two upgradient water supply wells were identified within a 1,500-foot radius of the site. Visual reconnaissance and review of a United States Geological Survey topographic map of properties within a 500-foot radius of the source area did not identify any surface water bodies. One unnamed tributary to Stewart Creek was identified approximately 1,130 feet to the northwest to the site.

On June 26, 2013, W&R submitted the Risk Assessment Report for the People's Cleaners, which evaluated the risk to receptors via exposure pathways as compared to the SSTLs defined in 15A NCAC 02S .0102(33). Where SSTLs were exceeded, appropriate land-use controls were recommended to reasonably manage future risk based on the current understanding of the science of contaminant assessment, migration, and toxicity. As recommended in the Risk Assessment Report for the People's Cleaners, future management of the risk associated with this site is contingent upon successful implementation and maintenance of the land-use controls for the source property. Concurrence with the findings of the risk assessment was received from DSCA on July 22, 2013, and preparation of a RMP was recommended. 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 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*

Several groundwater monitoring events have been conducted for existing monitoring wells including: February 2010, August 2010, April 2012, July 2012, October 2012, and January 2013. Constituents detected in groundwater samples from the site include: PCE, 1,2-dichloroethane (1,2-DCA), benzene, cis-1,2-DCE, chloroform, ethylbenzene, naphthalene, MTBE, toluene, trans-1,2-dichloroethene, TCE, VC, xylenes, bromodichloromethane, chlorodibromomethane, acetone, n-butylbenzene, sec-butylbenzene, 2-butanone, di-isopropyl ether, isopropylbenzene, p-isopropyltoluene, n-propylbenzene, 1,2,4-trimethylbenzene, 1,2,3-trimethylbenzene, and 1,3,5-trimethylbenzene. Most of these constituents were detected at concentrations exceeding the 2L Standard; however, W&R focused on PCE as the COC for evaluation of plume stability.

W&R prepared a concentration versus time trend plot for monitoring well MW-3I, which is included in a Plume Stability Evaluation report, dated February 21, 2013 (**Appendix A**). As shown on the PCE trend plot, PCE concentrations have been generally stable to decreasing in monitoring well MW-3I during the last five sampling events completed from August 2010 through January 2013. In addition, with the exception of the one-time detection at MW-30, PCE either has not been detected or has not been detected at increasing concentrations, at any of the

cross-gradient or downgradient monitoring well locations associated with the former People's Cleaners release. Based on this data, W&R 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 figure showing monitoring well locations, a table showing historical groundwater analytical data, and a concentration versus time trend plot is 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*

For groundwater, the average of the contaminant concentrations detected in the source area was determined for each monitoring well. The maximum calculated average of each contaminant was utilized as the RC. 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 conditions being commercial. 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.*

A Level 1 Ecological Risk Assessment was completed 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 and associated attachments are included in **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 or adjacent property, assuming the assumptions detailed in the Notice of Dry-Cleaning Solvent Remediation (NDCSR) remain valid. As such, this section is not applicable.

## **6.0 LAND-USE CONTROLS**

The risk assessment conducted for the site was based on assumptions that usage of the property is currently commercial and future use could potentially be residential. 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 conditions:

- The source property shall be used exclusively for non-residential land use except as approved in writing by NCDEQ;
- 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;
- No activities that encounter, expose, remove or use groundwater may occur on the source property without prior approval of NCDEQ;
- 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 source property without prior approval of NCDEQ;
- Structural modifications that may cause or create an increased risk from vapor intrusion require the property owner to demonstrate to the satisfaction of NCDEQ that the indoor air in the structure does not pose an unacceptable risk to the occupants following modifications; and
- No activities that cause or create an increase in infiltration may occur within the boundaries of Area A on the source property without prior approval of NCDEQ.

Land-use controls will be implemented to ensure that land-use conditions are maintained and monitored until the land-use controls are no longer required for the site. A NDCSR was prepared for the source property to comply with the land-use control requirements. 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 are 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 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 site property and possible exposure to the contamination is managed through the NDCSR, 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 public comment period and final approval of the RMP, the NDCSR will be filed with the Mecklenburg 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 NDCSR has been executed and recorded with the Mecklenburg County Register of Deeds. The NDCSR, at the request of the property owner, may be canceled by 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 NCDEQ is notified of a change in site conditions, per the notification requirements detailed in the NDCSR, 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 source property owner as part of the NDCSR requirements.

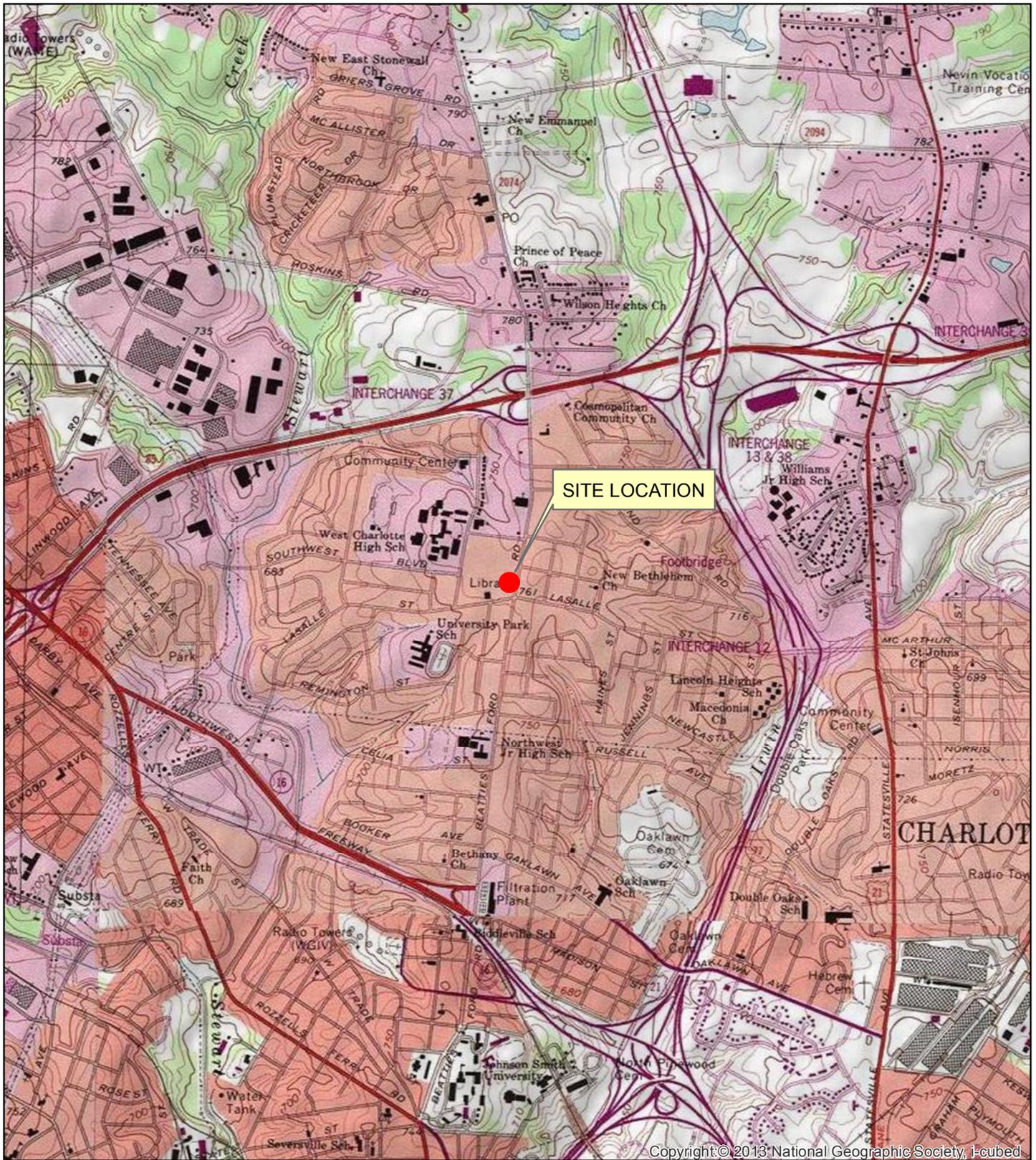
#### **10.0 CONTINGENCY PLAN IF RMP FAILS**

As discussed above, unless the DSCA Program is notified of a change in land-use conditions 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 source property NDCSR 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 the People's Cleaners site on behalf of the DSCA Program. The results of the risk assessment completed for the site indicate that contaminant concentrations do not pose an unacceptable risk. The contaminant plume associated with the site appears stable. This RMP specifies that the source property 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



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**Site Location Map**

Former People's Cleaners (DSCA ID # DC600040)  
 2133 BeattiesFord Road  
 Charlotte, Mecklenburg, North Carolina  
 NC USGS Topographic Quadrangle-Charlotte East (1984)


May 2014 60315422

Figure 1

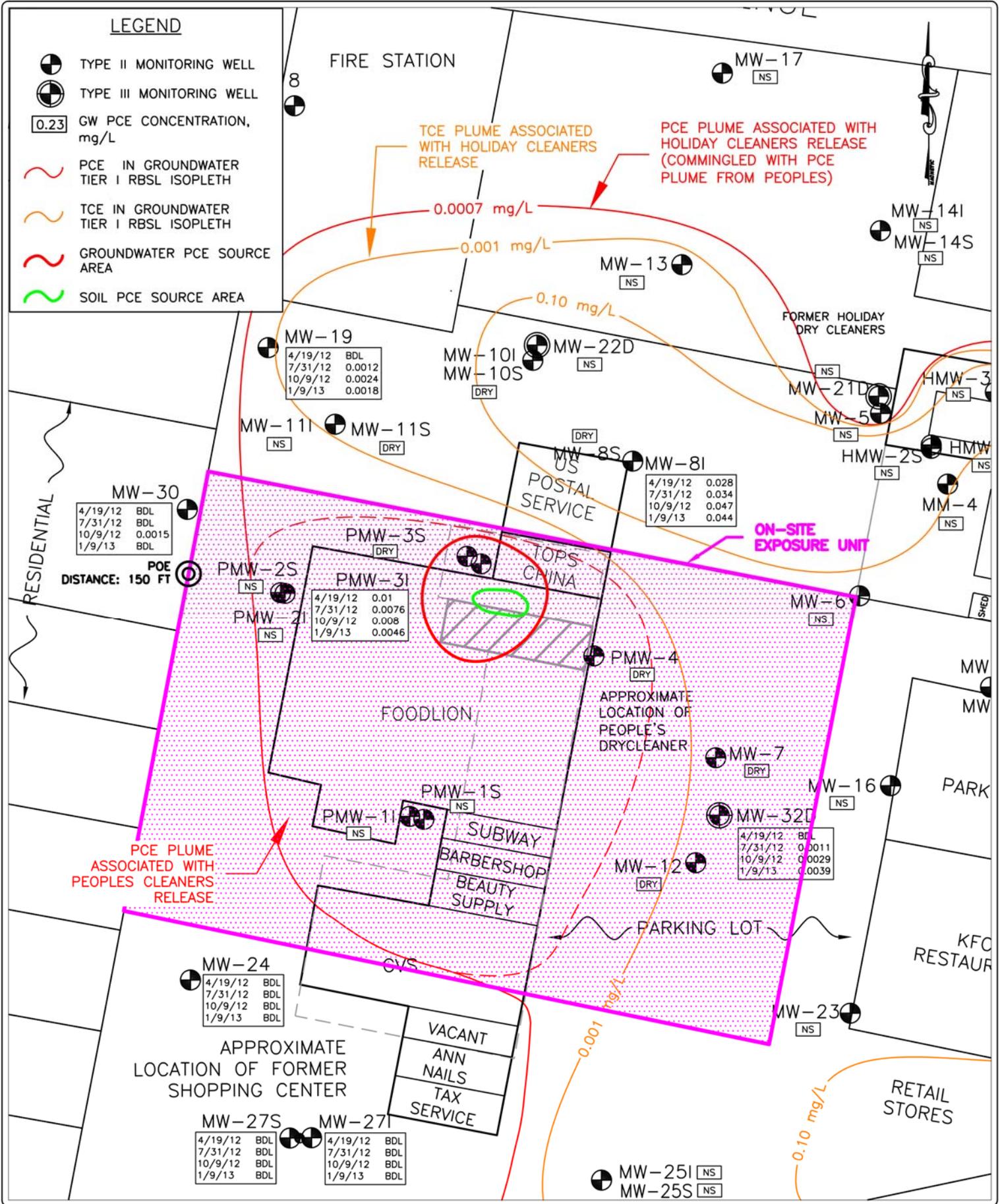
**AECOM**

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**LEGEND**

- TYPE II MONITORING WELL
- TYPE III MONITORING WELL
- 0.23 GW PCE CONCENTRATION, mg/L
- PCE IN GROUNDWATER TIER I RBSL ISOPLETH
- TCE IN GROUNDWATER TIER I RBSL ISOPLETH
- GROUNDWATER PCE SOURCE AREA
- SOIL PCE SOURCE AREA



**WITHERS & RAVENEL**  
ENGINEERS | PLANNERS | SURVEYORS

111 MacKenan Drive Cary, North Carolina 27511 tel: 919-469-3340 www.withersravenel.com License No. C-0832

PEOPLE'S DRY CLEANERS, DSCA ID 60-0040  
2211 BEATTIES FORD ROAD  
CHARLOTTE, NORTH CAROLINA

TIER II GROUNDWATER PCE  
SOURCE AREA

DRAWN BY: WRP  
APPROVED BY: LP  
SCALE: 1"=80'  
DATE: 5/21/12

FIGURE NO. 3  
JOB NO: 02060496.06

**LEGEND**

● SOIL BORING

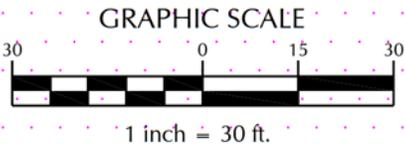
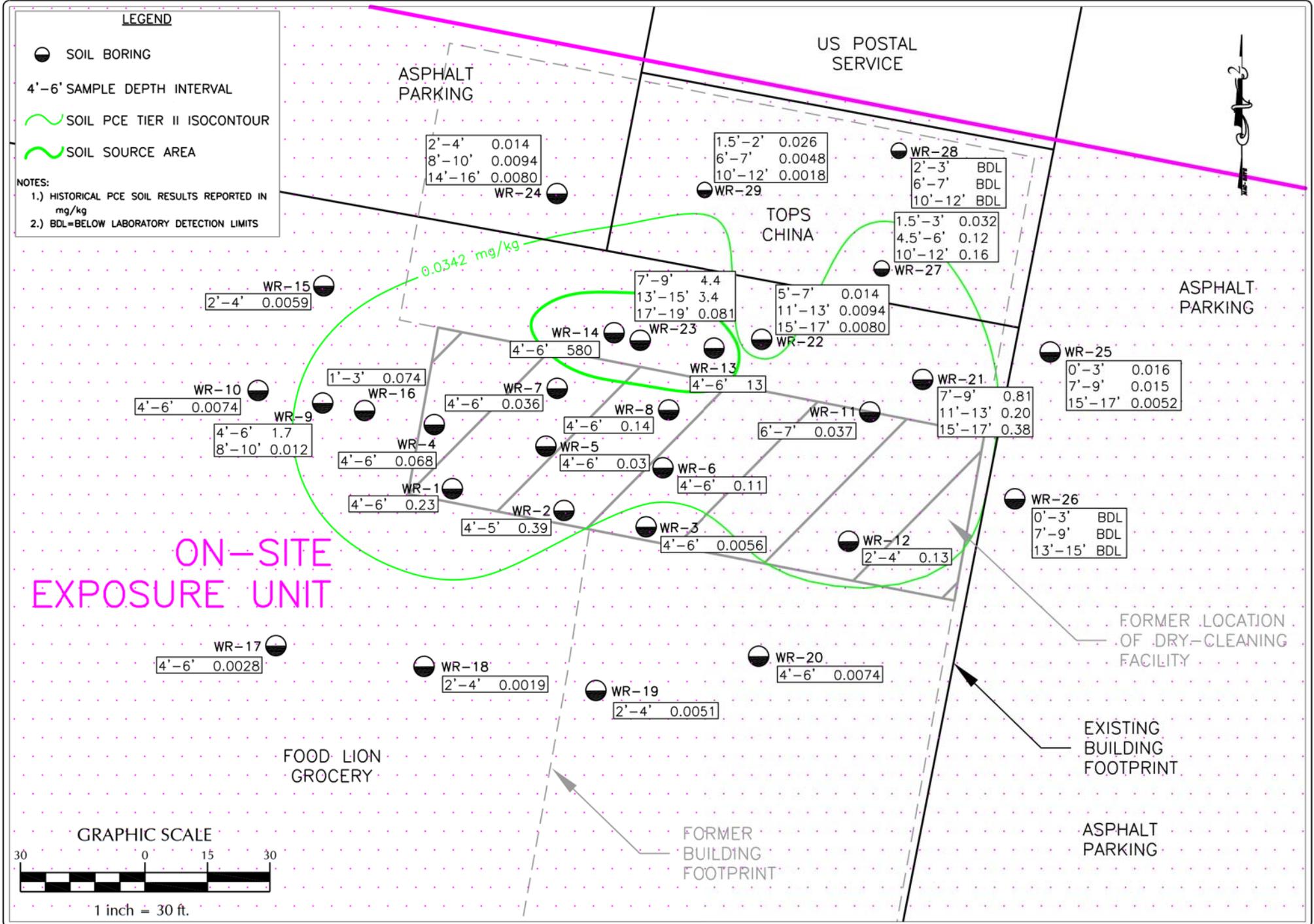
4'-6' SAMPLE DEPTH INTERVAL

~ SOIL PCE TIER II ISOCONTOUR

~ SOIL SOURCE AREA

**NOTES:**

- 1.) HISTORICAL PCE SOIL RESULTS REPORTED IN mg/kg
- 2.) BDL=BELOW LABORATORY DETECTION LIMITS



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 tel: 919-460-6006 fax: 919-535-4545

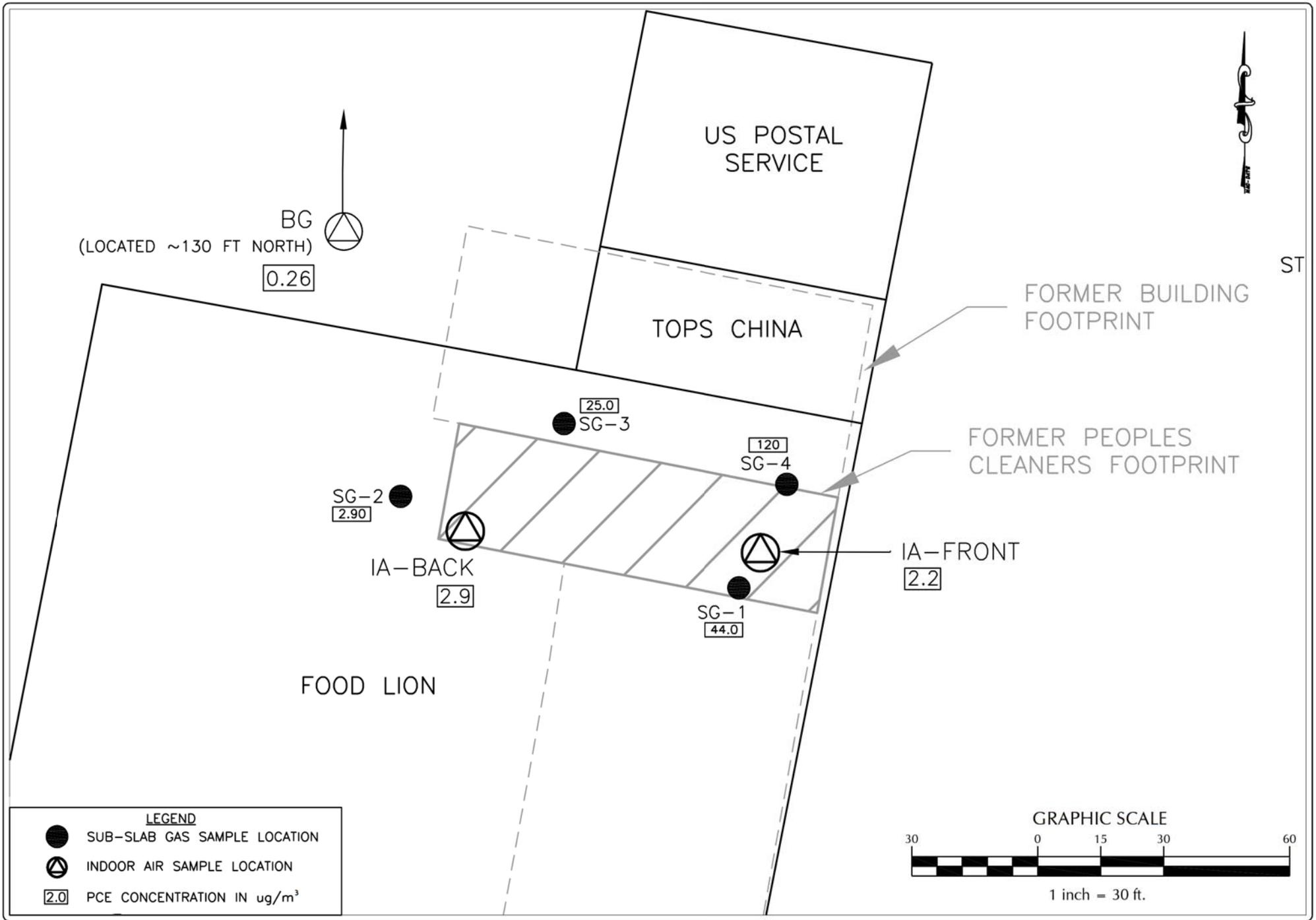
Revisions			
No.	Description	Date	By

PEOPLE CLEANERS, DSCA ID 60-0041  
 2241 BEATTIES FORD ROAD  
 CHARLOTTE, NORTH CAROLINA

**TIER II SOURCE SOIL**

Drawn By WRP	Scale 1" = 30'
Checked By LP	Date 2/22/13

Job No. 2060496.06
ATTACHMENT
4



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Revisions		
No.	Description	Date

PEOPLE'S CLEANERS, DSCA ID 60-0040  
2211 BEATTIES FORD ROAD  
CHARLOTTE, NORTH CAROLINA

**SUB-SLAB GAS AND INDOOR AIR  
SAMPLE LOCATIONS MAP**

Drawn By WRP	Scale 1" = 40'
Checked By LP	Date 10/26/10

Job No. 2060496.06
Sheet No. 5

**APPENDIX A**  
**DOCUMENTATION OF PLUME STABILITY EVALUATION**

February 21, 2013

Jay King, Hydrogeologist  
DSCA Project Manager

North Carolina Department of Environment and Natural Resources  
Division of Waste Management  
Dry Cleaning Solvent Cleanup Act Program  
1646 Mail Service Center  
Raleigh, North Carolina 27699

Subject: Plume Stability Evaluation  
DSCA #60-0040  
People's Cleaners  
2211 Beatties Ford Road, Charlotte, Mecklenburg County

Dear Mr. King,

Per your recent request, Withers & Ravenel (W&R) is pleased to provide our evaluation of the stability of perchloroethene (PCE) concentrations in groundwater in the vicinity of People's Cleaners (DSCA #60-0040). The subject site is located in a commercially developed area of Charlotte. Withers & Ravenel's involvement with this DSCA site began in 2008.

People's Cleaners was part of a larger commerce center which operated in the northwestern portion of the property until the mid 1990's when the building was demolished as part of a property redevelopment plan. In 2006, Shield Engineering performed an environmental site assessment on the subject property, near the former People's Cleaners, and on an out parcel located approximately 300 feet to the east of People's Cleaners, adjacent to Beatties Ford Road, which contained Holiday Cleaners (DSCA # 60-0041). Results of the assessment activities revealed the presence of chlorinated ethenes in the surficial aquifer in the vicinity of both sites. Subsequently, both sites were accepted into the NCDENR DSCA program.

In 2008 and 2009, W&R conducted an environmental assessment at the former People's Cleaners site. Soil assessment activities indicated the presence of relatively high PCE concentrations along the northern exterior wall of the Food Lion Grocery Store. Based on these results, shallow and intermediate depth groundwater monitoring wells MW-3S and MW-3I were installed in this area and sampled. Analytical results showed the presence of PCE within both the shallow and intermediate depth groundwater. Several additional paired groundwater monitoring wells were installed at locations hydraulically cross gradient and down gradient from the source area. The locations of these wells and results of quarterly analysis for PCE in groundwater are shown on the attached Figure.

Subsurface assessment activities were conducted in the vicinity of the nearby Holiday Cleaners site at the same time as those for the People's Cleaners site, and included the installation of several groundwater monitoring wells at hydraulically down-gradient and cross-gradient locations. The

results of the assessment activities proximal to Holiday Cleaners indicated the presence of PCE in groundwater. However the petroleum-related compounds benzene, ethylbenzene, toluene and xylenes (BTEX) were also detected in the groundwater samples collected for the Holiday Cleaners site. The presence of BTEX within these groundwater samples is believed to be related to a former petroleum release from a gas station located adjacent to the Holiday Cleaners site. Results of the groundwater assessment in the vicinity of the Holiday Cleaners site imply migration of the PCE and BTEX plumes toward the People's Cleaners contaminant plume.

Review of the groundwater analytical data for both sites indicates several differences between the People's Cleaners and Holiday Cleaners contaminant plumes, specifically: 1) Groundwater analytical results indicate the presence of both BETX and chlorinated ethenes in samples from wells associated with the Holiday Cleaners contaminant plume. 2) Due likely to the comingling of the BETX and PCE in groundwater near the Holidays Cleaners site, degradation products of PCE (TCE cis 1,2 DCE and VC) are present within the contaminant plume associated with Holiday Cleaners. 3) PCE degradation products have not been observed in the samples from wells associated with the People's Cleaners site. These observations and the groundwater analytical data suggest that wells MW-3I, MW-24, MW-27, MW-27S, and MW-30 are located in areas that have been affected by the People's Cleaners contaminant plume and not the Holiday Cleaners.

Our work also included collection and analysis of quarterly groundwater samples from five wells that monitor contamination associated with the release of PCE from the People's Cleaners site (wells MW-3I, MW-24, MW-27, MW-27S, and MW-30). The purpose of this activity was to document the apparent stability of PCE concentrations in groundwater associated with the People's Cleaners site. The following paragraphs describe the results of the quarterly monitoring program, and graphical as well as statistical analysis the PCE concentrations within samples from source area well MW-3I over a five year period.

The attached Table 1 summarizes the historical analytical results for monitoring wells MW-3I, MW-24, MW-27, MW-27S, and MW-30. The attached figure shows the well locations, approximate limits of the contaminant plume, and quarterly groundwater analysis results. Among the wells included in the study group, low but detectable concentrations of PCE were consistently reported for samples from MW-3I. PCE was not identified in any of the samples from wells MW-24, MW-27 or MW-27S over the monitoring period, and only a trace concentration of PCE (0.0015 mg/L) was identified in the October 2012 groundwater sample from well MW-30. PCE was not detected in any of the other quarterly samples from well MW-30.

Review of the historical data collected from the groundwater monitoring well system associated with the People's Cleaners site does not indicate increasing trends of PCE concentration or extent in the vicinity of the site. Data collected since 2008 from source area well MW-3I showed only what appear to be seasonal fluctuations in PCE concentrations. The highest concentrations of PCE for this location occurred during the April 2009 and 2012 sampling events while the lowest concentrations occurred during the January 2008 and 2013 sampling events. Additionally, with the exception of the one-time detection of a trace concentrations of PCE within the sample from MW-30, the groundwater analytical data do not indicate the presence of PCE, or of increasing concentrations of

PCE at any of the cross-gradient or down-gradient well locations. These attributes of the groundwater analysis data set are in W&R's opinion indications of plume stability.

Another line of evidence that supports the concept of plume stability is illustrated in Table 2, which shows descriptive statistics of PCE concentration data, along with a histogram that shows the distribution of detected PCE concentrations with respect to the mean concentration for source area well MW-3I. The histogram depicts a normal distribution of PCE concentrations, and the absence of outliers, or more specifically high concentrations that are more than one or two standard deviations higher than the mean. In our opinion, the normal concentration distribution shown by the histogram is further evidence of the stability of PCE concentrations in groundwater near DSCA Site #60-0040.

We hope that you find the information and opinions contained in this submittal to be supportive of our recommendation to proceed with preparation of a Risk Management Plan and to move the site towards regulatory closure. It continues to be our pleasure to be of service to the DSCA program. Should you have any questions regarding the contents of this submittal, please do not hesitate to contact me at 910-256-9277.

Sincerely,

**WITHERS & RAVENEL**

  
Brian J. Bellis, P.G.  
Project Manager



Attachments: Referenced Tables, Maps and Charts

**Table 8: Analytical Data for Groundwater**

**DSCA ID No.: 60-0040**

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-Dichloroethy	Trichloroethylene	Vinyl chloride	Xylenes (total)
		[mg/L]										
PMW-3S	6/27/07	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	<b>0.026</b>	< 0.005	< 0.001	< 0.001	< 0.001	< 0.003
	6/16/08	DRY										
PMW-3I	1/9/08	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	<b>0.0027</b>	< 0.005	< 0.001	< 0.001	< 0.001	< 0.003
	6/16/08	< 0.001	< 0.001	< 0.001	NA	NA	<b>0.0053</b>	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002
	4/28/09	<0.0010	<0.0010	<0.0010	<0.0010	<0.0050	<b>0.011</b>	<0.0050	<0.0010	0.0016	<0.0010	<0.0030
	2/9/10	<0.0010	<0.0010	<0.0010	<0.0010	<0.0050	<b>0.0099</b>	<0.0050	<0.0010	<0.001	<0.0010	<0.0030
	8/3/10	<0.0010	<0.0010	<0.0010	<0.0010	<0.0050	<b>0.0082</b>	<0.0050	<0.0010	<0.0010	<0.0010	<0.0030
	4/19/2012	<0.0010	<0.0010	<0.0010	<0.0010	<0.0050	<b>0.01</b>	<0.0050	<0.0010	<0.0010	<0.0010	<0.0030
	7/31/12	<0.0010	<0.0010	<0.0010	<0.0010	<0.0050	<b>0.0076</b>	<0.0050	<0.0010	<0.0010	<0.0010	<0.0030
	10/9/12	<0.0010	<0.0010	<0.0010	<0.0010	<0.0050	<b>0.008</b>	<0.0050	<0.0010	<0.0010	<0.0010	<0.0030
1/9/13	<0.0010	<0.0010	<0.0010	<0.0010	<0.0050	<b>0.0046</b>	<0.0050	<0.0010	<0.0010	<0.0010	<0.0030	
MW-24	6/23/08	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001	< 0.002
	4/30/09	<0.0010	<0.0010	<0.0010	<0.0010	<0.0050	<0.0010	<0.0050	<0.0010	<0.0010	<0.0010	<0.0030
	2/8/10	<0.0010	<0.0010	<0.0010	<0.0010	<0.0050	<0.0010	<0.0050	<0.0010	<0.0010	<0.0010	<0.0030
	8/4/10	<0.0010	<0.0010	<0.0010	<0.0010	<0.0050	<0.0010	<0.0050	<0.0010	<0.0010	<0.0010	<0.0030
	4/19/2012	<0.0010	<0.0010	<0.0010	<0.0010	<0.0050	<0.0010	<0.0050	<0.0010	<0.0010	<0.0010	<0.0030
	7/31/2012	<0.0010	<0.0010	<0.0010	<0.0010	<0.0050	<0.0010	<0.0050	<0.0010	<0.0010	<0.0010	<0.0030
	10/9/2012	<0.0010	<0.0010	<0.0010	<0.0010	<0.0050	<0.0010	<0.0050	<0.0010	<0.0010	<0.0010	<0.0030
1/9/2013	<0.0010	<0.0010	<0.0010	<0.0010	<0.0050	<0.0010	<0.0050	<0.0010	<0.0010	<0.0010	<0.0030	
MW-27S	2/9/10	<0.0010	<0.0010	<0.0010	<0.0010	<0.0050	<0.0010	<0.0050	<0.0010	<0.0010	<0.0010	<0.0030
	8/4/10	<0.0010	<0.0010	<0.0010	<0.0010	<0.0050	<0.0010	<0.0050	<0.0010	<0.0010	<0.0010	<0.0030
	4/19/2012	<0.0010	<0.0010	<0.0010	<0.0010	<0.0050	<0.0010	<0.0050	<0.0010	<0.0010	<0.0010	<0.0030
	7/31/2012	<0.0010	<0.0010	<0.0010	<0.0010	<0.0050	<0.0010	<0.0050	<0.0010	<0.0010	<0.0010	<0.0030
	10/9/2012	<0.0010	<0.0010	<0.0010	<0.0010	<0.0050	<0.0010	<0.0050	<0.0010	<0.0010	<0.0010	<0.0030
1/9/2013	<0.0010	<0.0010	<0.0010	<0.0010	<0.0050	<0.0010	<0.0050	<0.0010	<0.0010	<0.0010	<0.0030	
MW-27I	2/9/10	<0.0010	<0.0010	<0.0010	<0.0010	<0.0050	<0.0010	<0.0050	<0.0010	<0.0010	<0.0010	<0.0030
	8/4/10	<0.0010	<0.0010	<0.0010	<0.0010	<0.0050	<0.0010	<0.0050	<0.0010	<0.0010	<0.0010	<0.0030
	4/19/2012	<0.0010	<0.0010	<0.0010	<0.0010	<0.0050	<0.0010	<0.0050	<0.0010	<0.0010	<0.0010	<0.0030
	7/31/2012	<0.0010	<0.0010	<0.0010	<0.0010	<0.0050	<0.0010	<0.0050	<0.0010	<0.0010	<0.0010	<0.0030
	10/9/2012	<0.0010	<0.0010	<0.0010	<0.0010	<0.0050	<0.0010	<0.0050	<0.0010	<0.0010	<0.0010	<0.0030
1/9/2013	<0.0010	<0.0010	<0.0010	<0.0010	<0.0050	<0.0010	<0.0050	<0.0010	<0.0010	<0.0010	<0.0030	
MW-30	2/10/10	<0.0010	<0.0010	<0.0010	<0.0010	<0.0050	<0.0010	<0.0050	<0.0010	<0.0010	<0.0010	<0.0030
	8/5/10	<0.0010	<0.0010	<0.0010	<0.0010	<0.0050	<0.0010	<0.0050	<0.0010	<0.0010	<0.0010	<0.0030
	4/19/2012	<0.0010	<0.0010	<0.0010	<0.0010	<0.0050	<0.0010	<0.0050	<0.0010	<0.0010	<0.0010	<0.0030
	7/31/2012	<0.0010	<0.0010	<0.0010	<0.0010	<0.0050	<0.0010	<0.0050	<0.0010	<0.0010	<0.0010	<0.0030
	10/9/2012	<0.0010	<0.0010	<0.0010	<0.0010	<0.0050	0.0015	<0.0050	<0.0010	<0.0010	<0.0010	<0.0030
1/9/2013	<0.0010	<0.0010	<0.0010	<0.0010	<0.0050	<0.0010	<0.0050	<0.0010	<0.0010	<0.0010	<0.0030	

**Table 8(1): Analytical Data for Groundwater (User Specified Chemicals)**

**DSCA ID No.: 60-0040**

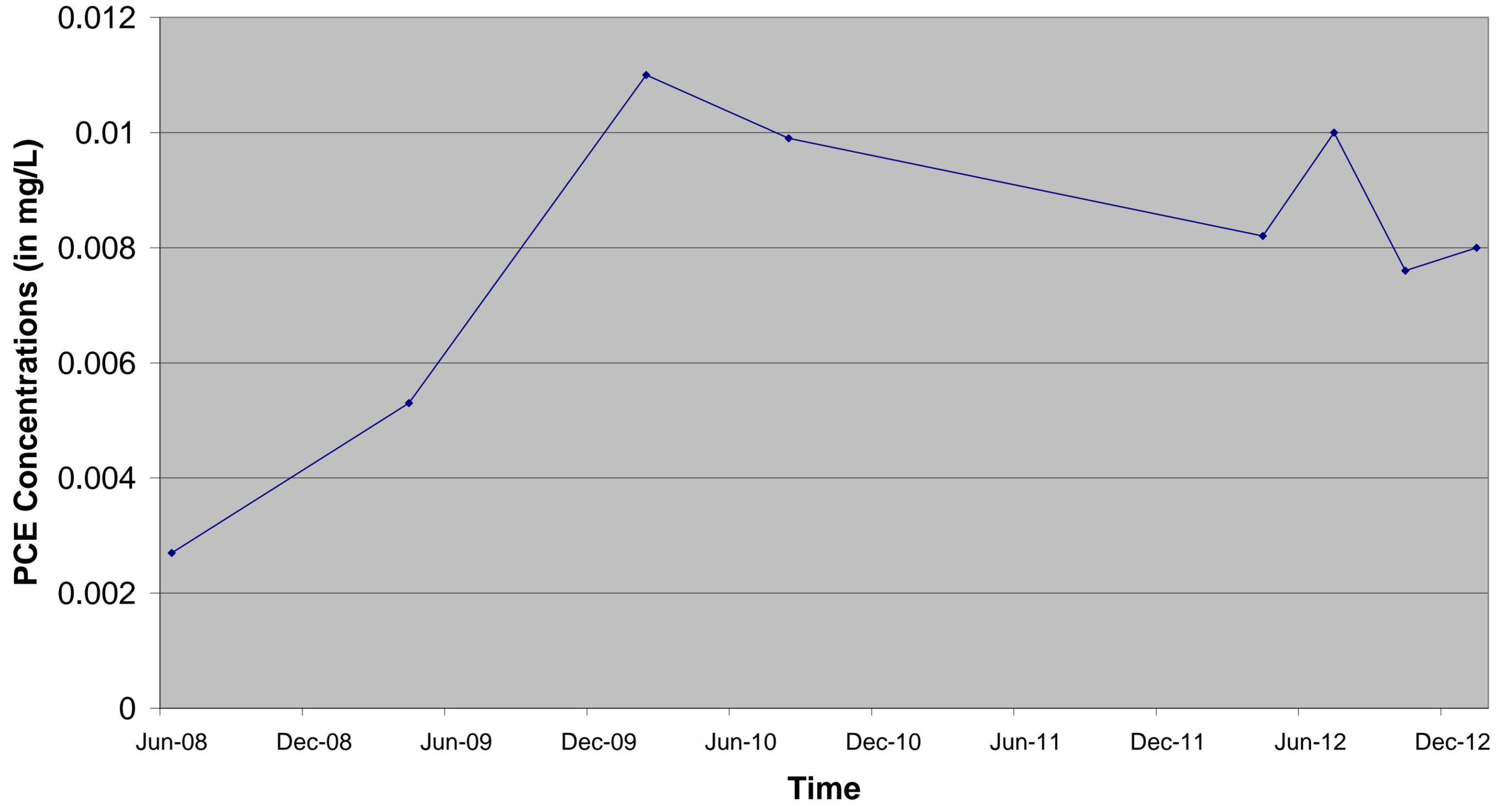
Groundwater Sampling Point	Sampling Date (mm/dd/yy)	1,1-Dichloroethylene	1,2-Dichloroethane (EDC)	Chloroform	Bromodichloromethane	Chlorodibromomethane	Acetone	n-Butylbenzene	sec-Butylbenzene	2-Butanone	Di-isopropyl ether	Isopropylbenzene
		[mg/L]										
PMW-3S	6/27/07	< 0.001	< 0.001	<b>1.6</b>	< 0.001	< 0.001	<0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
	6/16/08	DRY										
PMW-3I	1/9/08	< 0.001	< 0.001	<b>0.024</b>	< 0.001	< 0.001	<0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
	6/16/08	< 0.001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4/28/09	<0.0010	<0.0010	<b>0.028</b>	<0.001	<0.001	<0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
	2/9/10	<0.0010	<0.0010	<b>0.029</b>	<0.001	<0.001	<0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
	8/3/10	<0.0010	<0.0010	<b>0.029</b>	<0.0010	<0.0010	<0.050	<0.0010	<0.0010	<0.010	<0.0010	<0.0010
	4/19/2012	<0.0010	<0.0010	<b>0.029</b>	<0.0010	<0.0010	<0.050	<0.0010	<0.0010	<0.010	<0.0010	<0.0010
	7/31/12	<0.0010	<0.0010	<b>0.021</b>	NA	NA	NA	NA	NA	NA	NA	NA
	10/9/12	<0.0010	<0.0010	<b>0.018</b>	<0.0010	<0.0010	<0.050	<0.0010	<0.0010	<0.010	<0.0010	<0.0010
1/9/13	<0.0010	<0.0010	<b>0.01</b>	<0.0010	<0.0010	<0.050	<0.0010	<0.0010	<0.010	<0.0010	<0.0010	
MW-24	6/23/08	< 0.001	< 0.001	< 0.005	< 0.001	< 0.001	<0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
	4/30/09	<0.0010	<0.0010	<0.0050	<0.001	<0.001	<0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
	2/8/10	<0.0010	<0.0010	<0.0050	<0.001	<0.001	<0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
	8/4/10	<0.0010	<0.0010	<0.0050	<0.0010	<0.0010	<0.050	<0.0010	<0.0010	<0.010	<0.0010	<0.0010
	4/19/2012	<0.0010	<0.0010	<0.0050	<0.0010	<0.0010	<0.050	<0.0010	<0.0010	<0.010	<0.0010	<0.0010
	7/31/2012	<0.0010	<0.0010	<0.0050	NA	NA	NA	NA	NA	NA	NA	NA
	10/9/2012	<0.0010	<0.0010	<0.0050	<0.0010	<0.0010	<0.050	<0.0010	<0.0010	<0.010	<0.0010	<0.0010
1/9/2013	<0.0010	<0.0010	<0.0050	<0.0010	<0.0010	<0.050	<0.0010	<0.0010	<0.010	<0.0010	<0.0010	
MW-27S	2/9/10	<0.0010	<0.0010	<0.0050	<0.001	<0.001	<0.05	<0.001	<0.001	<0.001	<0.001	<0.001
	8/4/10	<0.0010	<0.0010	<0.0050	<0.0010	<0.0010	<0.050	<0.0010	<0.0010	<0.010	<0.0010	<0.0010
	4/19/2012	<0.0010	<0.0010	<0.0050	<0.0010	<0.0010	<0.050	<0.0010	<0.0010	<0.010	<0.0010	<0.0010
	7/31/2012	<0.0010	<0.0010	<0.0050	NA	NA	NA	NA	NA	NA	NA	NA
	10/9/2012	<0.0010	<0.0010	<0.0050	<0.0010	<0.0010	<0.050	<0.0010	<0.0010	<0.010	<0.0010	<0.0010
	1/9/2013	<0.0010	<0.0010	<0.0050	<0.0010	<0.0010	<0.050	<0.0010	<0.0010	<0.010	<0.0010	<0.0010
MW-27I	2/9/10	<0.0010	<0.0010	<0.0050	<0.001	<0.001	<0.05	<0.001	<0.001	<0.001	<0.001	<0.001
	8/4/10	<0.0010	<0.0010	<0.0050	<0.0010	<0.0010	<0.050	<0.0010	<0.0010	<0.010	<0.0010	<0.0010
	4/19/2012	<0.0010	<0.0010	<0.0050	<0.0010	<0.0010	<0.050	<0.0010	<0.0010	<0.010	<0.0010	<0.0010
	7/31/2012	<0.0010	<0.0010	<0.0050	NA	NA	NA	NA	NA	NA	NA	NA
	10/9/2012	<0.0010	<0.0010	<0.0050	<0.0010	<0.0010	<0.050	<0.0010	<0.0010	<0.010	<0.0010	<0.0010
	1/9/2013	<0.0010	<0.0010	<0.0050	<0.0010	<0.0010	<0.050	<0.0010	<0.0010	<0.010	<0.0010	<0.0010
MW-30	2/10/10	<0.0010	<0.0010	<0.0050	<0.001	<0.001	<0.05	<0.001	<0.001	<0.001	<0.001	<0.001
	8/5/10	<0.0010	<0.0010	<0.0050	<0.0010	<0.0010	<0.050	<0.0010	<0.0010	<0.010	<0.0010	<0.0010
	4/19/2012	<0.0010	<0.0010	<0.0050	<0.0010	<0.0010	<0.050	<0.0010	<0.0010	<0.010	<0.0010	<0.0010
	7/31/2012	<0.0010	<0.0010	<0.0050	NA	NA	NA	NA	NA	NA	NA	NA
	10/9/2012	<0.0010	<0.0010	<0.0050	<0.0010	<0.0010	<0.050	<0.0010	<0.0010	<0.010	<0.0010	<0.0010
	1/9/2013	<0.0010	<0.0010	<0.0050	<0.0010	<0.0010	<0.050	<0.0010	<0.0010	<0.010	<0.0010	<0.0010

**Table 8(2): Analytical Data for Groundwater (User Specified Chemicals)**

**DSCA ID No.: 60-0040**

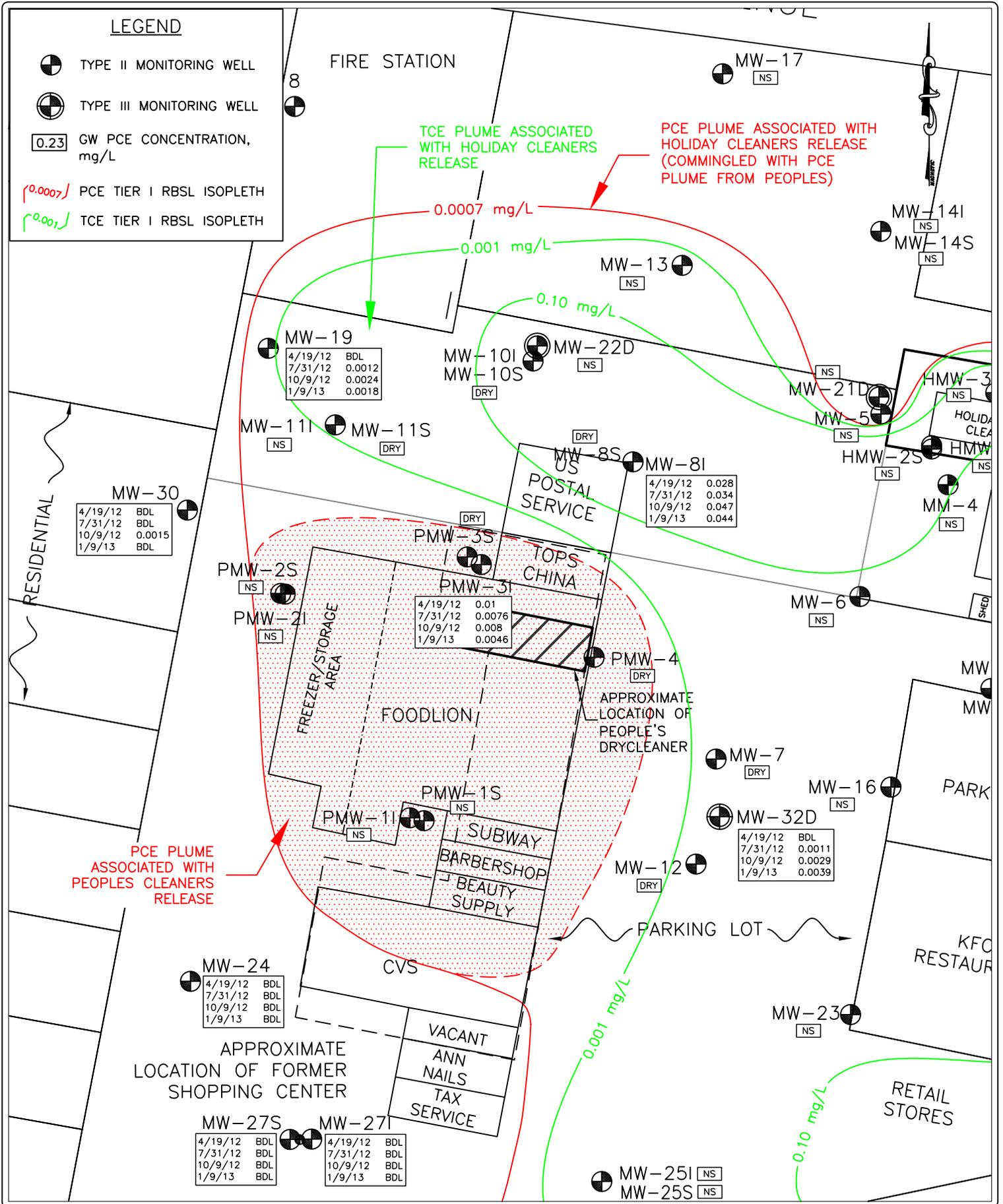
Groundwater Sampling Point	Sampling Date (mm/dd/yy)	p-Isopropyltoluene	n-Propylbenzene	1,2,4-Trimethylbenzene	1,2,3-Trimethylbenzene	1,3,5-Trimethylbenzene						
		[mg/L]										
PMW-3S	6/27/07	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001						
	6/16/08	DRY										
PMW-3I	1/9/08	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001						
	6/16/08	NA	NA	NA	NA	NA						
	4/28/09	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001						
	2/9/10	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001						
	8/3/10	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010						
	4/19/2012	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010						
	7/31/12	NA	NA	NA	NA	NA						
	10/9/12	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010						
MW-24	1/9/13	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010						
	6/23/08	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001						
	4/30/09	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001						
	2/8/10	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001						
	8/4/10	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010						
	4/19/2012	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010						
	7/31/2012	NA	NA	NA	NA	NA						
	10/9/2012	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010						
MW-27S	1/9/2013	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010						
	2/9/10	<0.001	<0.001	<0.001	<0.001	<0.001						
	8/4/10	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010						
	4/19/2012	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010						
	7/31/2012	NA	NA	NA	NA	NA						
	10/9/2012	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010						
MW-27I	1/9/2013	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010						
	2/9/10	<0.001	<0.001	<0.001	<0.001	<0.001						
	8/4/10	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010						
	4/19/2012	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010						
	7/31/2012	NA	NA	NA	NA	NA						
	10/9/2012	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010						
MW-30	1/9/2013	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010						
	2/10/10	<0.001	<0.001	<0.001	<0.001	<0.001						
	8/5/10	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010						
	4/19/2012	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010						
	7/31/2012	NA	NA	NA	NA	NA						
	10/9/2012	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010						

## People Cleaners-PCE Concentrations vs Time in MW-3I



**LEGEND**

-  TYPE II MONITORING WELL
-  TYPE III MONITORING WELL
- 0.23 GW PCE CONCENTRATION, mg/L
- {0.0007} PCE TIER I RBSL ISOPLETH
- {0.001} TCE TIER I RBSL ISOPLETH



**WITHERS & RAVENEL**  
ENGINEERS | PLANNERS | SURVEYORS

111 MacKenan Drive Cary, North Carolina 27511 tel: 919-469-3340 www.wITHERSRAVENEL.com License No. C-0832

PEOPLE'S DRY CLEANERS, DSCA ID 60-0040  
2211 BEATTIES FORD ROAD  
CHARLOTTE, NORTH CAROLINA

**GROUNDWATER PCE QUARTERLY SAMPLING RESULTS MAP**

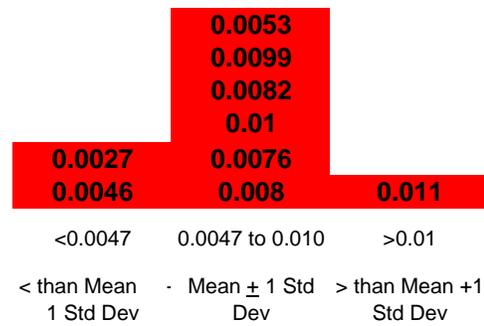
DRAWN BY: WRP	SCALE: 1"=80'	FIGURE NO. 3
APPROVED BY: LP	DATE: 5/21/12	JOB NO. 02060496.06

**Descriptive Statistics and Histogram of PCE Concentrations for MW-3I  
DSCA #60-0040: People's Cleaners, Charlotte**

MW-3I		MW-24		MW-30	
1/9/08	0.0027				
6/16/08	0.0053	6/23/08	< 0.001		
4/28/09	0.011	4/30/09	<0.001		
2/9/10	0.0099	2/8/10	<0.001	2/10/10	<0.001
8/3/10	0.0082	8/4/10	<0.001	8/5/10	<0.001
4/19/2012	0.01	4/19/2012	<0.001	4/19/2012	<0.001
7/31/12	0.0076	7/31/2012	<0.001	7/31/2012	<0.001
10/9/12	0.008	10/9/2012	<0.001	10/9/2012	<b>0.0015</b>
1/9/13	0.0046	1/9/2013	<0.001	1/9/2013	<0.001

Mean	0.0075
Standard Error	0.0009
Median	0.0080
Mode	#N/A
Standard Deviation	0.0028
Sample Variance	0.0000
Kurtosis	-0.7328
Skewness	-0.5210
Range	0.0083
Minimum	0.0027
Maximum	0.0110
Sum	0.0673
Count	9.0000
+1 STD D	0.0102
-1 STD D	0.0047

**MW-3I PCE Concentrations (ug/L)**



## APPENDIX B

### LEVEL I ECOLOGICAL RISK ASSESSMENT CHECKLISTS

**Level 1 Ecological Risk Assessment  
Checklist A for Potential Receptors and Habitat  
People's Cleaners, DSCA #60-0040  
2133 Beatties Ford Road, Charlotte, Mecklenburg County, NC**

**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.** Based on the Charlotte East Quadrangle Topographic map, an intermittent tributary is located approximately 1,130 feet to the northwest of the Site. This tributary discharges into Stewart Creek which eventually reaches the Catawba River by way of Sugar Creek.

**2. Are there any water bodies anywhere on or within the one-half mile of the site?**

**Yes.** Based on the Charlotte East Quadrangle Topographic map, an intermittent tributary to Stewart Creek is located approximately 1,130 feet northwest of the Site.

**3. Are there any wetland<sup>1</sup> area such as marshes or swamps on or within one-half mile of the site?**

**No.** Based on reviews of the Charlotte East Quadrangle Topographic map and the US Fish and Wildlife National Wetlands Inventory Map, no wetlands were identified within one-half mile of the Site.

**4. Are there any sensitive environmental areas<sup>2</sup> on or within one-half mile of the site?**

**No.** The surrounding area is developed with commercial and residential properties.

**5. Are there any areas on or within one-half mile of the site owned or used by local tribes?**

**No.** The Native American Consultation Database and the Indian Reservation Database do not identify any tribal areas within one-half mile of the Site.

**6. Are there any habitat, foraging area or refuge 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?**

**Not likely.** None were identified on the North Carolina Natural Heritage Program (NHP) online databases or the Conservation Planning Tool map viewer within one-half mile of the site. Nine

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<sup>1</sup> 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.fws.gov>, federal or state agency, and USGS topographic maps.

<sup>2</sup> Areas that provide unique and often protected habitat for wildlife species. These areas typically used during critical life stages such as breeding, hatching, rearing or young and overwintering. Refer to Attachment 1 for examples of sensitive environments.

element occurrences, including two state endangered species, were identified on the North Carolina NHP database within the Charlotte East topographic quadrangle. One vascular plant, *Delphinium exaltatum* (Tall Larkspur), has historically been sighted in grassy balds, glades, and woodlands, mostly over mafic rock. However, according to the NHP database, it is likely that *Delphinium exaltatum* (Tall Larkspur) is no longer present in Mecklenburg County. Additionally, no suitable habitat was identified within one-half mile of the site. One freshwater bivalve, *Lasmigona decorata* (Carolina Heelsplitter), has historically been sighted in Catawba drainages. However, review of the *Department of the Interior, Fish and Wildlife Service, 50 CFR Part 17, Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the Carolina Heelsplitter; Final Rule*, indicates that populations of *Lasmigona decorata* (Carolina Heelsplitter) have not been identified in Stewart Creek, located within one mile of the site. Additionally, no suitable habitat was identified 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 of the site?**

**Potentially.** Migratory birds are present in Mecklenburg County according to the Mecklenburg Audubon Society website; however, none have been specifically identified within one-half mile of the site.

**8. Are there any ecologically<sup>3</sup>, recreationally or commercially important species on or within one-half mile of the site?**

**No.** None have been identified through onsite observations and the desktop review. The area surrounding the site is developed with commercial, retail, and residential properties. Any remnant habitat would be too small to support ecologically, recreationally, or commercially important species. Additionally, no gaming or farming is located 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?**

AECOM reviewed the US Fish and Wildlife Service online species list. The following species were identified within Mecklenburg County:

- *Lasmigona decorata* – Carolina Heelsplitter: Endangered
- *Echinacea laevigata* – Smooth Coneflower: Endangered
- *Helianthus schweinitzii* – Schweinitz’s Sunflower: Endangered
- *Rhus michauxii* – Michaux’s Sumac: Endangered
- *Symphyotrichum georgianum* – Georgia aster: Candidate

AECOM also reviewed the North Carolina Heritage Program online Charlotte East Quadrangle species list. The following species were identified:

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<sup>3</sup> Ecologically important species include populations of species which provide a critical food resource for higher organisms. Ecologically important species include pest and 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.

- *Colonial Wading Bird Colony* – Endangered
- *Falco peregrinus* – Peregrine Falcon: Endangered
- *Nyctanassa violacea* – Yellow-crowned Night-Heron: Significantly Rare
- *Lasmigona decorata*– Carolina Heelsplitter: Endangered
- *Lasiurus intermedius* – Northern Yellow Bat: Special Concern
- *Dichelyma capillaceum* – Hair Claw Moss: Significantly Rare-Peripheral
- *Cirsium carolinianum* – Carolina Thistle: Endangered
- *Delphinium exaltatum* – Tall Larkspur: Endangered
- *Echinacea pallida* – Pale Coneflower: Significantly Rare-Disjunct

Based on site observations and the desktop review, the above listed species are not likely to be within one-half mile of the site due to lack of critical habitat.

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

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March 2007

DSCA Program

**Level 1 Ecological Risk Assessment  
Checklist B for Potential Exposure Pathways  
People's Cleaners, DSCA #60-0040  
2133 Beatties Ford Road, Charlotte, Mecklenburg County, NC**

1A. Can chemicals associated with the site leach, dissolve, or otherwise migrate to groundwater?

**Yes.** The primary constituent of concern is tetrachloroethylene (PCE). Based on published references (EPA, 2006), PCE is leachable to groundwater and is slightly soluble in groundwater. Furthermore, impacted groundwater has been confirmed at the site.

1B. Are chemicals associated with the site mobile in groundwater?

**Yes.** Chemical mobility is primarily influenced by the chemical solubility and soil-water partition coefficient. Based on these values, PCE is classified as moderately mobile (Fetter, 1988).

1C. Does groundwater from the site discharge to an ecological receptor habitat?

**No.** The primary ecological receptor habitat identified in the site vicinity is an unnamed tributary to Stewart Creek, located approximately 1,130 feet northwest and cross-gradient of the site. Stewart Creek is located approximately 3,600 feet west and downgradient of the site.

**Question 1. Could chemicals associated with the site reach ecological receptors through groundwater?**

**Not likely** based on the distance from the site to the nearest surface water bodies and relatively low chemical concentrations in groundwater onsite.

2A. Are chemicals present in surface soils on the site?

**Yes.** PCE has been detected in surface soils collected at the site. However, the impacted area is covered by the onsite building and impervious surfaces.

2B. Can chemicals be leached from or be transported by erosion of surface soil on the site?

**Not likely.** The soil source area is covered by the existing onsite building and impervious surfaces.

**Question 2. Could chemicals associated with the site reach ecological receptors through runoff or erosion?**

**No.** The impacted area is covered by the existing onsite building and impervious surfaces (i.e., asphalt paving).

3A. Are chemicals present in the surface soil or on the surface of the ground?

**Yes.** PCE has been detected in surface soils collected at the site. However, the impacted area is covered by the onsite building and impervious surfaces.

3B. Are potential ecological receptors on the site?

**No.**

**Question 3. Could chemicals associated with the site reach ecological receptors through direct contact?**

**No.** Ecological receptors have not been identified on the site property.

4A. Are chemicals on the site volatile?

**Yes.** Chlorinated solvents are considered volatile organic compounds.

4B. Could chemicals on the site be transported in air as dust or particulate matter?

**No.** The impacted area is covered by a building and asphalt paving.

**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.** PCE has been detected in surface and subsurface soils collected at the site; therefore, it is possible that chemicals associated with the site could reach ecological receptors through inhalation of volatilized chemicals or adhered chemicals to dust in subsurface burrows.

5A. Is Non-Aqueous Phase Liquid (NAPL) present at the site?

**No.** NAPL has not been encountered at the site.

5B. Is NAPL migrating?

**No.** NAPL has not been encountered at the site.

5C. Could NAPL discharge occur where ecological receptors are found?

**No.** NAPL has not been encountered at the site.

**Question 5. Could chemicals associated with the site reach ecological receptors through migration of NAPL?**

**No.** NAPL has not been encountered at the site.

6A. Are chemicals present in surface and shallow subsurface soils or on the surface of the ground?

**Yes.** PCE has been detected in surface and subsurface soils collected at the site. However, the impacted area is covered by the existing onsite building and asphalt paving.

6B. Are chemicals found in the soil on the site taken up by plants growing on the site?

**No.** The impacted area is covered by a building and asphalt paving.

6C. Do potential ecological receptors on or near the site feed on plants (e.g., grasses, shrubs, forbs, trees, etc.) found on the site?

**Yes.** It is possible that wildlife feed on the site's vegetation. However, the majority of the site is covered by asphalt paving.

6D. Do chemicals found on the site bioaccumulate?

**No.** Based on published references (U.S. Agency for Toxic Substances and Disease Registry, 1997), PCE does not significantly bioaccumulate.

**Question 6. Could chemicals associated with the site reach ecological receptors through direct ingestion of soil, plants, animals, or contaminants?**

**Unlikely.** Impacted soils and groundwater are covered by the existing onsite building and asphalt paving. Furthermore, groundwater impacts have been delineated and are contained onsite.

**APPENDIX C**

**NOTICE OF DRY-CLEANING SOLVENT REMEDIATION**

APPENDIX C - 1  
NDCSR FOR THE SOURCE PROPERTY  
(A&B UNIVERSITY PARK, LLC, PIN 06917122)

## NOTICE OF DRY-CLEANING SOLVENT REMEDIATION

Property Owner: A&B University Park, 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 A&B University Park, 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 2119 Beatties Ford Road, Charlotte, Mecklenburg County, North Carolina, Parcel Identification Number (PIN) 06917122.

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 People's Cleaners (DSCA Site DC600040) located at 2133 Beatties Ford Road, Charlotte, in the former University Shopping Plaza. Dry-cleaning operations were conducted on the Property from approximately the 1980s to 1993.

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. child care 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. 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 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.
5. 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 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.

6. No activities that cause or create an increase in infiltration (for example, removal or demolition of materials such as asphalt, concrete, buildings, or other structures that by their use and nature minimize infiltration of rain or water runoff into potentially contaminated soil) may occur in “Area A” of the Property, as shown on Exhibit A, without prior approval of DEQ.
7. In January of each year, on or before January 31<sup>st</sup>, 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.
8. 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.
9. 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.

#### **EASEMENT (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\_\_.

A&B University Park, 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 A&B University Park, 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: \_\_\_\_\_ Date \_\_\_\_\_  
Jim Bateson, LG  
Chief, Superfund Section  
Division of Waste Management

**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”.

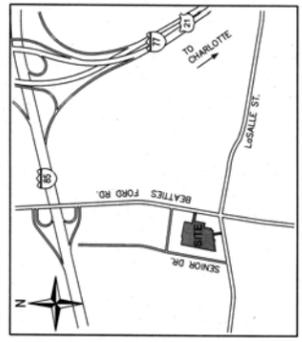
WITNESS my hand and official stamp or seal, this \_\_\_\_ day of \_\_\_\_\_, 20\_\_.

\_\_\_\_\_  
Name typed or printed  
Notary Public

My Commission expires: \_\_\_\_\_  
[Stamp/Seal]



**EXHIBIT A**  
**REDUCTION OF SURVEY PLAT**



HATCH LEGEND table with categories: CONCRETE, BUILDING, AREA A.

LINE LEGEND table with categories: PROPERTY LINE (PL), RIGHT-OF-WAY LINE, EASEMENT, CURB & GUTTER, CHAIN-LINK FENCE, BWC FENCE, OVERHEAD UTILITY WIRES, AREA A LIMITS.

SYMBOL LEGEND table with categories: PROPERTY CORNER FOUND, COMPUTED POINT, DATUM CONTROL POINT, LIGHT POLE, UTILITY POLE WITH DROP, GUY WIRE / ANCHOR, ELECTRIC TRANSFORMER, ELECTRIC METER, HVAC UNIT, TELEPHONE PEDESTAL, TELEPHONE HANDHOLE, COMMUNICATIONS HANDHOLE, MONITORING WELL, SOIL BORING.

N.C.G.S. 143-215.104M(G) STATEMENT. THIS PROPERTY HAS BEEN CONTAMINATED WITH DRY-CLEANING SOLVENT...

STATE OF NORTH CAROLINA. REVIEW OFFICER: CERTIFY THAT THE MAP OR PLAT TO WHICH THIS CERTIFICATION IS AFFIXED MEETS ALL STATUTORY REQUIREMENTS FOR RECORDING.

SURVEY NOTES. THE PURPOSE OF THIS PLAT IS TO PERK AT (1) THE LOCATIONS OF THE CONTROL POINTS...

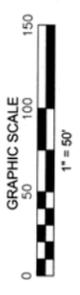
SURVEY CONTROL / GRID TIE NOTES. THE CONTROL LINE SHOWN HEREON WAS ESTABLISHED BY GPS SURVEY...

LINE LEGEND table with columns: LINE, BEARING, DISTANCE, and a list of line segments (L1 through L24).

OWNERS ACKNOWLEDGEMENT. I, A KNOWN EDGE THAT I HAVE FULL AUTHORITY TO LEGALLY EXECUTE A DEED FOR THIS PROPERTY.

DO HEREBY CERTIFY THAT AND SIGN BEFORE ME THIS THE DAY OF 20. A NOTARY PUBLIC OF SAID COUNTY AND STATE.

DO HEREBY CERTIFY THAT AND SIGN BEFORE ME THIS THE DAY OF 20. A NOTARY PUBLIC OF SAID COUNTY AND STATE.



WELL TABLE. Table with columns: WELL ID, NORTHING, EASTING, TOP OF CASING ELEV., GROUND ELEV. Lists wells MW-24 through MW-35.

VRS SURVEY TIE. ALL BEARINGS, DISTANCES AND COORDINATES SHOWN HEREON ARE FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION...

FLOOD CERTIFICATION. UPON EXAMINATION OF FLOOD INSURANCE RATE MAP, PANEL NUMBER 6540 OF COMMUNITY...

ABBREVIATIONS. DR DEED BOOK, MB MAP BOOK, NS NORTH-SOUTH, RW RIGHT-OF-WAY, SF SQUARE FEET, etc.

Taylor Wiseman & Taylor logo and contact information. Includes address: 709 FOREST POINT CIRCLE, SUITE 110, CHARLOTTE, NC 28207.



**EXHIBIT B**  
**LEGAL DESCRIPTION**

*All tracts hereafter described are located in Mecklenburg County, North Carolina and all Deeds, Plats, and like instruments of record referred to hereafter are recorded in the office of the Register of Deeds of Mecklenburg County, North Carolina.*

The **POINT AND PLACE OF BEGINNING** is an iron pin set in the northeast corner of KFC of America, Inc. ("KFC") (now or formerly, Deed Book 14609, Pages 0381 and Page 0385) and the western right of way edge of Beatties Ford Road. From said **POINT AND PLACE OF BEGINNING**, proceed with the lines of KFC, in four courses and distances as follows:

1. N. 78-03-33 W. 146.24 feet to a point;
2. S. 11-41-33 W. 101.09 feet to a point;
3. S. 11-42-37 W. 124.94 feet to a point; and
4. S. 78-11-30 E. 146.43 feet to a point in the western right of way edge of Beatties Ford Road.

Thence with the western right of way edge of Beatties Ford Road S. 11-50-35 W. 51.69 feet to a point, in the northeast corner of W.B. Nivens and Mechanics and Farmers Bank (now or formerly, Deed book 3045, page 0022).

Thence with the line of Nivens S. 80-52-39 W. 162.19 feet to a point, the northwest corner of Nivens in common with the northeast corner of Thomas A. Sturdivant and Mary R. Sturdivant (now or formerly, Deed Book 5266, Page 0786). Thence with the line of Sturdivant and the line of Howard Hoyle and Mary Hoyle (now or formerly, Deed Book 7387, page 0293) S. 89-48-53 W. 151.55 feet to a point, the northwest corner of Hoyle.

Thence continuing with the line of Hoyle S. 07-56-35 E. 145.62 feet to an iron pin set in the northwestern right of way edge of LaSalle Street (a 60' public right of way).

Thence with the northwestern right of way line of LaSalle Street S. 81-47-15 W. 31.77 feet to a point in the southeast corner of the City of Charlotte (now or formerly, Deed Book 9536, Page 0761).

Thence with the line of the City of Charlotte in three courses and distances as follows:

1. N. 07-56-20 W. 149.96 feet to a point;
2. S. 82-21-52 W. 85.09 feet to a point; and
3. S. 08-07-36 E. 19.96 feet to an iron pin set.

Thence with the line of Clarence Russell, Jr. and Marie Russell (now or formerly, Deed Book 1771, Page 0048) in two courses and distances as follows:

1. N. 77-15-47 W. 58.69 feet to a point; and
2. S. 82-34-38 W. 24.71 feet to an iron pin set in the northeast corner of Mrs. E. H. Hunt and Irene S. Hunt (now or formerly, Deed Book 2461, Page 0421).

Thence along the line of Hunt and John W. Patton and Helen B. Patton (now or formerly, Deed Book 1989, Page 0247), S. 81-50-20 W. 130.12 feet to a point, a southeast corner of Willie F. Hubbard and Elisha Hubbard (now or formerly, Deed Book 1936, Page 0269).

Thence with the line of Hubbard, N. 08-25-08 E. 27.92 feet to a point, the southeast corner of Bruce Cumberland Chandler (now or formerly, Deed Book 4272, Page 0543).

Thence along the southeastern lines of Chandler, Margaret A. Sinclair (now or formerly, Deed Book 18492, Page 0408), Will E. Starr and Mrs. A. Starr (now or formerly, Deed Book 2060, Page 0158), Alice C. Elston (now or formerly, Deed Book 2190, Page 0301), Dena M. Paysour and Lisa E. Steves (now or formerly, Deed Book 12308, Page 0935), Willie J. Barksdale and Gladys R. Barksdale (now or formerly, Deed Book 6176, Page 0970), and Margaret A. Alexander (now or formerly, Deed Book 2340, Page 0019) N. 11-46-55 E. 486.83 feet to a set iron pin in the line of Alexander.

Thence continuing along the line of Alexander and along the line of Booker T. Johnson (now or formerly, Deed Book 6220, Page 0522) N. 11-46-55 E. 117.89 feet to a #5 rebar in the southwest corner of Charlotte Fire Department Station 18 (now or formerly, Deed Book 3160, Page 0222).

Thence with the line of the Charlotte Fire Department (City of Charlotte) in two courses and distances as follows:

1. S. 78-15-49 E. 134.78 feet to a set iron pin; and
2. N. 11-44-46 E. 17.61 feet to a #5 rebar in the common line of Charlotte Fire Department Station 18 and the Trustees of University Park Baptist Church (now or formerly, Deed Book 3985, Page 0151).

Thence with the line of the Trustees of University Park Baptist Church (see Deed from Trustees of University Park Baptist Church to University Park Shopping Center, LLC, recorded immediately prior hereto, S. 78-11-42 E. 283.64 feet to a set iron pin in the western line of B. Ford Corp. (now or formerly, Deed Book 6471, Page 0767).

Thence continuing along the line of B. Ford Corp. S. 11-51-21 W. 36.16 feet to a set iron pin in the western line of Willie J. Waddell (now or formerly, Deed Book 7994, Page 0421).

Thence with the line of Waddell in two courses and distances as follows:

1. S. 11-42-07 W. 99.00 feet to a set iron pin; and

2. S. 78-14-36 E. 191.57 feet to a point in the western right of way edge of Beatties Ford Road.

Thence with the western right of way line of Beatties Ford Road S. 11-48-15 W. 43.08 feet to the **POINT AND PLACE OF BEGINNING**; being all that 6.444 acres shown on “An As Built Survey Showing University Park Shopping Center, Surveyed for A & B of University Park, LLC”, dated March 30, 2006, by Carolina Surveyors, Inc.

The **Property**, described above by metes and bounds, is also described as being all of the fee simple interest conveyed to University Park Shopping Center, LLC by: (i) General Warranty Deed from University Village Service Center, Inc., recorded November 22, 1994 in Book 7978, Page 0594 of the Mecklenburg County Registry; and (ii) General Warranty Deed from the Trustees of University Park Baptist Church, recorded immediately prior hereto;

Less and except:

- i. Strips conveyed to the City of Charlotte for the widening of Beatties Ford Road as described in General Warranty Deed recorded August 26, 1996 in Book 8711, Page 0354; and
- ii. An “outparcel” of approximately .34 acres conveyed to KFC of America, Inc., recorded December 27, 2002 in Book 14609, Page 0381.

The appurtenant interests which run with the land for the benefit of the fee simple interest in the **Property** include these appurtenant driveway and access easements:

1. Easement and Driveway Agreement between University Village Service Center, Inc., and Public Library of Charlotte and Mecklenburg County, recorded in Book 7889, Page 0962; and
2. Easement Agreement between University Park Shopping Center, LLC, and Howard Hoyle and Mary Hoyle recorded in Book 8111 at Page 0742.

## APPENDIX D

### EXAMPLE ANNUAL CERTIFICATION OF LAND-USE RESTRICTIONS

**Annual Certification of Land-Use Restrictions**

**Site Name:** People’s Cleaners  
**Site Address:** 2119 Beatties Ford Road, Charlotte, Mecklenburg County, NC  
**DSCA ID No:** DC600040

**ANNUAL CERTIFICIATION of LAND-USE RESTRICTIONS**

Pursuant to land-use restriction number [ ] (the land-use restrictions are included as part of this form for reference) in the Notice of Dry-Cleaning Solvent Remediation (Notice) signed by A&B University Park, LLC and recorded in Deed Book <blank>, Page <blank> on <date> at the Mecklenburg County Register of Deeds Office, A&B University Park, LLC 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 Mecklenburg County Register of Deeds office and the land-use restrictions therein are being complied with.

Duly executed this \_\_\_\_ day of \_\_\_\_\_, 20\_\_.

A&B University Park, LLC  
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



ROY COOPER

Governor

MICHAEL S. REGAN

Secretary

MICHAEL SCOTT

Director

<Date>

<name>, <City Manager/County Health Director>  
<address>  
<city>, NC <zip>

Subj: Remediation of Dry-Cleaning Solvent Contamination  
DSCA Site # DC600040  
People’s Cleaners, 2133 Beatties Ford Road, Charlotte, 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:

Jay W. King, DSCA Remediation Unit  
Division of Waste Management, NCDEQ  
1646 Mail Service Center  
Raleigh, North Carolina 27699-1646

A Summary of the NOI is being published in the Charlotte Observer, 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.

Remediation of Dry-Cleaning Solvent Contamination  
DSCA Site # DC600040  
People's Cleaners, 2133 Beatties Ford Road, Charlotte, NC  
Page 2

<date>

If you have any questions, please feel free to contact me at (919)707-8367.

Sincerely,

Jay W. King, DSCA Project Manager  
Division of Waste Management, NCDEQ

**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**

People's Cleaners  
DSCA Site # DC600040

Pursuant to N.C.G.S. §143-215.104L, on behalf of A&B University Park, 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.

People's Cleaners formerly conducted dry-cleaning operations at 2133 Beatties Ford Road, in Charlotte, North Carolina. The property is currently occupied by the Food Lion grocery store. Dry-cleaning solvent contamination in soil and/or groundwater has been identified at the following parcel(s):

2119 Beatties Road, in Charlotte; Parcel No. 06917122

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 Jay King at (919)707-8367. All comments and requests should be sent to:

Jay W. King, DSCA Remediation Unit  
Division of Waste Management, NCDEQ  
1646 Mail Service Center  
Raleigh, North Carolina 27699-1646



Waste Management  
ENVIRONMENTAL QUALITY

ROY COOPER

*Governor*

MICHAEL S. REGAN

*Secretary*

MICHAEL SCOTT

*Director*

<date>

<property owner>

<mailing address>

<city, state, zip>

Subj: Dry-Cleaning Solvent Contamination at People's Cleaners, 2133 Beatties Road  
Charlotte, NC #DC600040

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. The Dry-Cleaning Solvent Clean-up Act (DSCA) Program has completed an assessment of the dry-cleaning solvent contamination associated with the People's Cleaners at 2133 Beatties Road in Charlotte. The property is currently occupied by the Food Lion 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 [jay.king@ncdenr.gov](mailto:jay.king@ncdenr.gov) or (919) 707-8367, or the unit supervisor, Delonda Alexander at [delonda.alexander@ncdenr.gov](mailto:delonda.alexander@ncdenr.gov) or (919) 707-8365.

Sincerely,

Jay W. King, DSCA Project Manager  
Division of Waste Management, NCDEQ

Attachments: Summary of the NOI

Cc: DSCA Site # DC600040 File